LIZARD
Landscape Design and Ecology

PRELIMINARY ECOLOGICAL APPRAISAL

Capella House Car Park, Railway Approach, Worthing

On behalf of: Architectus Ltd

Client:	Architectus Ltd			
Project:	Capella House Car Park, Railway Approach, Worthing			
Reference:	LLD3529-ECO-REP-001-00-PEA			
Revision:	**Date:**	**Author**	**Proof**	**Approved**
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Validity:

This report is valid for 18 months from the date of the site visit. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

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SUMMARY

Lizard Landscape Design and Ecology (LLDE) has been commissioned by Architectus Ltd to undertake a Preliminary Ecological Appraisal (PEA) of land at Capella House Car Park, Railway Approach, Worthing (located around central grid reference: TQ 14656 03369 – hereafter referred to as 'the site'). This report presents the results of an initial scoping survey, which was undertaken on the 30th of May 2025 to evaluate the existing ecological resources within and adjacent to the site, to highlight any potential ecological constraints and opportunities to inform scheme design, and to identify the need for further assessment prior to application, where required.

The site covers an area of 0.08 ha and is located immediately south of Worthing Central Station, Platform 3. The site consists of a 27-space hardstanding car park with a section of grassland to the west and two areas of loose gravel within the northeast and southeast corners. Surrounding the site was a landscape of commercial and residential properties in all directions, with the greatest ecological interest at the site associated with the individual tree, which should be retained and protected throughout proposals, wherever practicable.

The habitats within and adjacent to the site were found suitable to support foraging / commuting bats, birds and minor invertebrate assemblages. Due to the overall low value of the site, further surveys have been ruled out under the condition that appropriate RAMs are incorporated into the scheme.

Proposals have negligible potential to impact any statutory designations identified within a potential zone of influence of development. Therefore, further assessment in regard to the *Habitat Regulations (2017)* or site-specific mitigation is not required. Furthermore, as the development is subject to the de minimis exemption, it is not required to demonstrate Biodiversity Net Gain, and a statement of exemption shall be produced alongside this report. However, recommendations of ecological enhancements have still been provided to allow the ecological value of the site to be maximised within the proposals.

Subject to a sensitively designed scheme, which gives due consideration to the survey and mitigation requirements outlined herein, no major ecological constraints have been identified which would preclude the provision of a well-designed development.

1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology (LLDE) has been commissioned by Architectus Ltd to undertake a Preliminary Ecological Appraisal (PEA) of land at Capella House Car Park, Railway Approach, Worthing (located around central grid reference: TQ 14656 03369 – hereafter referred to as 'the site').

1.2 The purpose of this report is to establish the site's suitability for development, inform the design process for future proposals, record the ecological baseline and identify key potential ecological constraints and opportunities associated with future development proposals. This report has been prepared with due consideration for existing best practice guidance (CIEEM, 2017) (BSI, 2013) and aims to provide general advice on ecological constraints associated with development of the site. The report includes recommendations for further assessment where necessary.

Site Information

1.3 The site covers an area of c. 0.08 hectares (ha) of hardstanding car park with a strip of grassland at its western extent. Immediately north of the site is Platform 3 of Worthing Central Station, as well as the tracks for the West Coastway Line and Worthing Loop. To the west of the site is Sandell House, a Grade 2 listed building, and to the east lies an HGV delivery bay with Railway Approach Road running along the site's southern boundary.

Surrounding Landscape

1.4 The site is located within an urban setting in the centre of Worthing, immediately adjacent to The First Worthing Railway Station. The site is situated on a bed of freely draining, slightly acidic loamy soil, which forms the foundation of most of the surrounding area. The landscape in all directions of the site is predominantly urban, characterised by residential and commercial properties.

Development Proposals

1.5 It is understood that the proposals are for the development of a new multi-storey residential building with ground-level parking and associated bicycle storage.

2.0 SCOPE OF THE ASSESSMENT

2.1 In accordance with current guidance (CIEEM, 2017), the aim of the Preliminary Ecological Appraisal has been to:

- Identify the likely ecological constraints associated with a project;
- Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy' (BSI, 2013);
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and
- Identify the opportunities offered by a project to deliver ecological enhancement.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 The Multi-Agency Geographical Information Centre (MAGIC) website was consulted for information regarding the location of waterbodies, priority habitats, statutory designated sites and existing wildlife mitigation licences, within a potential zone of influence of the site. Additionally, the Local Planning Authority (LPA) website was consulted for information regarding the location of non-statutory designated areas, and satellite imagery and historic mapping was used to inform an assessment of the recent land use changes and habitat types within the area. The following potential zones of Influence's have been used for the following potential ecological receptors during the desk study assessment:

Table No. 01 – Zones of Influence for Ecological Receptors

Potential Zone of Influence	Type of Record / Designation/s / Ecological Receptor
0.5km	• Ponds, ditches and other water bodies.
2.0km	• Priority Habitats (UKBAP) (NERC, 2006); • European Protected Species Mitigation Licences (EPSMLs); • Local Nature Reserves (LNRs); • National Nature Reserves; • Sites of Special Scientific Interest (SSSIs); and • Local Wildlife Sites (LWS) / Site of Nature Conservation Interest (SNCI).
10.0km	• Special Protection Areas (SPAs); • potential Special Protection Areas (pSPAs); • Ramsars (Wetlands of International Importance); • proposed Ramsars (pRamsar); • Special Areas of Conservation (SACs); and • possible Special Areas of Conservation (pSACs).
12.0km	• Special Areas of Conservation (SACs) and possible Special Areas of Conservation (pSACs) designated for supporting Annex II bat species.

3.1.2 Given the quantum of development proposed / broad low ecological value of the site and the surrounding area, a local biological records centre search has not been provided. This is an approach in line with current guidance (CIEEM, 2020).

3.1.3 The Local Planning Authority website was consulted to inform of additional relevant information to this assessment, including local development plan policies in relation to ecology and biodiversity (see *Appendix A – Planning Policy and Legislation*) as well as any Local Nature Recovery Strategies, Nature Improvement Areas (NIAs) and Biodiversity Opportunity Areas (BOAs) etc.

