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Ecological Assessment

Site Name

Land at Freemans Close, Walberton

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Client

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About the Author

This report has been co-prepared by Owen Crawshaw, a Principal Ecologist at The Ecology Co-op, with over 10 years' experience. As a full member of the Chartered Institute for Ecology and Environmental Management (CIEEM) and as a Chartered Ecologist through this body, he is bound by their code of professional conduct.

This report has been co-prepared by Rozel Hopkins, a Senior Ecologist at The Ecology Co-op, with over 5 years' experience. She has a Level 1 bat survey licence and a Level 1 great crested newt survey licence and as a Full member of the Chartered Institute for Ecology and Environmental Management (MCIEEM) is bound by their code of professional conduct.

About the Reviewer

This report has been reviewed by Kate Priestman, who is a Principal Ecologist with over twenty years' experience. Kate has undertaken survey work and reporting, and prepared European Protected Species licences for numerous schemes. As a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and a Chartered Environmentalist (CEnv), she is bound by CIEEM's code of professional conduct.



Report Summary

Purpose	The Ecology Co-op was commissioned by Mr Tim Howarth to undertake an Ecological Assessment of Land at Freemans Close, further to an application for change of use of the site.
Context	The Land at Freemans Close measures approximately 1.88ha and is located between the villages of Fontwell and Walberton in West Sussex. The site contains a number of buildings set amongst areas of garden with scattered trees and a central access road; it was previously used as a residential learning centre.
Key findings	The proposed works at Land at Freemans Close constitute change of use from an education facility to residential housing and are therefore relatively light in terms of their ecological impacts. The overall nature and extent of the site's habitats will not change significantly. Building 2 & 3 were assessed as having 'moderate' suitability for roosting bats. All trees within the site were classified as 'negligible' in terms of their roost suitability. eDNA sampling of two ponds within the locality of the site returned negative results. Whilst access was not granted to all ponds within the local area, the site's habitats are considered largely unsuitable for GCN and the species is unlikely to be presents. A badger survey did not identify any setts. Invasive Virginia creeper was recorded within the site.
Recommendations	A detailed Biodiversity Net Gain calculation will be required to quantify the impact of the change of use on the site's biodiversity. Installation of solar panels on Building's 2 & 3 is considered to present a low-level risk to bats and their roost site given the nature of the proposed works. Reasonable avoidance measures in the form of sensitive timing and careful, supervised works have been prescribed. Reasonable avoidance measures are also recommended for the construction phase with regard to nesting birds and reptiles. A Biodiversity Corridor, identified by the BENP crosses the site towards its western edge. Creation of gardens, including the installation of fencing, and external has the potential to sever this corridor. Ecological permeability in this area (and across the site) must be maintained and enhanced where possible through the creation of hedgehog highways and dark corridors for bats. This report makes recommendations for enhancement through native planting and species-specific measures for roosting bats, nesting swift and invertebrates.



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op has been commissioned to undertake an Ecological Assessment of Land at Freemans Close, Walberton by Mr Tim Howarth. This report presents the findings of a walkover survey undertaken on the 22nd August 2025, with subsequent protected species surveys undertaken across 2025. The survey programme was led by Rozel Hopkins MSci (Hons). It provides details on the potential for any protected/notable species and/or habitats to be present at the site and a detailed assessment of the potential ecological constraints and opportunities in relation to a proposed application for change of use (residential) of the site.

Measures to avoid, mitigate and/or compensate for significant adverse effects are set out. The potential to incorporate ecological enhancement measures as part of the scheme is discussed, in addition to any requirement to achieve biodiversity net gain.

1.2 Background

The Land at Freemans Close measures approximately 1.88ha and is located between the villages of Fontwell and Walberton in West Sussex. The site contains a number of buildings set amongst areas of garden with scattered trees and a central access road; it was previously used as a residential learning centre. The site address is Freemans Close, Eastergate Lane, Walberton, Arundel, BN18 0AE with a central grid reference of SU 95713 06201. Figure 1 shows the boundary of the site.

There is a proposal for a change of use to create 25 new residential units. A proposed layout masterplan is provided in Figure 2.

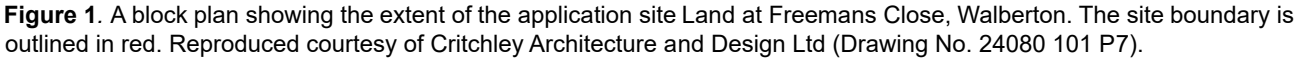




Figure 2. A proposed layout plan for the development at Land at Freeman Close, Walberton. Produced by Critchley Architecture and Design Ltd (Drawing No. 24080 155 P2). Dated 16.01.2026.

1.3 Policy and Legislation

Legal protection applying to relevant bird, mammal, herpetofauna, invertebrate species and flora, and current nature conservation planning policy is outlined in Appendix 1 of this report.

Where possible, this report provides guidance on how the proposal can be designed to meet the requirements of both local planning policy and the National Planning Policy Framework (NPPF). Details of the NPPF can be found in Appendix 1 and relevant local planning policy by Arun District Council is provided in Appendix 2.

2 METHODOLOGY

The methodologies used for this survey are in accordance with the Guidelines for Preliminary Ecological Appraisal¹, but also consider the Guidelines for Ecological Report Writing, Second Edition².

¹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

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



2.1 Desk Study

A search for existing records of protected species, species of conservation concern and invasive non-native species was requested from the Sussex Biodiversity Records Centre (SxBRC) records centre within a radius of 1km of the site.

A search of on-line mapping resources was undertaken to identify the location of any features of potential ecological interest including ponds within 500m (relevant to great crested newts *Triturus cristatus*), watercourses (relevant to riparian mammals and crayfish) and connectivity to woodland, scrub, and hedgerow networks (relevant to bats and dormice *Muscardinus avellanarius*) in the wider landscape around the site. The connectivity of the site to these features, buildings and other semi-natural habitats, such as grassland and heathland, are also relevant to great crested newts, reptiles and a wide variety of notable species of conservation concern.

The MAGIC website resource (www.magic.gov.uk) was used to identify the location of designated sites for nature conservation and European Protected Species (EPS) licences granted in relation to the survey site.

2.2 Field Survey

A site walkover survey was undertaken on 5th March & 19th August 2025, during which the habitats contained within the site were described and evaluated. The 2024 walkover also include UKHab mapping of the site. The application site was mapped under UKHab classification using Coreo and the UKHab/BNG Platform. All habitat types contained within the site, together with the dominant botanical species and indicators of important habitat types, such as ancient woodland or unimproved grassland, have been listed and described where identified.

Habitats and features at the site were evaluated for their potential to support legally protected species and/or species of conservation interest. In addition, observations of any important plant communities, bird assemblages or other potentially valuable ecological features were recorded.

Details of the preliminary survey methods for each legally protected species are given below. Any site-specific limitations to the survey, e.g. access constraints or seasonal constraints, are set out in section 3.11.



2.4 Bats

Bats can use a wide range of features for roosting purposes, including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks, cavities, ivy and loose bark.

2.4.1 Preliminary Roost Assessment

A detailed building inspection was carried out in accordance with best practice guidance as set out by the Bat Conservation Trust³; the inspection comprised identification of potential access points and 'Potential Roost Features' (PRFs) that bats could use and any evidence indicating the presence of bats using the building, such as rub marks, feeding remains, staining or droppings. The survey included a ground-based external inspection around the building and internal inspection of any enclosed loft spaces or roof voids, where safe access was possible.

The potential for roosting bats for each feature, or group of features was assessed as negligible, low, moderate, or high, in accordance with best practice. Any evidence confirming the presence of bats was clearly recorded including photos and samples taken (e.g. droppings), where appropriate.

The habitats surrounding the site and wider landscape were broadly assessed for their potential to support foraging and commuting bats.

2.4.2 Ground Level Tree Assessment

All trees likely to be affected directly or indirectly by the proposed development were subject to a ground-based visual inspection to identify potential roost features followed by climbing inspections where necessary and safe, to look for evidence of roosting bats and to further assess the suitability of the feature. The potential for roosting bats for each feature, or group of features was assessed as none, FAR (further assessment required) or PRF (Potential Roost Feature(s)) in accordance with best practice guidelines⁴.

Table 1. Characterising potential roost features in trees.

Category	Description
Negligible	A tree with negligible roosting habitat features likely to be used by bats.
Low	A tree of sufficient size to potentially support roosting features, but with none seen from the ground or features identified of limited roosting potential.
Medium	A tree with one or more potential roost sites that could be used by bats due to their size, conditions and surrounding habitat, but unlikely to support a roost of high conservation status such as a maternity or hibernation roost.
High	Trees with one or more potential roost sites that appear suitable for large numbers of bats or use as maternity or hibernation roosts.