3.2 Field Survey

3.2.1 The field survey was undertaken on the 30th of May 2025 by the following Suitably Qualified Ecologist: James Tann BSc (Hons). Weather conditions were mild (17°C) with a light northeastern wind (Beaufort 2) and overcast skies.

3.2.2 The field survey comprised a walkover inspection of the site, immediately adjacent land and boundaries features, in which ecological features were noted and mapped in accordance with principles of the UKHabs-Professional Classification System (UKHabs Ltd., 2023). A minimum mapping unit of 25m^2 / 5m length was used and habitats were identified to at least level 4 wherever practicable. Habitat categories were slightly amended to be consistent with those used as part of Biodiversity Net Gain calculations.

3.2.3 A list of plant species noted was compiled, together with an estimate of relative abundance made according to the DAFOR scale. In addition, Target Notes were used to provide supplementary information where necessary on any features encountered which were notable, relevant to the assessment or too small to map.

3.3 Evaluation of Ecological Features

3.3.1 An assessment was made to determine the likely importance of any flora / habitats present, as well as determining whether any qualified as being of conservation merit, such as those listed as habitats and species of principal importance for the conservation of biodiversity (NERC, 2006). Likely importance was determined in reference to a predefined geographical frame of reference, as laid out in *Guidelines for Ecological Impact Assessment* (CIEEM, 2022), this was assessed in accordance with the accordance with the criteria outlined below:

Table No. 02 – Likely Importance Assessment Criteria

Likely Importance Categories	Likely Importance Criteria
Negligible	Of no notable ecological value.
Site	Ecologically valuable within the context of the site
Local	Ecologically valuable within the context of the immediate surrounds, i.e., c. 1km^2
District	Ecologically valuable within the context of the wider surrounds / LPA district, i.e., c. 10km^2
County	Ecologically valuable within the context of the wider county, i.e., c. 100km^2
Regional	Of ecological value within the region, i.e., south east, south west, midlands etc.
National	Of ecological value within the context of the United Kingdom, such as a SSSIs, NNR's etc.
International	Ecological value of global significance, such as SACs, SPAs etc.

3.3.2 Habitats within and adjacent to the site were assessed to determine their potential to support protected and notable fauna. This assessment was based on professional judgment and experience, with due consideration to industry standard best practice guidance for the relevant taxa, as laid out in the table below. The possible presence of each taxon was summarised as either negligible, low, moderate, high or confirmed.

Table No. 03 – Habitat Suitability Assessment References

Fauna	Relevant Best Practice Guidance
Great Crested Newts	*Great Crested Newt Conservation Handbook* (Langton *et al*, 2001) & *Evaluating the Suitability of Habitat for the Great Crested Newt* (Oldham *et al,* 2000)
Reptiles	*Herpetofauna Workers' Manual* (Gent and Gibson, 2003)
Bats	*Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)* (Collins, 2023)
Dormice	*The Dormice Conservation Handbook* (English Nature, 2006)
Badger	*Survey Badgers* (Harris *et al,* 1989)
Water Vole	*The Water Vole Mitigation Handbook* (Dean *et al,* 2016)
Birds	*Guidance for Bird Surveys in Relation to Development* (NE, 2022)
Invertebrates	*Considering Terrestrial Invertebrates in Preliminary Ecological Appraisals* (Jukes, 2021) and *Organising Surveys to Determine Site Quality for Invertebrates* (English Nature, 2005)

3.3.3 Photographs were taken as evidence and to illustrate any notable ecological features on site. These have been provided within the body of the relevant parts of the Results section, where appropriate.

3.4 Daytime Bat Walkover Survey

3.4.1 A Daytime Bat Walkover (DBW) survey was undertaken as part of the field survey assessment by the suitably experienced surveyor (James Tann accredited agent under 2016-20460-CLS).

3.4.2 The Daytime Bat Walkover (DBW) survey entailed a slow walkover of the site, during which time the surveyor identified any structures, trees and other features that could be suitable for bats to roost in, and any habitats which could be suitable for bats to commute, forage or swarm in.

3.4.3 During this survey any direct evidence of bats was searched for and recorded, such as grease marks, urine stains, bat droppings, feeding remains and dead / live bats. Furthermore, any structures or trees which offered features with the potential to support bats were noted. For trees this included the identification of features typically associated with decay, such as, but not limited to, cracks, crevices and holes naturally formed by trees. For structures this included the identification of features such as, but not limited to, slipped, missing or uneven tiles, gaps around the soffit / barge board and raised flashing etc.

3.4.4 All suitable bat habitat was assessed in accordance best practice criteria (Collins, 2023), which is outlined herein. During the survey all trees within and immediately adjacent to the site were assessed using the following criteria:

Table No. 04 – Criteria for Assessing the Bat Roosting Suitability of Trees

Suitability	Description
None	Either no potential roosting features in the tree, or highly unlikely to be any.
FAR	Further assessment required to establish if potential roosting features are present in the tree.
PRF	A tree with at least one potential roosting feature present.

3.4.5 If it was possible to adequately assess a Potential Roosting Feature (PRF) from ground level then this was completed, and the feature classified as either:

- **PRF-I**: Feature only suitable for individual or very small numbers of bats, either due to size or lack of suitable surrounding habitat; or
- **PRF-M**: PRF is suitable for multiple bats and therefore has the potential to be used by a maternity colony.

3.4.6 Furthermore, all structures were assessed externally, and internally wherever possible for their potential to support bats, using the following criteria:

Table No. 05 – Criteria for Assessing the Bat Roosting Suitability of Structures

Potential Suitability	Description
None	No habitat features on site likely to be used by any roosting bats at any time of year.
Negligible	No obvious habitat features on site likely to be used by roosting bats. However, some small uncertainty remains, as bats can use small and apparently unsuitable features occasionally.

Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these do not provide enough shelter, space, protection, appropriate conditions or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	A structure with one of 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, irrespective of species conservation status.
High	A structure 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, with the potential to support high conservation status roosts irrespective of species conservation status.
Confirmed	Direct evidence of bats identified.

3.4.7 Finally, an assessment of the winter hibernation potential of the structures was made in consideration of the criteria used for assessing structures and trees, in combination with the potential presence of classic hibernation features, known roosts and suitability of habitat in the surrounds.

3.5 Great Crested Newts – Habitat Suitability Assessment

3.5.1 Any ponds identified within or adjacent to the site were subject to a Habitat Suitability Index (HSI) assessment to determine their suitability to support GCN, in line with current guidance (Oldham *et al*, 2000). The HSI is a numerical index, between 0 and 1 (0 representing completely unsuitable habitat and 1 representing optimal habitat), calculated based on the suitability of 10 calculable indices.

3.5.2 HSI assessment is useful to aid in determining how suitable a given waterbody is for GCN, but it does not directly correlate with GCN presence or population numbers and serves as information only.

3.5.3 The 10 indices considered as part of the HSI assessment include geographic area, pond area, permanence of waterbody, water quality, shading, waterfowl presence, fish presence, number of ponds within 1.0km, suitability of terrestrial habitat and macrophyte cover, which were investigated during the field survey assessment.

3.6 Badgers

3.6.1 A walk over assessment of the site, and all land within 30m of the site where access was available and practicable, was conducted in order to search for evidence of badgers. This survey was conducted in line with best practice guidance (Harris *et al,* 1989) and included a systematic search for signs such as:

- 'Push-throughs';
- 'Snuffle-holes';
- Latrines;
- Badger guard hairs;
- Setts;
- Badger footprints; and
- Mammal runs.

3.7 Constraints and Limitations

3.7.1 Due to the field survey consisting of only one site visit, certain species, particularly some of the flowering plants, may not have been visible or may have been otherwise inconspicuous at the time of the survey and hence overlooked. These are accepted constraints associated with the UKHabs Survey Methodology.

4.0 RESULTS

4.1 Desk Study

Pond Study

4.1.1 No ponds were identified within 500m of the site, based on OS mapping and satellite imagery.

Priority Habitats

4.1.2 In accordance with the MAGIC dataset, within a 2.0km search radius of the site, there were UKBAP Priority Habitats (NERC, 2006) of Traditional Orchards, Deciduous Woodland (none of which was ancient), Intertidal Substrate Foreshore (sand and Gravel) and Coastal Vegetated Shingle.

European Protected Species Mitigation Licence (EPSML) Search

4.1.3 In accordance with the MAGIC dataset, within a 2.0km search radius of the site, no records for existing European Protected Species Mitigation Licences (EPSMLs) were returned.

Local Non-Statutory Designated Areas

4.1.4 The following non-statutory designated areas were identified within 2.0km of the site:

Table No. 06 – Non-Statutory Designated Areas

Site	Location
St Michael's Graveyard / Heene Cemetery (LWS)	c. 1.1km SW
Broadwater Green (Village Green)	c. 1.2km N
Cokeham Brooks (LWS)	c. 1.4km NE
Brooklands Recreation Area (Green Gap)	c. 1.9km E

Statutory Designated Sites

4.1.5 Statutory designated sites identified within a potential zone of influence of the site include:

Table No. 07 – Statutory Designated Sites

Site	Description	Location
Statutory Designated Sites within 2.0km		
The South Downs National Park	The national park was primarily designated for its diverse composition of habitats and wildlife, in addition to its unique natural character. It is an area supporting a significant number of nationally and internationally important species and contains numerous features of valued cultural heritage or natural beauty.	c. 1.9km NE

4.1.6 The site is located within the Impact Risk Zone of Adur Estuary SSSI and Cissbury Ring SSSI. However, development proposals do not meet the criteria which would require the LPA to consult with Natural England regarding potential impacts.

4.2 Existing Habitat Assessment

Site Assessment

4.2.1 Habitats within and adjacent to the site include:

- Developed Land, Sealed Surface
- Modified Grassland
- Individual Trees
- Introduced Shrub
- Sparsely Vegetated Urban Land

Developed Land, Sealed Surface

4.2.2 The main body of the site comprises a small asphalt car park with space for about 27 vehicles. Along the perimeter of this area was a low metal barrier, which gave way to a similar height brick wall along the southern edge. Vegetation was almost entirely absent within the parcel, save for some encroachment from the adjacent western grassland and infrequent occurrences of buddleia *Buddleja davidii* along the northern boundary. Overall, this parcel was of **negligible** ecological value.

Photograph No. 01 – The entrance to the hardstanding car park off of Railway Approach Road.

Modified Grassland

4.2.3 Located to the west of the car park was an L-shape of grassland dominated by annual meadow-grass *Poa annua*, the parcel appeared regularly managed, evenly cut to less than 5 cm in height, with patches of bare ground likely from frequent footfall found along its edges. The grassland contained abundant assemblages of white clover *Trifolium repens* and common daisy *Bellis perennis* with frequent cover of wall barley *Hordeum murinum* and swinecress *Lepidium coronopus* as well as creeping buttercup *Ranunculus repens* and dandelion *Taraxacum officinale* found occasionally throughout. Overall, the parcel was of **low** ecological value at the **site** level.

Photograph No. 02 – The area of grassland with the individual tree and shrub to the west of the car park.

Individual Trees

4.2.4 Contained within the southwest corner of the grassland on site was a single medium-height, mature Norway maple tree *Acer platanoides*. The individual showed clear evidence of recent crown management, leaving obvious gaps, particularly within the lower canopy. Overall, the feature was of **medium** ecological value at the **site** level.