³ Collins, J.(ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

⁴ Collins, J.(ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.



2.5 Breeding Birds

Birds can use a wide range of natural and artificial habitats when breeding, including trees, hedgerows, fields, houses and garden sheds. The habitats contained within the site and adjacent areas were broadly assessed for their potential to support important bird species/assemblages, and breeding birds. Any birds identified during the site visit were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern⁵ and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981). Further surveys are recommended as appropriate.

2.6 Dormice

Dormice are found in deciduous woodland and hedgerows, feeding on flowers, pollen, fruits, insects and nuts, favouring hazel *Corylus avellana* and honeysuckle *Lonicera periclymenum* for food and as bedding. The site was broadly assessed for its potential to support dormice. This included use of on-line mapping resources to assess the surrounding area for connectivity to large blocks of woodland, scrub and extensive hedgerow networks.

2.7 Great Crested Newt

Great crested newts breed in ponds during the spring and spend the rest of the year feeding on invertebrates primarily in semi-natural habitats including woodland, hedgerows, marshes and tussocky grassland. A desk study was undertaken to identify ponds and wet ditches within 500m of the site that might support breeding great crested newts. The value of the site for terrestrially foraging great crested newts and any features that might be used by hibernating newts has also been assessed.

Further surveys are recommended as appropriate, in accordance with best practice guidance⁶.

2.7.1 eDNA Survey

This technique allows a quick and reliable qualitative measure of the presence/likely absence of great crested newts. It involves collection of water samples from a pond, using a standard protocol set out by Natural England. The samples are sent to an approved laboratory to isolate and amplify environmental DNA (eDNA) shed into the water by amphibians during the breeding season. The eDNA samples of two ponds, located within 250m of the site, were collected on 23rd & 24th June 2025.

⁵ Stanbury, A., Eaton, M., Aebischer, N., Balmer, N., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). Birds of Conservation Concern 5: the status of bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man. *British Birds* 114, pp 723-747.

⁶ English Nature (2001). *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

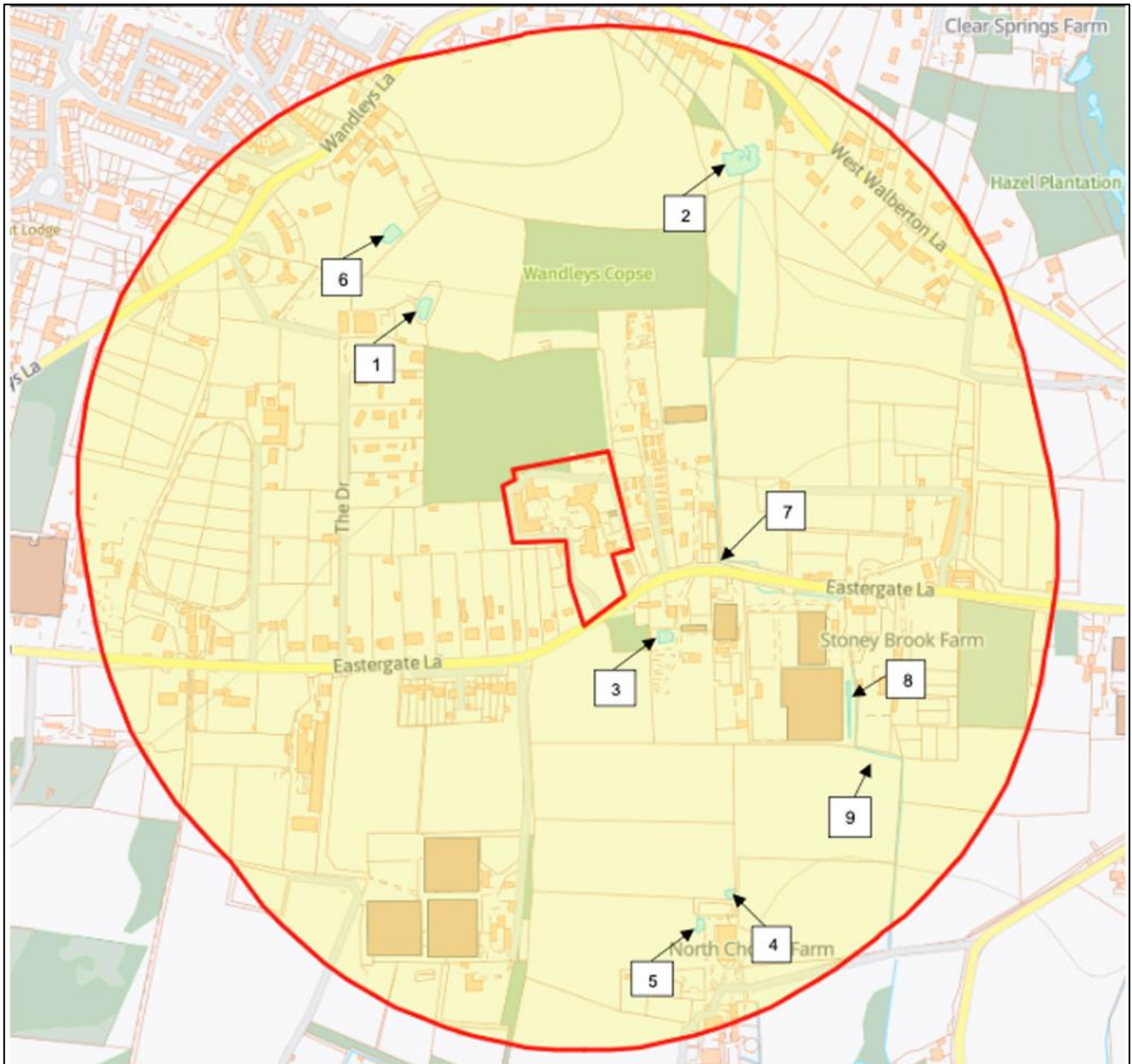


Figure 3. A plan showing the location of ponds around Freeman's Close with ponds 2 and 3 that were subjected to eDNA sampling in June 2025. Produced using QGIS Software (version 3.16.3 Hannover).

2.8 Reptiles

The common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica* and adder *Vipera berus* are widespread species that can be found in any of these habitats, whereas smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* have much more restricted and isolated populations on lowland heathland and sand dunes.

Habitats on the site were broadly assessed for their potential to support reptiles. Particular attention was paid to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (rough grassland and scrub).



2.9 Other Notable Species

The site's habitats were broadly assessed for their potential to support species of principal importance for nature conservation (Section 41 NERC Act 2006) and other notable species. This includes mammals such as harvest mouse *Micromys minutus*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, and many bird species. The site was broadly assessed for its potential to support important invertebrate assemblages with particular attention paid to features such as standing deadwood, wet flushes, bare earth banks and botanically rich areas.

3 BASELINE CONDITIONS

3.1 Designated Sites and Granted EPS Licences

There are no statutory or non-statutory designated sites within the zone of influence of the site.

Whilst not a formal site designation, the Barnham and Eastergate Neighbourhood Plan (BENP) has identified a biodiversity corridor which crosses through the application site at its western side (Figure 4). The BENP states:

“This corridor links Wandley’s Lane to Barnham Lane in a route through equine pastures, past Wandley’s Copse, through glasshouses, across Eastergate Lane, and bordering farmer’s fields to the Barnham-Walberton road. It marks the border between parishes and the northern edge of BENP’s built-up area. The corridor has several well-established trees where rooks, carrion crows, jackdaws and starlings regularly roost. There is a substantial orchard at the northeastern side of Downview Road frequented by jays and woodpeckers. At the eastern end it forms the top end of Hedge End Wood, where woodpeckers can be heard and bats frequent. The whole area is patrolled by kestrels, sparrowhawks and buzzards.”