Introduced Shrub

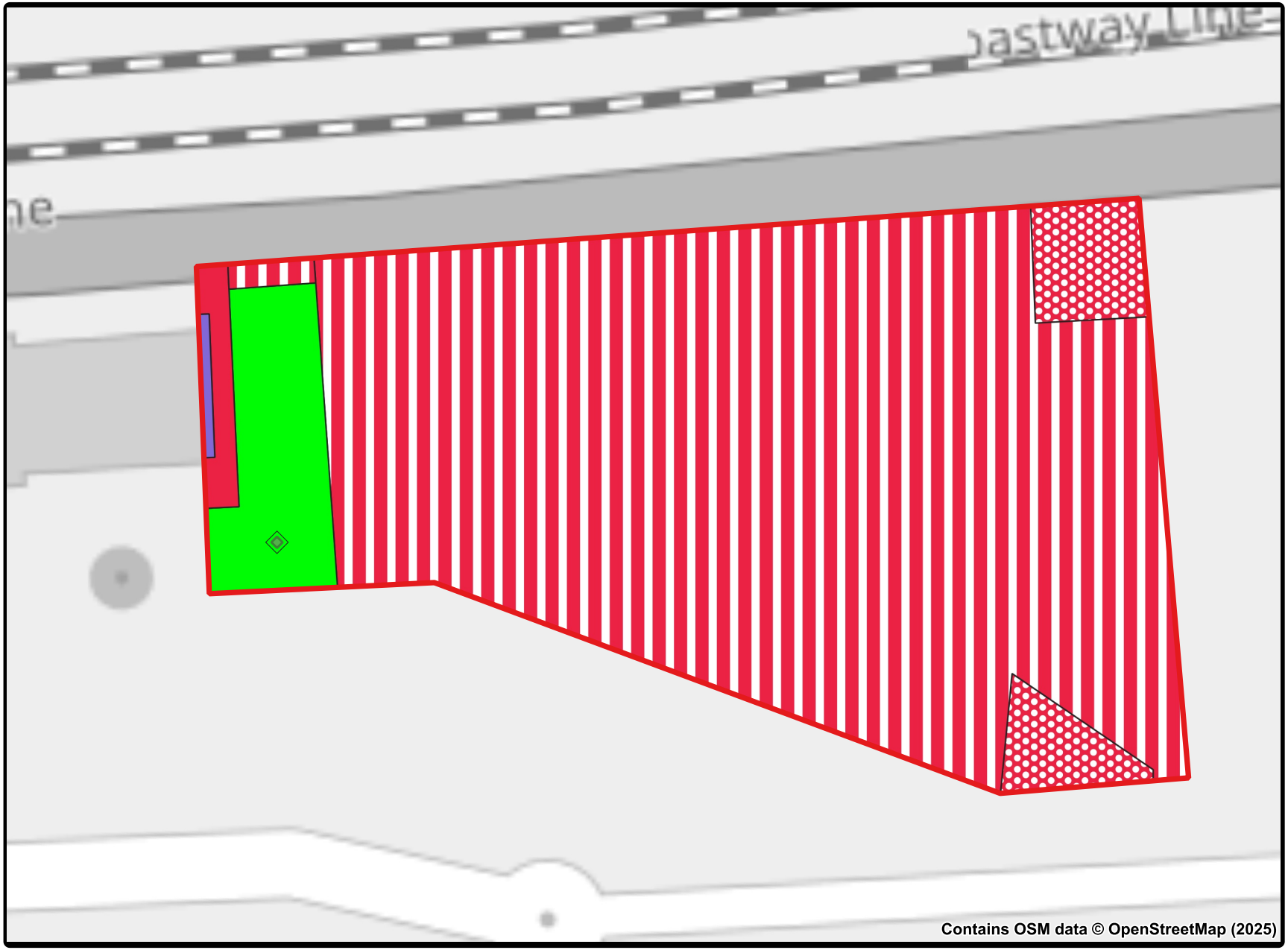
4.2.5 Running along the eastern and southern faces of Sandell House was a bed of firethorn *Pyracantha spp.* shrub. The firethorn was low-growing and dominated the bed, with no other vegetation identified in the parcel. The shrubs themselves were relatively thin and lacked any density, indicating recent introduction and / or regular management. Overall, this linear habitat was of **low** ecological value at the **site** level.

Photograph No. 03 - Closer view of the firethorn adjacent to the eastern face of Sandell House.

Sparsely Vegetated Urban Land

4.2.6 Within the northeast and southeast corners of the car park were areas of loose gravel, slightly raised above the height of the surrounding hardstanding by a border of concrete sleepers. These areas contained small patches of vegetation dominated by black medick *Medicago lupulina*, as well as frequent buddleia *B. davidii* and occasional willowherb *Epilobium montanum*. Overall, these parcels were of **low** ecological value at the **site** level.

Photograph No. 04 – The northeast (left) and southeast (right) sections of gravel.



Legend

- Red Line Boundary
- Existing Medium Urban Tree
- Artificial unvegetated, unsealed surface
- Built linear features
- Developed land; sealed surface
- Introduced shrub
- Modified grassland

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Client
Architectus Ltd

Project Title & Location
Capella House Car Park,
Railway Approach, Worthing

Drawn by	Approved by	Rev	Date
JT	WM	00	07/07/25

15 30 m

Figure No. 01 - Site Habitat Plan

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4.3 Invasive Species

4.3.1 Buddleia *B. davidii* was observed in the northeast corner of the car park, likely encroaching from the vegetated verge neighbouring the site. This species is not listed on Schedule 9 of the Wildlife and Countryside Act 1981; however, it is listed as an invasive species within Sussex.

4.4 Protected and Notable Fauna - Likely Presence Assessment

Amphibians

Desk Study

4.4.1 The data search returned 2 no. records for great crested newt *Triturus cristatus* within the search area, both records were historical and dated from 1984. The search also returned a further 47 no. records for 3 no. widespread amphibian species, including 34 no. common frog *Rana temporaria*, 9 no. common toad *Bufo bufo*, and 4 no. smooth newt *Lissotriton vulgaris*. The closest record was for common frog found c. 0.2km northeast of the site.

Site Assessment

4.4.2 No GCN habitat exists on site, further, most great crested newts tend to stay within 250m of breeding ponds (Langton *et al.*, 2001). Therefore, the site was considered to be of **negligible** suitability to GCN.

Reptiles

Desk Study

4.4.3 The data search returned 335 no. records for five species of reptiles from within the search area, including 296 no. record for adder *Vipera berus,* 15 no. for slow worm *Anguis fragilis*, 9 no. for common lizard *Zootoca vivipar*a and a single record of a loggerhead turtle *Caretta caretta*. The closest record was of a wall lizard *Podarcis muralis* located c. 0.3km west of the site.

Site Assessment

4.4.4 Reptiles require a mosaic of habitats to persist in a landscape, including vegetative cover for refuge opportunities, open areas for basking and a diverse flora to support viable invertebrate prey throughout the year. The area of grassland on site lacks the necessary height to be able to support reptiles, making the site unsuitable as reptile habitat. Therefore, the site is considered to be of **negligible** suitability to reptile species.

Bats

Desk Study

4.4.5 The data search returned 67 no. records for 7 no. species of bat, including records for common pipistrelle *Pipistrellus pipistrellus*, serotine *Eptesicus serotinus*, noctule *Nyctalus noctula*, and brown long-eared bats, from within the search area. This included records for observations of bats in the field and acoustic analysis. The closest records were centred c. 1.6km east, northeast of the site and were for observations of a pipistrelle species made in the field.

Preliminary Roost Assessment - Trees

4.4.6 A single medium-sized mature Norway maple was identified within the bounds of the site. An inspection of this tree assessed it as offering no potential roosing features.

Preliminary Roost Assessment – Buildings

4.4.7 No buildings were present within the site; therefore, further consideration regarding bat roost within buildings has been scoped out of this assessment.

Winter Roosting Potential

4.4.8 Given the preliminary roost assessment found no suitable roosting features on site, it was determined that the site offered **negligible** winter roosting potential.

Foraging and Commuting Suitability

4.4.9 Bat foraging habitat on site is limited to the individual Norway tree as the modified grassland on site lacks the floral diversity to support a good range and abundance of prey species. No suitable bat commuting habitat exists on site. Therefore the habitats on the site are of **low** suitability to only gap and light tolerant species of foraging / commuting bats.

Dormice

Desk Study

4.4.10 The data search returned no records of dormouse *Muscardinus avellanarius* from within the search area.

Site Assessment

4.4.11 The site did not contain any suitable boundary vegetation or habitat suitable to support dormouse. Therefore, the site is considered to be of **negligible** value to this species.

Badgers

Desk Study

4.4.12 Under the protections afforded to badgers *Meles meles* records have been kept confidential and were therefore not included within the data search.

Site Assessment

4.4.13 No evidence of badger presence, such as 'push-throughs', setts, latrines, footprints or badger guard hairs was identified during the site assessment. Moreover, suitable badger foraging habitat on site is restricted to the modified grassland habitat. However, it's suitability is reduced due to the small size of the habitat parcel. Therefore the site is considered to be of **negligible** value to badgers.

Birds

Desk Study

4.4.14 The data search returned 103,786 no. records for 233 no. species of birds from within the search area. This included records for 42 no. birds listed under Schedule 1 (Wildlife and Countryside Act, 1981) (as amended), a further 51 no. found on the Birds of Conservation Concern (BoCC) Red List (Stanbury et al, 2021), and 34 no. classed as Section 41 Priority Species (NERC, 2006). Among the abovementioned records were multiple species with a known preference for nesting in buildings and cavities, such as swift *Apus apus*, swallow *Hirundo rustica*, house martin *Delichon urbicum* and starling *Sturnus vulgaris*. As well as records for many birds of prey, small passerines and larger generalist species such as pigeons and gulls.

Site Assessment

4.4.15 Suitable breeding bird habitat on site is restricted to the individual tree. Therefore, the site is considered to be of **low** value to nesting birds.

Invertebrates

Desk Study

4.4.16 The data search returned 1516 no. records for 55 no. species of protected / notable invertebrates from within the search area, including 14 no. protected butterfly species, such as brown hairstreak *Thecla betulae*, small blue *Cupido minimus*, and Duke of Burgundy *Hamearis lucina*. An additional 38 no. notable moth species were also listed, including blood vein *Timandra comae*, small emerald *Hemistola chrysoprasaria*, and hedge rustic *Tholera cespitis*, amongst others. The search also returned records for stag beetle *Lucanus cervus*, saltmarsh short-spur beetle *Anisodactylus poeciloides* and large garden bumblebee *Bombus ruderatus*.

Site Assessment

4.4.17 Overall, the site lacked the habitat necessary to support notable assemblages of invertebrates; the grassland did contain a relatively diverse selection of flora to support a good range and abundance of invertebrates. Therefore, the site was considered to be of **low** value to widespread invertebrates.

Others

4.4.18 The data search also returned several records for hedgehog *Erinaceus europaeus* within the search area; however, given that the site lacks any significant areas of suitable foraging grassland and the absence of appropriate vegetative cover, the site was deemed to be of **negligible** value to hedgehogs and other small terrestrial mammals.

5.0 ECOLOGICAL CONSTRAINTS AND RECOMMENDATIONS

5.1 Internationally Designated Sites

5.1.1 No internationally designated statutory sites were identified within a potential zone of influence of the proposed development site. Due to the intervening distance to such designations and the small scale of the development, no impacts upon any internationally designated sites are likely to occur.

5.2 Nationally and Locally Designated Sites

5.2.1 Several nationally and locally designated areas were identified within a potential zone of influence of the site. However, none exist within or directly adjacent to the site, so would not be likely to be directly impacted by proposals.

5.3 On Site Habitats

5.3.1 The following section provides an evaluation of the potential impacts of proposals on the habitats on site and outlines any recommendations required in order to ensure proposals accord with planning policy and legislation (see *Appendix* A), and to maximise opportunities to deliver net gains for biodiversity. Where identified, any potential impacts should be addressed in line with the mitigation hierarchy (BSI, 2013) (CIEEM, 2022) and where possible, mitigation should be embedded in the scheme design as this gives assurance of delivery.

Biodiversity Net Gain Statement

5.3.2 The proposed development does not impact a priority habitat. Nor does it impact more than 25m^2 of onsite habitat with a value greater than 0, or 5 metres of linear habitats such as hedgerows. As such, the development is subject to the de minimis exemption and is not required to demonstrate Biodiversity Net Gain.

Evaluation and Recommendations

5.3.3 Overall, the habitats on site were assessed as being of broad **low** ecological value. The existing areas of modified grassland and hardstanding are highly suitable for development, and the loss of these habitats could be compensated for within the scheme.

5.3.4 The greatest ecological interest at the site is associated with the individual tree. Proposals should aim to retain and protect this tree wherever practicable.

5.4 Protected and Notable Species

5.4.1 Varying levels of legal protection are afforded to certain protected animals, certain species of conservation importance and broader biodiversity (see *Appendix A – Planning Policy and Legislation*). Therefore, in order to ensure proposals accord with statutory legislation, further surveys for these taxa may be required to determine their presence and, if present, to devise an appropriate mitigation strategy. However the site lacks suitable habitat for any protected / notable species, therefore no further survey work is being recommended.