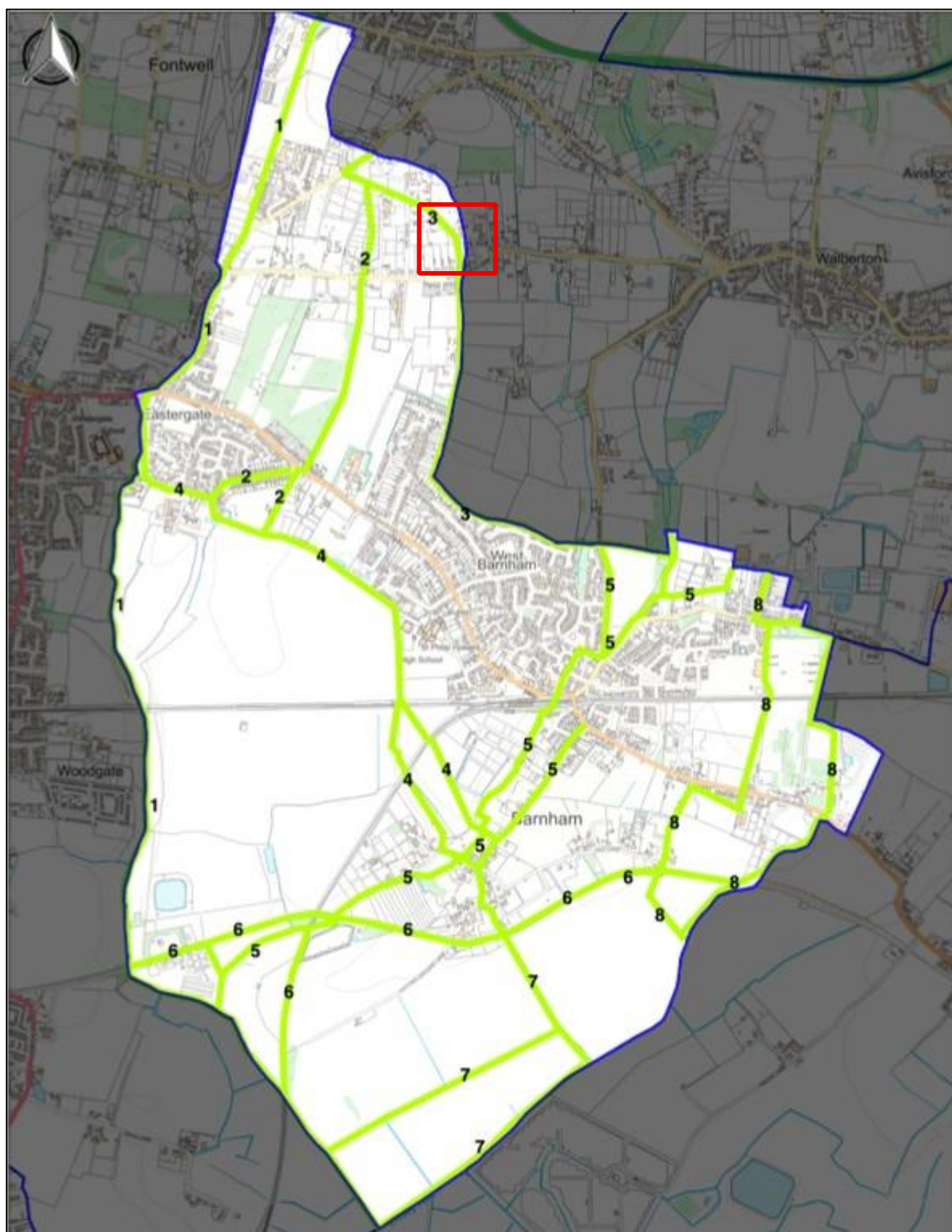


Figure 4. A map showing the Biodiversity Corridors identified within the BENP⁷. The corridor which runs through the western part of the application site is highlighted in red.

⁷ <https://www.arun.gov.uk/download.cfm?doc=docm93ijim4n17417.pdf&ver=18059>



There are three granted EPS licences for mitigation projects within 1km of the site boundary. The closest EPS licence to the site concerns Hazel dormouse and is located 0.7km east of the application site.

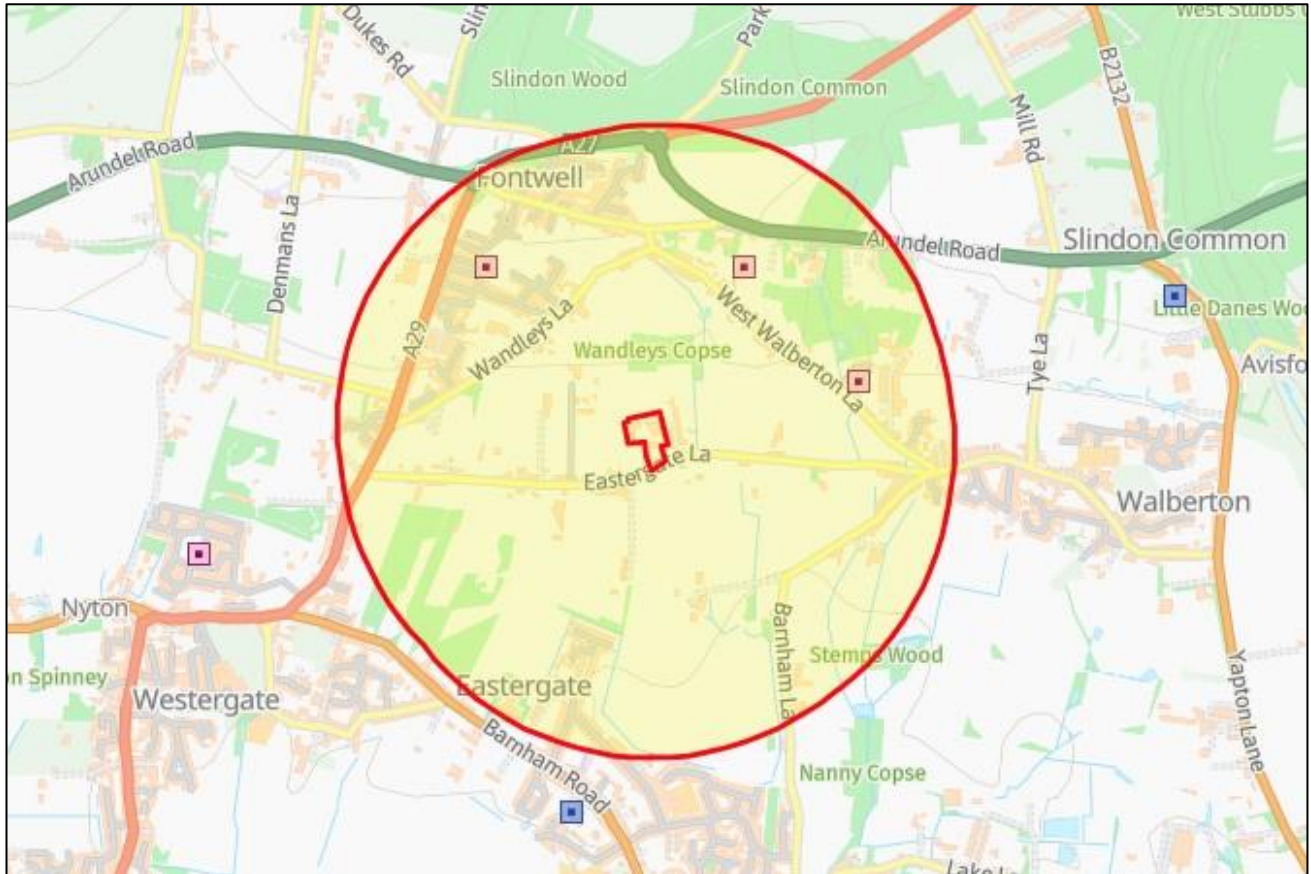


Figure 5. Granted EPS licences within 1km of Land at Freemans Close. The pink squares represent granted hazel dormouse licences. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government).

An area of ancient replanted woodland, priority deciduous woodland, and traditional orchard is located approximately 0.1km north of the site (Figure 6).



Figure 6. Priority habitats of importance for nature conservation within 1km of Land at Freeman Close. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>), contains public sector information licensed under the Open Government.

3.2 Habitats

Habitats within the site are described in Table 1, with a UKHab map and photographs presented below.

Table 2. Details of baseline habitats within the site at Land at Freeman Close.

UKHab Habitat (Figure 7)	Polygon/Line ID(s) (Figure 7)	Secondary Codes (see Appendix 3)	Description
u1b5 buildings	–		Multiple buildings are scattered across the site.
u1b developed land; sealed surface	–		Hard-standing is created in the form of a tarmacked road through the centre of the site as well as several pedestrian walkways.
u1c – artificial unvegetated; unsealed surface			An area of gravel aggregate with some colonizing vegetation exists at the south-eastern edge of the site.
u1 847 introduced shrub	IS1 & IS2	847 (introduced shrub)	Several areas of formal planting were noted within the site, species recorded include: buddleia <i>Buddleja davidii</i> , <i>Hebe</i> sp., New Zealand cabbage tree <i>Cordyline australis</i> and other non-native and ornamental plants.
g4 – modified grassland	G1-G8, G10		Multiple areas of existing lawn exist across the site. These areas are heavily mowed to maintain a short sward height.



UKHab Habitat (Figure 7)	Polygon/Line ID(s) (Figure 7)	Secondary Codes (see Appendix 3)	Description
			Species recorded include: yarrow <i>Achillea millefolium</i>, creeping bent <i>Agrostis stolonifera</i>, lesser burdock <i>Arctium minus</i>, false oat-grass <i>Arrhenatherum elatius</i>, daisy <i>Bellis perennis</i>, creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, field bindweed <i>Convolvulus arvensis</i>, narrow-leaved hawk's-beard <i>Crepis tectorum</i>, cock's-foot <i>Dactylis glomerata</i>, horseweed (Canadian fleabane) <i>Erigeron canadensis</i>, fescue <i>Festuca</i> sp., cleavers <i>Galium aparine</i>, dove's-foot crane's-bill <i>Geranium molle</i>, hedgerow crane's-bill <i>Geranium pyrenaicum</i>, ground-ivy <i>Glechoma hederacea</i>, bristly oxtongue <i>Helminthotheca echioides</i>, hogweed <i>Heracleum sphondylium</i>, Yorkshire-fog <i>Holcus lanatus</i>, common ragwort <i>Jacobaea vulgaris</i>, perennial rye-grass <i>Lolium perenne</i>, common mallow <i>Malva sylvestris</i>, Virginia-creeper <i>Parthenocissus quinquefolia</i>, ribwort plantain <i>Plantago lanceolata</i>, greater plantain <i>Plantago major</i>, creeping cinquefoil <i>Potentilla reptans</i>, selfheal <i>Prunella vulgaris</i>, creeping buttercup <i>Ranunculus repens</i>, bramble <i>Rubus fruticosus</i> agg., common sorrel <i>Rumex acetosa</i>, broadleaved dock <i>Rumex obtusifolius</i>, perennial sow-thistle <i>Sonchus arvensis</i>, dandelion <i>Taraxacum</i> spp., white clover <i>Trifolium repens</i>, and common nettle <i>Urtica dioica</i>.
g3c -other neutral grassland	G9, G11, G12a G12b		An area of unmanaged grassland is located along the northern section of the site. This is dominated by cock's-foot grass with frequent false oat and occasional creeping thistle and common knapweed. Creeping buttercup, broad-leaved dock, common nettle, white clover and common mouse-ear were also recorded. The area appears relatively unmanaged with a tussocky sward forming. An additional area of unmanaged grassland is located within the redline boundary at the north, which has a similar structure and species mix to the above grassland. Two final parcels of tall unmanaged grassland area also present at the south-western corner around the greenhouses. Species present are: creeping bent <i>Agrostis stolonifera</i>, barren brome <i>Anisantha sterilis</i>, lesser burdock <i>Arctium minus</i>, false oat-grass <i>Arrhenatherum elatius</i>, white bryony <i>Bryonia dioica</i>, field bindweed <i>Convolvulus arvensis</i>, cock's-foot <i>Dactylis glomerata</i>, American willowherb <i>Epilobium ciliatum</i>, great willowherb <i>Epilobium hirsutum</i>, horseweed (Canadian fleabane) <i>Erigeron canadensis</i>, Californian poppy <i>Eschscholzia californica</i>, hogweed <i>Heracleum sphondylium</i>, Yorkshire-fog <i>Holcus lanatus</i>, common ragwort <i>Jacobaea vulgaris</i>, nipplewort <i>Lapsana communis</i>, balm <i>Melissa officinalis</i>, broadleaved dock <i>Rumex obtusifolius</i>, stone parsley <i>Sison amomum</i>, feverfew <i>Tanacetum parthenium</i>, dandelion <i>Taraxacum</i> spp., white clover <i>Trifolium repens</i>, and common nettle <i>Urtica dioica</i>.



g 16 – tall forbs	TF1 & TF2	16 (tall forbs)	Two areas of tall forbs are present on site: A small patch of land is dominated by tall ruderal vegetation is present within an unmanaged tank area. Species include: creeping thistle, common nettle, hogweed and common ivy. In the northern section of the site there is an area of tall forbs
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UKHab Habitat (Figure 7)	Polygon/Line ID(s) (Figure 7)	Secondary Codes (see Appendix 3)	Description
			dominated by by creeping thistle and common nettle, likely relatively unmanaged. Grassy areas present in between tall forbs dominated by cock's-foot grass. Thorn-apple, wild teasel and broad-leaved dock were also recorded.
h3d – bramble scrub			Two areas of dense bramble scrub were noted within the site.
h2b – ornamental and non-native hedgerow	West 1 & West 2		The rear garden of Bramley Cottage is delineate by a hedgerow of garden privet <i>Ligustrum ovalifolium</i> with a goat willow <i>Salix caprea</i> tree and a lilac <i>Syringa vulgaris</i> shrub. A cherry laurel <i>Prunus laurocerasus</i> , hedgerow with some bramble <i>Rubus fruticosus</i> agg forms the front garden for this building also.
h2a – native hedgerow with trees	North Hedge	11 (hedgerow with trees)	Box <i>Buxus sempervirens</i> dominant hedgerow with frequent spindle <i>Euonymus europaeus</i> along the southern boundary of the access track. Individual trees such as field maple <i>Acer campestre</i> , alder, beech <i>Fagus sylvatica</i> and red oak <i>Quercus rubra</i> are present within the hedgerow.
w 33 – line of trees	North-West & North TL	33 (line of trees)	Two lines of trees are present along the site's northern boundaries. Species contained within these are dominated by alder <i>Alnus glutinosa</i>
u 200 – urban trees		200 (tree)	A total of 35 scattered trees were recorded across the site, this includes individual specimens of: Norway maple <i>Acer platanoides</i> , sycamore <i>Acer pseudoplatanus</i> , alder, silver birch <i>Betula pendula</i> , Atlas cedar <i>Cedrus atlantica</i> , Leyland cypress <i>Cupressus × leylandii</i> , beech <i>Fagus sylvatica</i> , fig <i>Ficus carica</i> , wild cherry <i>Prunus avium</i> , cherry plum <i>Prunus cerasifera</i> , dwarf cherry <i>Prunus cerasus</i> , <i>Prunus</i> sp., pear <i>Pyrus communis</i> , pedunculate oak <i>Quercus robur</i> , stag'shorn sumach <i>Rhus typhina</i> , goat willow <i>Salix caprea</i> , elder <i>Sambucus nigra</i> , and rowan <i>Sorbus aucuparia</i> , with other unlisted or hybrid species also recorded.