Bats

5.4.2 The protected species assessment identified that the site and adjacent habitats would be likely to be of **low** value to gap / light tolerant commuting and foraging bat species in the area. Though the site is unlikely to support a notable assemblage of foraging / commuting bats, therefore, bat activity surveys are unlikely to be required. However, proposals should be mindful of the potential for bats to occur in the area by ensuring that the site is protected from inappropriate nocturnal lighting, by limiting the need for nocturnal lighting in the first instance. Any external lighting designs should comply with best practice standards regarding external lighting and bats (BCT & ILP, 2023).

Birds

5.4.3 The protected species assessment identified that the site and adjacent habitats offered habitats of **low** value to some widespread species of birds. Should any habitat suitable to support nesting birds scheduled for removal, i.e. trees, should be cleared outside of the main bird nesting season (March – August inclusive) or first be subject to a bird nesting check prior to removal, to be conducted by a suitably qualified ecologist or arborist.

5.4.4 As detailed in *BS 42021:2022 Integral nest boxes* (BSI, 2022), integral nest boxes should be installed in all new developments at a rate equal to the number of dwellings. This could comprise integrated bird boxes targeted for a range of species, such as swifts, as well as sparrows and starlings. Boxes should be installed to the north-facing aspect of the new buildings, avoiding areas above windows and doors.

Invertebrates

5.4.5 The protected species assessment identified that the site and adjacent habitats offered **low** potential to support minor assemblages of invertebrates. It is recommended that provisions for invertebrates be incorporated within the scheme, such as including plants of known value to invertebrates in any soft landscaping plans.

6.0 OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENTS

6.1 In addition to any requirement to deliver +10% Biodiversity Net Gain outlined by the Environment Act (2021), net gains for biodiversity are a requirement outlined in National Planning Policy Framework (Department for Levelling Up, Housing & Communities, 2024) and local planning policy guidance. Opportunities for ecological enhancements which could be incorporated into the scheme design are provided below:

- The use of seed and fruit bearing species of tree such as cherry, rowan, birch, hawthorn and crab apple to provide a foraging resource for birds and insects;
- Installation of integrated bird and bat boxes into new buildings, and
- Installation of 'bug hotels', bird and bat boxes to mature trees;
- The use of flowering lawn in areas which require regular mowing rather than a standard amenity mix;
- Incorporation of semi-natural urban habitats where possible, such as rain gardens and SuDs;
- Green walls and roofs wherever possible, which are simplest to achieve on small structures such as bin stores and bike sheds; and
- Installation of invertebrate boxes in both sunny and sheltered locations to cater for a range of species; and
- Planting of new native species-rich hedging to the boundaries of the site.

7.0 CONCLUSIONS

7.1 The site covers an area of 0.08 ha and is located immediately south of Worthing Central Station, Platform 3. The site consists of a 27-space hardstanding car park with a section of grassland to the west and two areas of loose gravel within the northeast and southeast corners. Surrounding the site was a landscape of commercial and residential properties which lies between the South Downs to the north, and the coast to the south. The greatest ecological interest at the site is associated with the individual tree, which should be retained and protected throughout proposals, wherever practicable.

7.2 The habitats within and adjacent to the site were found suitable to support foraging / commuting bats, birds and minor invertebrate assemblages. Due to the overall low value of the site, further surveys have been ruled out under the condition that appropriate RAMs are incorporated into the scheme. As the presence, or potential presence, of protected species is a material consideration in the planning process, these surveys shall need to be undertaken before determination of the planning application.

7.3 Proposals have negligible potential to impact any statutory designations identified within a potential zone of influence of development. Therefore, further assessment in regard to the *Habitat Regulations (2017)* or site-specific mitigation would not be required.

7.4 Opportunities for ecological enhancement have been provided to allow the ecological value of the site to be maximised. However, the development is subject to the de minimis exemption and is not required to demonstrate Biodiversity Net Gain; a statement evidencing this exemption will be produced in place of the standard Biodiversity Net Gain report.

7.5 Subject to a sensitively designed scheme, which gives due consideration to the survey and mitigation requirements outlined herein, no major ecological constraints have been identified which would preclude the provision of a well-designed development.

8.0 REFERENCES

BCT & ILP. (2023). *Guidance Note 08/23. Bats and artificial lighting at Night. Bats and the Built Environment series.* Institution of Lighting Professionals Regent House, Regent Place, Rugby, Warwickshire.

Bright. P., Morris., P & Mitchell-Jones. T. (2006). *The Dormouse Conservation Handbook.* Second edition. Published by English Nature. ISBN: 1 85716219 6.

BSI. (2012). *BS 5837:2012 Trees in relation to design, demolition and construction: Recommendations*. London: BSI - British Standards Institution.

BSI. (2013). *BS 42020:2013 Biodiversity – Code of practice for planning and development.* London: BSI - British Standards Institution.

BSI. (2022). *BS 42021:2022 Integral nest boxes – selection and installation for new developments – specification*. London: British Standards Institution.

CIEEM. (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM. (2020). *Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK.* 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester.

CIEEM. (2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.* version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins., J. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition.)* The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6.

Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). *The Water Vole Mitigation Handbook* (The Mammal Society Mitigation Guidance Series). Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.

Department for Levelling Up, Housing & Communities. (2024). *National Planning Policy Framework.* December 2024. Fry Building, 2 Marsham Street, London.

English Nature. (2001). *Great Crested Newt Mitigation Guidelines*. Peterborough.

Gent, T., & Gibson, S. (2003). *Herpetofauna Workers' Manual.* Joint Nature Conservation Committee. Monkstone House, City Road, Peterborough, Cambs, PE1 1JY.

Harris, S., Cresswell, P. and Jefferies, D. (1989). *Surveying Badgers*. An occasional publication of the mammal society – No. 9. Baltic Exchange Buildings, 21 Bury St, London, EC3 5AU.

Jukes, A. (2021). *Considering Terrestrial Invertebrates in Preliminary Ecological Appraisals*. In Practice. 40-45, Issue 111. CIEEM.

Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001). *Great Crested Newt Conservation Handbook.* Froglife, Halesworth.

NE. (2022) *Guidance. Wild Birds: Advice for making planning decisions.* Published by Natural England, 14th January 2022. Available online: https://www.gov.uk/guidance/wild-birds-advice-for-making-planning-decisions#survey-methods.

NE. (2023). *The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology.* Natural England. Available online: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides.

Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000). *Evaluating the suitability of habitat for the great crested newt (Triturus cristatus).* Herpetological Journal, 10, 143–155.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747. Available online: https://britishbirds.co.uk/content/status-our-bird-populations.

UKHabs Ltd. (2023). *UK Habitat Classification Version 2.0*. Available online: https://ukhabs.org.

Table No. 08 – Species List for Habitat Parcels

Modified Grassland

Common Name	***Scientific Name***	***DAFOR***
Annual Meadowgrass	*Poa annua*	***D***
Bristly Oxtongue	*Helminthotheca echioides*	***R***
Broadleaf Plantain	*Plantago major*	***F***
Common Daisy	*Bellis perennis*	***A***
Common Ragwort	*Jacobaea vulgaris*	***R***
Creeping Buttercup	*Ranunculus repens*	***O***
Dandelion	*Taraxacum officinale*	***O***
Doves-foot Cranesbill	*Geranium mole*	***O***
Field Madder	*Sherardia arvensis*	***R***
Hop Trefoil	*Trifolium campestre*	***R***
Perennial Ryegrass	*Lolium perenne*	***A***
Ribwort Plantain	*Plantago lanceolata*	***R***
Selfheal	*Prunella vulgaris*	***O***
Swine Cress	*Lepidium coronopus*	***F***
Wall Barley	*Hordeum murinum*	***F***
White Clover	*Trifolium repens*	***A***
Yorkshire Fog	*Holcus lanatus*	***R***

Vegetated Urban Land

Common Name	***Scientific Name***	***DAFOR***
Black Medick	*Medicago lupulina*	***D***
Bramble	*Rubis fruticosus*	***LF***
Broadleaf Willowherb	*Epilobium montanum*	***O***
Buddleia	*Buddleja davidii*	***F***
Field Bindweed	*Convolvulus arvensis*	***LO***
Ivy	*Hedera helix*	***R***

Introduced Shrub

Common Name	***Scientific Name***	***DAFOR***
Firethorn	*Pyracantha spp.*	***D***

Individual Trees

Common Name	***Scientific Name***	***DAFOR***
Norway Maple	*Acer platanoides*	***D***

D – Dominant; A – Abundant; F – Frequent; O – Occasional; R – Rare; L – Locally

Appendix A – Planning Policy and Legislation

Legislation

Legislation relating to wildlife and biodiversity of particular relevance to this report includes:

- *The Conservation of Habitats and Species Regulations 2017;*
- *The Wildlife and Countryside Act 1981 (as amended);*
- *The Natural Environment and Rural Communities (NERC) Act 2006; and*
- *The Environment Act 2021.*

This above legislation has been addressed, as appropriate, in the production of this report. Further details of legislation relating to the protection of particular ecological receptors are provided in the table below:

Ecological Constraint	Rationale
SACs (Special Area of Conservation), SPAs (Special Protection Areas) and Ramsars (Wetlands of International Importance)	Under the Conservation of Habitats and Species Regulations 2017 places a duty on the competent authority to maintain the favourable conservation status of designated SAC, SPA and Ramsar sites. Therefore, where it appears to the appropriate nature conservation body that a notice of a proposal relates to an operation which is, or forms, part of a plan or project which is likely to have a significant effect on a European site (either alone or in-combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, it must make an appropriate assessment of the implications for that site in view of that site's conservation objectives. In the light of the conclusions of the assessment, it may give consent for the operation only after having ascertained that the plan or project will not adversely affect the integrity of the site.
European protected species (bats, otters, dormice, water voles, great crested newts)	It is an offence under the Conservation of Habitats and Species Regulations 2017 to deliberately kill or injure a European protected species, to destroy breeding/resting sites, or to deliberately disturb these species and affect their ability to survive, rear young, breed, or hibernate.
Nationally protected species (bats, water vole, otter)	It is an offence under the Wildlife and Countryside Act 1981 (as amended) to intentionally or recklessly disturb a species listed on Schedule 5 whilst it is in a place of shelter, or to obstruct access to a place for shelter.
Nationally protected species (reptiles)	It is an offence under the Wildlife and Countryside Act 1981 (as amended) to kill or injure common species of reptiles.
National conservation priority species (white-clawed crayfish, fish, common toad, reptiles, noctule, water vole, otter, hedgehog), i.e., UKBAPs	Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of species and habitats that are of principal importance for the conservation of biodiversity, and to take, and promote others to take, such steps to further the conservation of these habitats and species. These species and habitats will be considered by Planning Authorities in regard to the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) to conserve and enhance the natural environment.
Badgers	It is an offence under the Protection of Badgers Act 1992 to damage or destroy a badger sett; obstruct any entrance of a badger sett; and disturb a badger whilst it is occupying a

Ecological Constraint	Rationale
	badger sett.
Wild mammals (rabbits, foxes, water vole, otter, hedgehog, badger)	It is an offence under the Wild Mammals (Protection) Act 1996 to inflict unnecessary suffering to any wild mammal with intent.
Nesting birds	It is an offence under the Wildlife and Countryside Act 1981 (as amended) to damage or destroy a bird's nest whilst it is in use, and to kill or injure a bird or destroy an egg.
Non-statutory designated sites (SNCI's, LWS, LNR's, etc.)	LNRs are designated under Section 21 of the National Parks and Access to the Countryside Act 1949, which was amended by the Natural Environment and Rural Communities Act 2006. The value for biodiversity of LNRs and LWSs are recognised, and the sites and surrounding buffers are protected by the Local Plan.
Biodiversity	Section 40 of the NERC Act 2006 states that each public authority "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications. Chapter 15 of the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) states that the planning system and policies should minimise impacts on and provide net gains for biodiversity, and that, if significant harm to biodiversity would result from a development, then development should be avoided (through locating on alternative sites with less harmful impacts).
Irreplaceable habitats (ancient woodland, veteran trees, lowland meadows)	Chapter 15 of the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) states that 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.
Biodiversity Net Gain	+10% Biodiversity Net Gain (BNG) for new developments will be mandatory under the Environment Act (2021), although this deadline will be extended to April 2024 for small sites and there are exemptions for development below a 25m2 threshold, and for householder applications and self-builds. BNG means that proposals must result in more and/or better-quality natural habitats than there were before development. This also requires that any proposed habitats within the scheme would be necessary to manage for at least 30 years, which would be sought through the provision of S106 legal agreements or conservation covenants.