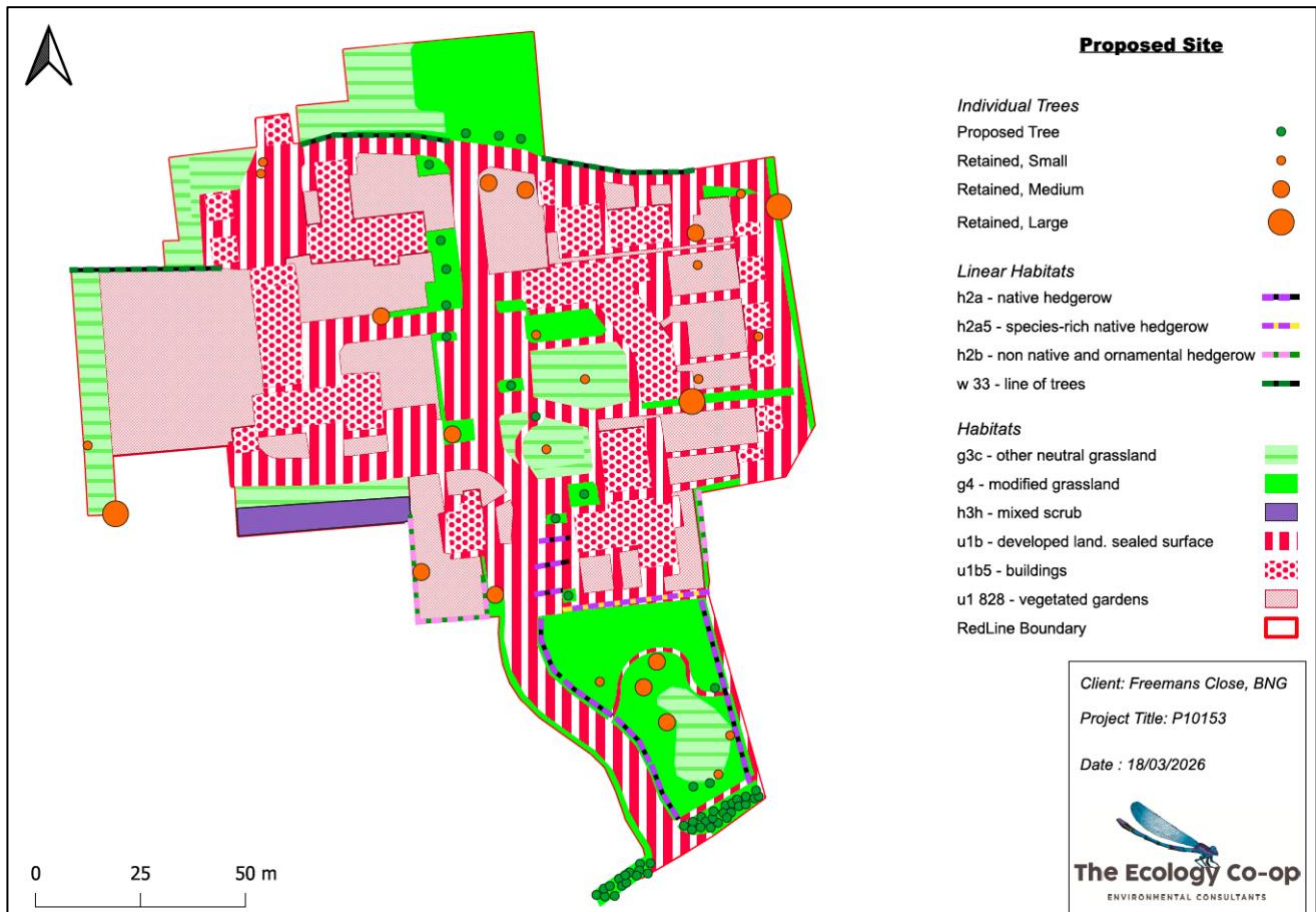


Figure 7. A UKHab map of Land at Freemans Close, Walberton. Produced using QGIS Software.



Photograph 1. u1b – developed land; sealed surface in the form of the road running through the site.



Photograph 2. One area of u1 (847) – introduced shrub within the site.



Photograph 3. An example of the g4 – modified grassland habitat present across the site.



Photograph 4. Areas of g3c- other neutral grassland located in the northern sections of the site.



Photograph 5. G12 other neutral grassland across the site.



Photograph 6. g1 (16) – tall forbs TF1.



Photograph 7. g1 (16) – tall forbs TF2.



Photograph 8. h3d – bramble scrub at the northern site boundary.



Photograph 9. One of the site's h2b – ornamental non-native hedgerows.



Photograph 10. One of the site's line of trees (w (33)).



Photograph 11. The native hedgerow with trees south of the existing grassy track.



Photographs 12a & 12b. Examples of the scattered trees found across the site.

3.3 Badgers

The badger walkover survey did not find any badger setts or conclusive evidence of badger activity. A number of mammal trackways were observed at the northern site boundary.



3.4 Bats

3.4.1 Preliminary Roost Assessment

A total of two buildings were assessed for their bat roosting potential. The locations of these are shown in Figure 8, with detailed descriptions and assessment of the buildings provided in Table 3 below.

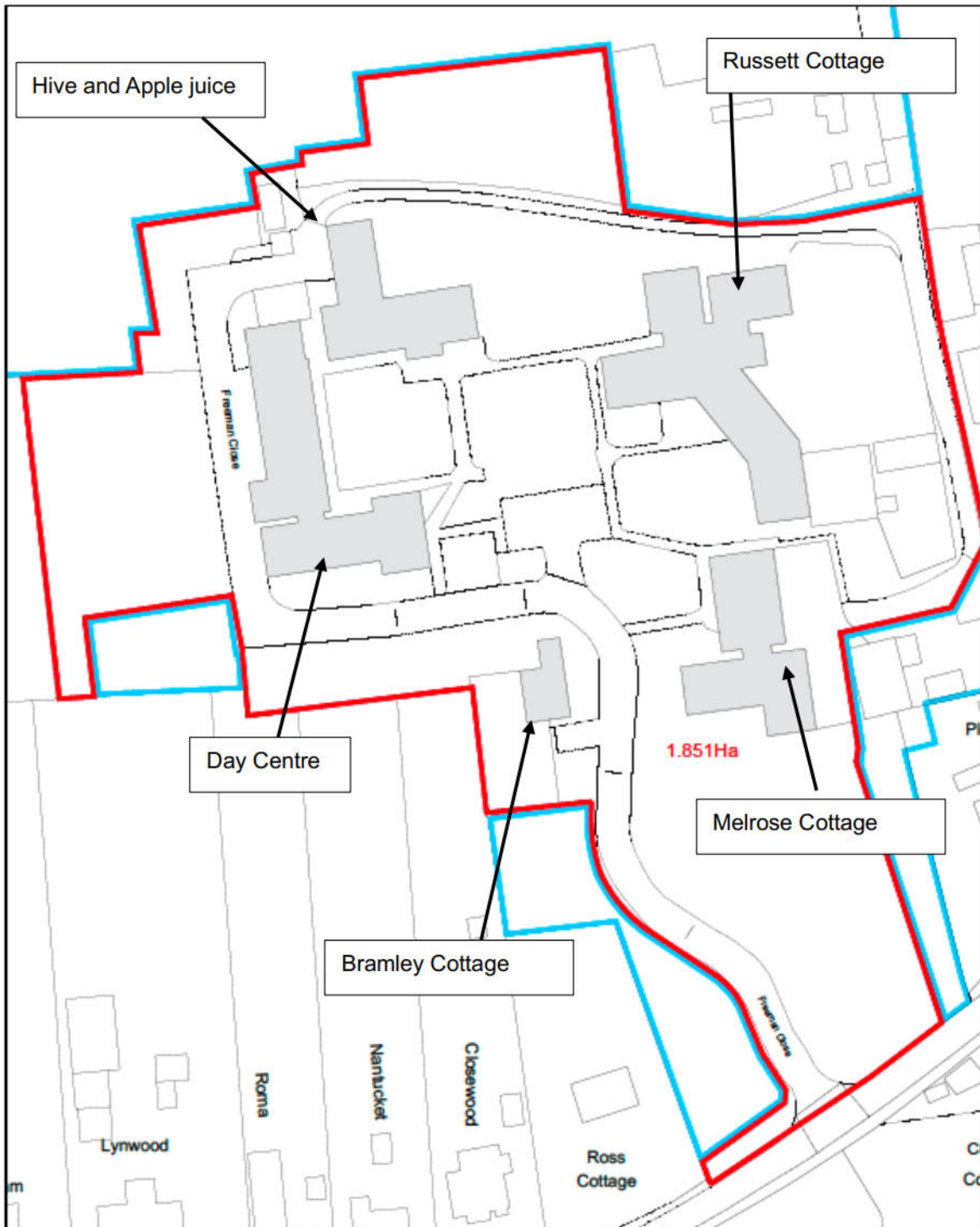


Figure 8. A plan showing the buildings at Land at Freemans Close which were assessed for their bat roost suitability as part of the study.



Table 3. Potential roost features for bats.

Buildings	Description of features	Assessment of suitability
Hive and Apple Juice Building	The building is a two-storey residential dwelling constructed of exposed brick measuring approximately 24m by 27m at its' longest and widest. The property has a hipped roof formed of clay roof tiles. The majority of the roof was tight with no features suitable for roosting bats. However between 5-10 lifted tiles were present on each elevation located around the edges of the roof close to the hips. Gaps were also seen under hip tiles particularly on the eastern face. Gaps between the top of the wall plate and soffit boxes were seen on the south-eastern and north-western corners of the building. The building was not accessed internally so the status of any internal loft voids cannot be assessed.	Moderate
Russett Cottage	The building is a single-storey residential dwelling constructed of exposed brick and render measuring approximately 45m by 23m from its' longest to widest. The property has a hipped roof formed of clay roof tiles with a hipped extension noted at the north-eastern section of the building clad with hanging tiles, connected by a small pitched roof entranceway in this area. Another entranceway is present on the western face which is cut-into the roof and weatherboarded, but this is tight with no features for bats. The majority of the roof has no suitability for bats, with limited gaps evident in field tiles. However, lifted tiles were seen under across the building with approximately 2-5 on each elevation close to the hips. Gaps were also present across all elevations under hip tiles, most of which weren't pugged with mortar. Gaps were also seen under broken or lifted hanging tiles on the two gablets on the north and western elevations. One gap was seen between the soffit box and wall on the southern corner of the building. The pitched-roof entranceway only had suitability for roosting bats in the form of one gap caused by a missing tile on the eastern pitch. Hanging tiles on the north-eastern extension were mostly tight, with a couple of gaps seen at corners. The building was not accessed internally so the status of any internal loft voids cannot be assessed.	Moderate



Melrose Cottage	The building is a single-story residential dwelling measuring approximately 34m by 25m from its' longest to widest. It is constructed of brick which has been rendered and painted white at the front. The elevations at the north, east and south are exposed brick and clad with hanging tiles. The majority of the roof is tight, with limited gaps evident in field tiles. However, lifted tiles were seen under across the building with approximately 5 on each elevation. Gaps were also present across all elevations under hip tiles, most of which weren't pugged with mortar. Gaps were also seen under hanging tiles at the corners of the building.	Moderate
Melrose Cottage	The building was not accessed internally so the status of any internal loft voids cannot be assessed.	
Bramley Cottage	The building is a two-storey residential dwelling constructed of exposed brick measuring approximately 5.5m by 7.5m. The property has a hipped roof formed of clay roof tiles with a single storey extension noted to the northern aspect of the building. Hanging tiles were noted to all aspects of the property. Several potential roosting features and/or access points have been noted to the property including; a number of gaps to raised hip tiles of the roof on all elevations as well as gaps to hanging tiles noted on all elevations. In addition, two gaps have been noted to roof tiles on the southern elevation and a gap under a ridge tile on the single storey extension. Internally, the loft void measured approximately 5m in height to the ridge. It was lined with bitumen roofing felt on the underside of the tiles with rockwool loft insulation. A number of cross beams were present throughout the loft. No evidence of bats was seen within the loft at the time of survey, and the loft did not appear to have been recently disturbed or cleaned.	Moderate
Day Centre	Single storey brick-built building with a gambrel roof formed of clay roof tiles. There is an open fronted structure noted to the northern aspect of the building. This feature creates an optimal feeding perch structure, though no evidence of this type of roost was identified. A number of lifted/missing roof tiles were noted to all aspects. The western aspect was well maintained overall however eight to ten tiles were seen to be lifted. In addition, a hole in the soffit and lifted hip tiles was noted to the western aspect of the building. The southern aspect of the building has a number of lifted roof tiles, and hanging tiles including a number of missing/lifted hanging tiles to the mid wing on the southern aspect. The eastern aspect similar has a number of roof, hip and hanging tiles missing or lifted that may act as crevice roosting features or bat access features. The northern aspect is well maintained however gaps were noted to the two chimney features of the northern wing. The building was not accessed internally so the status of any internal loft voids cannot be assessed.	Moderate



Photograph 13. Southern elevation of Hive and Apple Juice Building, viewed from the south-east corner.



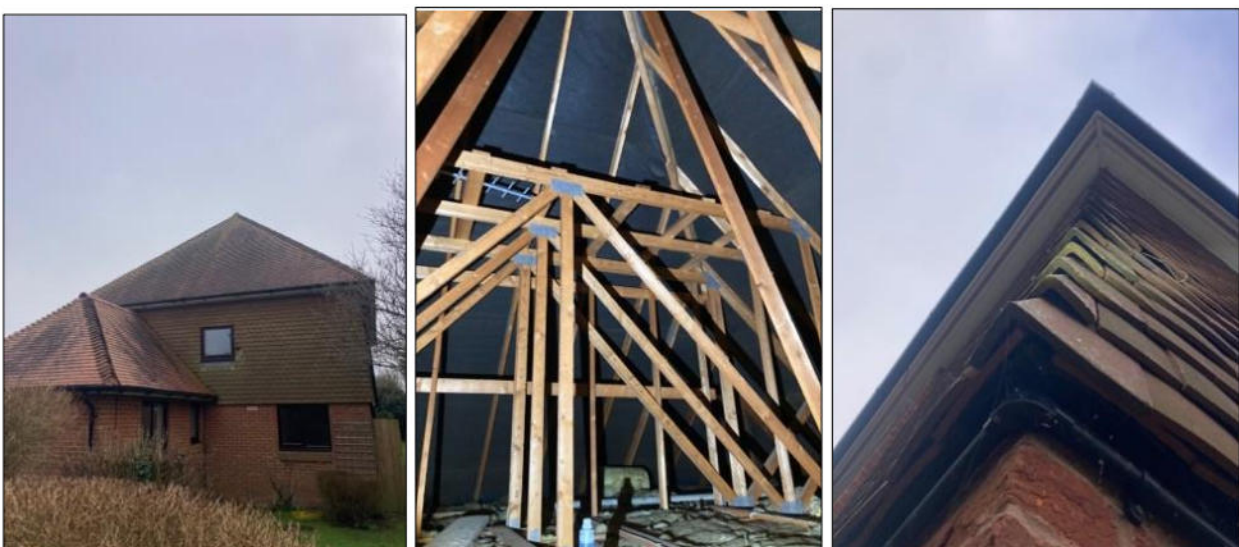
Photograph 14a & 14b. Views of Russett Cottage's western elevation and southern elevation.



Photograph 15a & b. View's of the north-eastern extension of Russett Cottage's and the pitched entranceway connecting this to the main building.



Photograph 16a & 16b. The eastern and southern elevations of Bramley Cottage.



Photograph 17a, 17b & 17c. The northern elevation of Bramley Cottage (a), an internal look of the loft void at Bramley Cottage (b) and examples of gaps under hanging tiles on the corners of Bramley Cottage (c).



Photograph 18a & 18b. View of the eastern and western elevations of Day Centre.



Photograph 19a & 19b. View of the western elevation of Day Centre and example of the roof of Day Centre, showing limited suitability for bats.

3.4.2 Ground Level Tree Assessment

All trees within the site were assessed as having negligible suitability for roosting bats.

3.4.3 Foraging/Commuting Habitat

The site's habitats are of low value for foraging and commuting bats. Species that use the site are likely to be those that are tolerant of human activity and raised light levels such as common pipistrelle, though other pipistrelles species, brown-long-eared bats and *Myotis* bats are common in West Sussex.

The SxBRC search indicates the presence of numerous bat species within 1km of the site, the closest record to the proposed site concerns a female Natterer's bat approximately 280m north of the site exiting a maternity roost tree in Wandley's Copse, 2019, identified through a roost exit count. The most recent record concerns an adult brown long-eared bat located approximately 280m southeast in a roof void, found during a 2022 loft inspection.

**Table 4.** Bat records returned within a 1km radius of the site 2015-2025.

Species Common name/Scientific name	Number of records
Common pipistrelle <i>Pipistrellus pipistrellus</i>	48
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	2
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	1
<i>Pipistrellus</i> species	17
Brown long-eared bat <i>Plecotus auritus</i>	14
Serotine <i>Eptesicus serotinus</i>	3
Noctule <i>Nyctalus noctula</i>	9
Barbastelle <i>Barbastella barbastellus</i>	12
Alcathoe bat <i>Myotis alcathoe</i>	1
Bechstein's bat <i>Myotis bechsteinii</i>	7
Natterer's bat <i>Myotis nattereri</i>	5
Whiskered bat <i>Myotis mystacinus</i>	4
Unidentified bat species etc...	17

3.5 Breeding Birds

Opportunities for nesting birds within the site are created by scattered trees, hedges and dense scrub. The nature of the site's habitat is considered suitable for common and widespread species of garden bird including several priority and red/amber listed species such as: house sparrow *Passer domesticus*, dunnoek *Prunus modularis* and song thrush *Turdus philomelos*. The buildings may provide nesting opportunities for swift *Apus apus* and starlings *Sturnus vulgaris*.

The SxBRC search indicates the presence of numerous bird species for the search area concerning a total of 82 species. Most of these are relatively common and widespread, but the list includes seven species of principle importance for conservation (S41 NERC Act 2007) and five species listed on Schedule 1 of the Wildlife and Countryside Act (1981). In addition, 10 species are red listed as Birds of Conservation Concern (Table 4).

Table 5. Bird records of conservation interest between 2015-2025.

Species Common name/Scientific name	Number of records	Conservation status
Cetti's warbler <i>Cettia cetti</i>	2	WCA Sch1 Pt1
Firecrest <i>Regulus ignicapilla</i>	1	WCA Sch1 Pt1
Red kite <i>Milvus milvus</i>	6	WCA Sch1 Pt1
Berwick's swan <i>Cygnus columbianus bewickii</i>	2	WCA Sch1 Pt1 NERC S41 Bird Red
Black-tailed godwit <i>Limosa limosa</i>	1	WCA Sch1 Pt1 Red list
Skylark <i>Alauda arvensis</i>	5	NERC S41 Red list
Hawfinch <i>Coccothraustes coccothraustes</i>	16	NERC S41 Red list



Marsh tit <i>Poecile palustris</i>	6	NERC S41 Red list
Cuckoo <i>Cuculus canorus</i>	1	NERC S41 Red list
Song thrush <i>Turdus philomelos</i>	2	NERC S41
Lesser spotted woodpecker <i>Dryobates minor</i>	2	NERC S41 Red list
Nightingale <i>Luscinia megarhynchos</i>	2	Red list
Woodcock <i>Scolopax rusticola</i>	1	Red list
Swift <i>Apus apus</i>	1	Red list

3.6 Dormice

Although there are areas of bramble scrub, these aren't dense enough to provide suitable cover for dormice. A number of denser hedgerows and shrubs are present within the site boundary, however these are of non-native species with very limited suitability for dormice. These habitats also have ecological connectivity to habitats of value within the local area.