Local Planning Policy

The Worthing Local Plan 2020 - 2036 (adopted March 2023) sets out the planning policies for development in the district in relation to biodiversity. Those of potential relevance to this assessment are highlighted in the table below:

Policy Reference	Policy Text
DM5 - Quality of The Built Environment	a) All new development (including extensions, residential annexes, alterations, ancillary development, change of use and intensification) should: i. be of a high architectural and design quality and respect and enhance the character of the site and the prevailing character of the area. This will include consideration of proportion, form, design, context, massing, siting, layout, density, height, size, scale, materials, detailed design features and landscaping; ii. enhance the local environment by way of its appearance and character, with particular attention being paid to the architectural form, height, materials, density, scale, orientation, landscaping, tree canopy, impact on street scene and layout of the development; iii. make a positive contribution to the sense of place, local character and distinctiveness of an area; iv. respect, preserve and where appropriate enhance, heritage assets and settings; v. be well built, accessible, fit for purpose, and adaptable to changing lifestyle, demography and climate; vi. include a layout and design which: take account of potential users of the site; create safe conditions for access, egress and active travel (walking and cycling) between all locations; provide good links to integrated public transport; and have acceptable parking arrangements (in terms of amount and layout); vii. make a positive contribution to creating a safe and secure environment by integrating measures for security and designing out opportunities for crime; viii. not have an unacceptable impact on the occupiers of adjacent properties, particularly of residential dwellings, including unacceptable loss of privacy, daylight/sunlight, outlook, an unacceptable increase in noise giving rise in significant adverse impacts, or vehicular movements resulting in severe cumulative impacts on the road network, or loss of important open space of public value (unless it satisfies any of the exceptions set out under Policy DM7 – Open Space, Recreation and Leisure); ix. respect the existing natural features of the site, including landform, trees and biodiversity and contribute positively to biodiversity net gain. Where appropriate, this will include the protection and integration of existing trees and green infrastructure into new developments; x. ensure that lighting incorporated into developments provides the minimum for public safety, is energy efficient and avoids light pollution.
DM16 - Sustainable Design	a) All development (excluding householder applications) will be required to achieve the relevant minimum standards below unless superseded by national planning policy, Building Regulations or it can be demonstrated that it is not practicable, feasible or viable (in which case the minimum standard should be met as far as is possible). Applications for major development must be supported by a Sustainability Statement demonstrating that the minimum standards are met and where possible exceeded. All development

Policy Reference	Policy Text
	is encouraged to exceed these minimum standards where possible. **Towards Zero Carbon Development** b) All new build housing will achieve a minimum 20% C02 reduction compared to the Building Regulations Part L 2013 standard through energy efficiency measures, unless superseded by national policy or Building Regulations. Developers will be expected to provide evidence of the level of carbon reduction achieved in the dwellings through submission of SAP calculation reports at the design and built stages. c) New non-domestic buildings will achieve a 27% reduction in C02 on average per building compared to the Building Regulations Part L 2013 standard unless superseded by national policy or Building Regulations. Applications for major development should demonstrate how the design and layout of the development has sought to maximise reductions in carbon emissions in line with the energy hierarchy. d) All new build housing should seek to achieve an A rating (with a minimum expectation of B rating) Energy Performance Certificate. New housing should achieve a minimum of a 'C' rating Energy Performance Certificate. e) All non-domestic properties (including those created through conversions) should achieve a 'B' rating Energy Performance Certificate. f) Non residential development of at least 1,000 sqm floorspace should achieve BREEAM New Construction 'Very Good' as a minimum rating based on the latest BREEAM scheme.
DM18 - Biodiversity	a) Planning applications should be supported by relevant environmental information, which is informed by appropriate up-to-date ecological information, prior to determination b) All development should ensure the protection, conservation, and enhancement of biodiversity. If significant harm cannot be avoided (by locating development on an alternative site with less harmful impacts or through design), then such harm should be adequately mitigated. Where it cannot be adequately mitigated then as a last resort such harm must be compensated for. Where it cannot be compensated for, then planning permission should be refused. This process is known as the mitigation hierarchy. c) Developments which would adversely affect a Site of Special Scientific Interest (SSSI) (individually or cumulatively) will not normally be permitted. Exceptions will only be made where the benefits of the development on the particular site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts. Where an exception is considered the mitigation hierarchy will apply. d) Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) will be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists. e) Proposals for development in, or likely to have an adverse effect (directly or indirectly) on a Local Wildlife Site, wildlife corridors, stepping stones or Local Geological Site will not be permitted unless it can be demonstrated the benefits of the proposal outweigh the need to safeguard the nature conservation value of the site/feature. Where an exception is considered the mitigation hierarchy will apply. f) Development that is likely to have an adverse effect on notable and priority habitat or species will not be permitted unless it can

Policy Reference	Policy Text
	be demonstrated the benefits of the proposal outweigh the need to safeguard the nature conservation value of the site/feature. Where an exception is considered the mitigation hierarchy will apply. g) Where relevant, new development adjacent to the coast will have to demonstrate how it is reducing the impacts of coastal squeeze. h) New developments (excluding change of use and householder) should provide a minimum of 10% net gain for biodiversity - where possible this should be onsite. Where it is required/necessary to deliver biodiversity net gain offsite this should be part of a strategic ecological network having regard to Green Infrastructure and Local Nature Recovery strategies. Where it is achievable, a 20%+ onsite net gain is encouraged and is required for development on previously developed sites. Major developments will be expected to demonstrate this at the planning application stage using biodiversity metrics. This should be accompanied by a long term management plan. i) Where appropriate, the Council will use planning conditions or obligations to provide appropriate enhancement and site management measures, and where impacts are unavoidable, mitigation or compensatory measures.
DM21 - Water Quality and Sustainable Water Use	a) Development should protect and enhance groundwater, surface water features and control aquatic pollution. Development will be permitted provided that it does not have an unacceptable impact on the quality and potential yield of local water resources, the water environment and its ecology. … e) All new residential development must achieve as a minimum the optional requirement set through Building Regulations for water efficiency that requires an estimated water use of no more than 110 litres per person per day.