The SxBRC identified 20 dormouse records in the 1km search area from 2017 to 2021. The closest of these was located 300m from the northern boundary of the site in Wandley's Copse in 2017.

3.7 Great Crested Newts and Other Amphibians

No ponds are located within the site boundary, however there are nine ponds and ditches within 500m of the site (Figure 9), three of which occur within 250m of the site boundary.

The eDNA surveys of Ponds 2 & 3 produced a negative result, confirming absence of the species from these waterbodies. Access to other waterbodies was either not granted or not considered necessary under the current study.

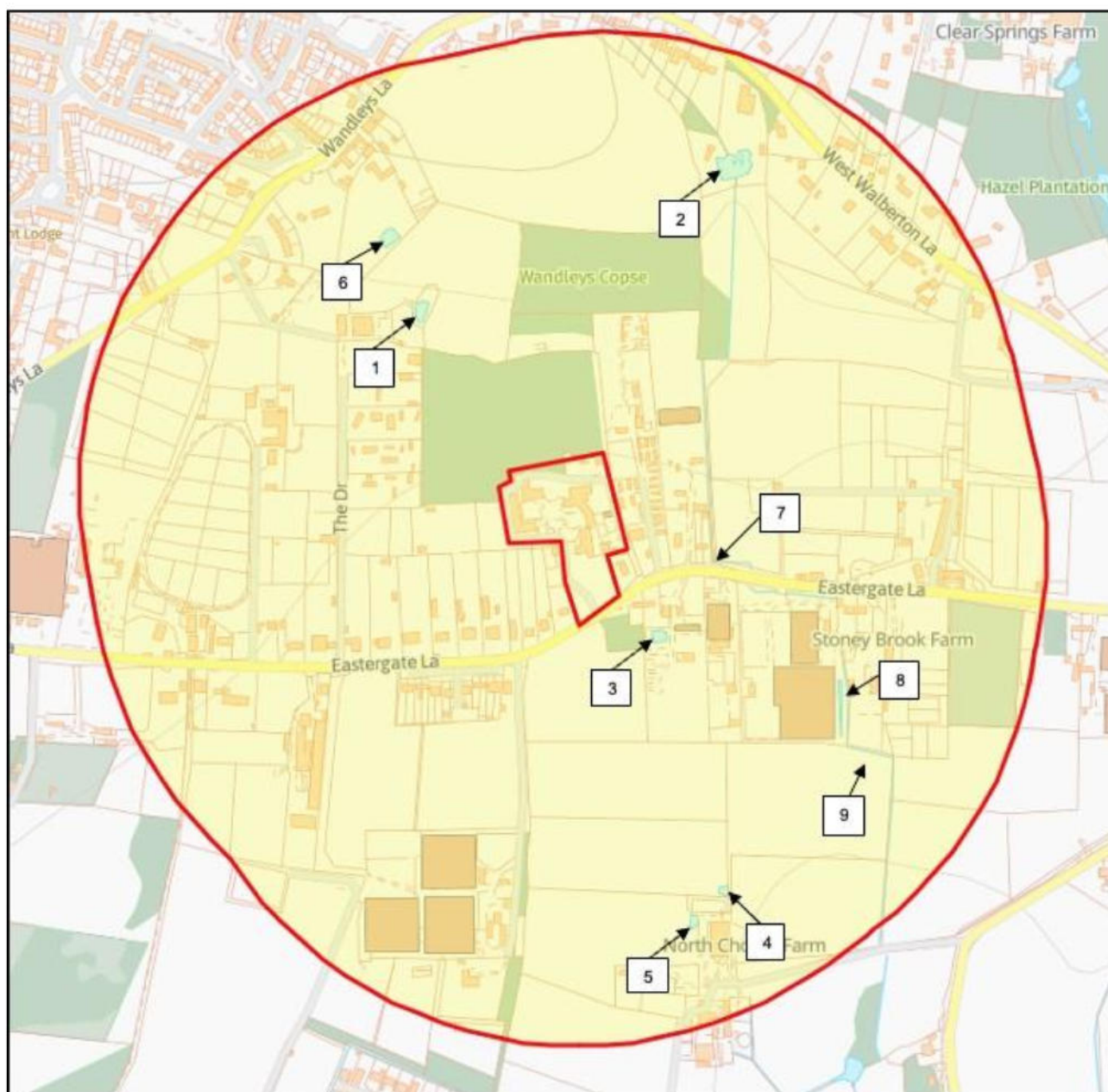


Figure 9. Ponds within 500m of the site. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

Table 6. Pond descriptions and survey results

Pond	NGR	Description	Results/Interpretation
1	SU 95488 06464	215m north of northern site boundary	Access requested – no response received
2 (The Pines)	SU 95861 06632	400m north of northern site boundary Connected to 'Pond (Ditch) 7'	GCN absent – negative eDNA result (see Appendix 5)
3 (Winter Egg Farm)	SU 95770 06074	65m south of southern site boundary	GCN absent – negative eDNA result (see Appendix 5)
4	SU 95846 05771	370m south of southern site boundary	Due to the small scale of the proposals, it is deemed not necessary for further surveys of this waterbody at



Pond	NGR	Description	Results/Interpretation
			this stage as it was outside of a 250m radius from the site.
5	SU 95801 05731	390m south of southern site boundary	Due to the small scale of the proposals, it is deemed not necessary for further surveys of this waterbody at this stage as it was outside of a 250m radius from the site.
6	SU 95448 06552	315m north of northern site boundary	Due to the small scale of the proposals, it is deemed not necessary for further surveys of this waterbody at this stage as it was outside of a 250m radius from the site.
7	SU 95878 06139	Ditch system adjacent to arable land. Potentially connected to 'Pond (Ditch) 7' and Pond (Ditch) 9' Closest section 90m east of southern site boundary	Access requested – no response received. Section along Eastergate Lane inspected and found to be dry at the time of survey, formed of a grassy dip which didn't appear to hold water for any length of time. Ruled out as suitable.
8	SU 95989 05996	Ditch system through agricultural buildings. Potentially connected to 'Pond (Ditch) 7' and Pond (Ditch) 9' Closest section 290m southeast of southern site boundary	Access requested – no response received.
9	SU 96017 05938	Ditch system through agricultural area. Potentially connected to 'Pond (Ditch) 7' and Pond (Ditch) 8' Closest section 350m southeast of southern site boundary	Access requested – no response received

The SxBRC search identified four amphibian records including great crested newt and other amphibian species within 1km of the site. The record details are listed below in Table 7.

Table 7. Amphibian records 2015-2025.

Species Common name/scientific name	Number of records	Date recorded	Distance from site boundary
Common toad <i>Bufo bufo</i>	1	15/04/2017	65m southeast
Common toad <i>Bufo bufo</i>	1	15/09/2016	660m north
Common frog <i>Rana temporaria</i>	1	03/11/2015	400m north
Great crested newt <i>Triturus cristatus</i>	1	23/09/2019	620m north

Some habitat on site provides potential opportunities for GCN during the terrestrial phase of their lifecycle, these areas include longer grass margins, ruderal vegetation and scattered scrub, however these areas of very limited size (Photographs 15a & 15b). Given the negative results of the eDNA surveys and the very



limited amount of suitable terrestrial habitat, it is considered that great crested newt are unlikely to be present within the site.

3.8 Reptiles

Habits within the site are largely unsuitable for reptiles: being composed of developed land and very short sward grassland lawn. However, a number of overgrown areas of scrub were recorded at the site's southwestern and northern boundaries. Whilst not likely to be extensive enough to support a self-sustaining population of reptiles on-site they are connected to off-site habitats which may support these animals. In conclusion, whilst the presence of reptiles on-site is considered unlikely, they cannot be ruled-out completely.



Photographs 20a & 20b. Overgrown areas located at the site boundaries which provide some suitable habit for reptiles.

3.9 Invasive Non-native Species (INNS)

Virginia creeper *Parthenocissus quinquefolia* was recorded within an ornamental cherry laurel hedgerow at the eastern edge of the site. This species is listed on Schedule 9 of The Wildlife & Countryside Act, 1981 as amended.



Photograph 21. The ornamental cherry laurel hedge at the eastern site boundary which was noted to contain Virginia creeper.

3.10 Other Notable Species

Hedgerows, bramble, and other ruderal vegetation present on site provide potential suitable foraging and cover habitat for hedgehogs.

The SxBRC search provided one record of Hedgehog *Erinaceus europaeus* (2015) located approximately 740m east of the site boundary.

3.11 Survey Limitations

An initial site assessment such as this is only able to act like a ‘snapshot’ to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey but may be evident at other times of the year. For this reason, habitats are assessed for their potential to support some species, even where no direct evidence has been found.



4 IMPACT APPRAISAL

4.1 Designated Sites

The proposed development will have no foreseeable direct impacts on statutory or non-statutory designated sites.

The change of use has provided an opportunity to enhance the Biodiversity Corridor (Figure 10). The landscape design has retained this area and kept it outside of any residential gardens with an aim to enhance it into other neutral grassland. This area will need to be managed and maintained closely and regularly as the residential gardens are directly adjacent to the area which could tempt owners to dump garden waste into the biodiversity corridor. In the absence of appropriate mitigation this could negatively impact on the ecological permeability of the site, and the surroundings including the formally identified Biodiversity Corridor.



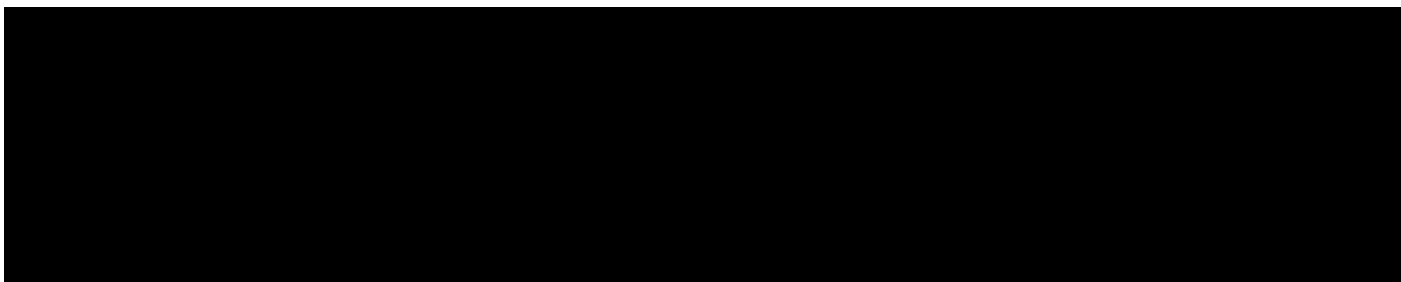
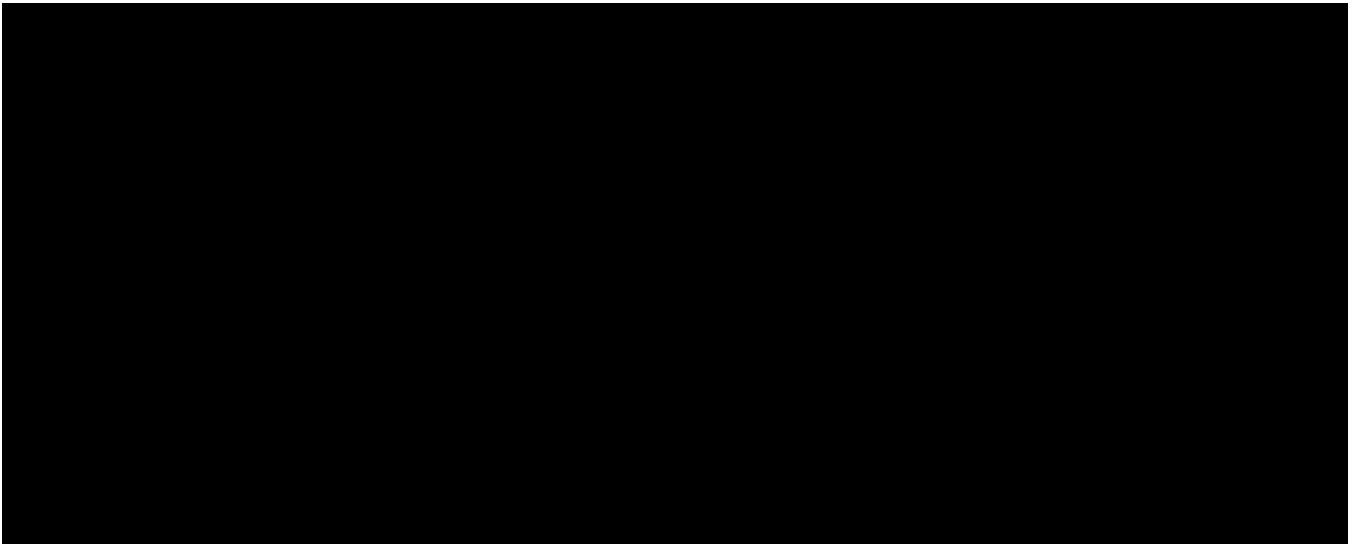
Figure 10. Top – the existing grassland habitat which is identified as a Biodiversity Corridor (indicated by the dashed line) within the BENP. Bottom. A close-up view of the proposed site layout showing the creation of a wildflower area within the Biodiversity Corridor.



4.2 Habitats

The proposals for this site involve a change of use from an education facility to residential homes. This will see the conversion of existing buildings and will make use of the existing hard and soft landscaping across the site with only relatively minor changes in the nature of the site's habitats. Following the change of use areas of private garden and short-sward grassland will be re-established across much of the site with a significant number of existing trees to be retained. Any proposed tree removal will require compensation in accordance with overall Biodiversity Net Gain and the trading rules of the Statutory Biodiversity Metric (see below). Areas of public open space are to be established at the northern edge of the site and provide an opportunity for native tree/shrub planting and/or establishment of species-rich grassland.

As of February 2024, Biodiversity Net Gain is mandatory for all new development. A Biodiversity Impact Calculation utilising the Statutory Biodiversity must be produced. A 10% net gain in both habitat and hedgerow units will be required. Where this cannot be achieved, the scheme must be redesigned in the first instance, where net gains remain unachievable off-site habitat creation and enhancement will be required.



4.4 Bats

All buildings were assessed as having 'moderate' roost suitability. It is understood that the proposed change of use will not see any significant external alteration to these structures, save for the installation of solar panels, with the majority of building works focussing on internal re-fitting.

The installation of solar panels onto the roofs of any of the buildings is unlikely to present any significant impacts on roosting bats (should they be present) through damage/destruction given that only a very small amount of tiles will require removal to allow for the fixings of the arrays. However, given that gaps have been noted



beneath roof tiles it is recommended that reasonable avoidance measures are adopted. Installation of the panels will only occur in March – April or October, thus avoiding the bat activity and hibernation periods and minimising any risks of disturbance. The removal of tiles will be undertaken by hand under the supervision of a suitably qualified ecologist. In the unlikely event a bat is discovered, works will cease immediately, and the impacts must be re-assessed by an ecologist. Works may be able to recommence once a mitigation licence from Natural England has been secured.

Given that all of the site's scattered trees were assessed as having 'negligible' suitability for roosting bats any proposed tree removal will have no foreseeable impacts on roosts.

An ecologically sensitive lighting scheme must be designed. This will require lighting in accordance with Bats and Artificial Lighting in the UK Guidance Note GN 08/23, including establishment of dark corridors through the site. These dark corridors will be established at the western and northern boundaries. Light levels within these dark corridors will not exceed 0.1lux.

Where lighting is essential, this should utilise low-level LED luminaires with no upward light spill and a warm white light source (2700 Kelvin or lower).

4.5 Breeding Birds

With the adoption of reasonable avoidance measures, the proposed development will have no foreseeable impacts on nesting birds. Removal of any dense vegetation must be undertaken outside of the nesting bird season: avoiding March–August (inclusive). Where this cannot be achieved, small sections of vegetation removal may be permitted during the breeding season provided they are checked for nesting birds by a suitably qualified ecologist.

The development presents an opportunity to enhance the site for nesting birds. Consideration should be given to the incorporation of swift *Apus apus* boxes and house *Passer domesticus* sparrow boxes within new buildings as well as the installation of traditional bird boxes on boundary trees.

4.6 Great Crested Newts

Given the likely absence of great crested newts from the site and nearby ponds the proposed development will have no foreseeable impacts on this species or its habitats.

An EPS (great crested newt) mitigation licence is not required for the proposed works to proceed. As a precautionary measure for all amphibians, the measures detailed below for reptiles will also protect any amphibians such as frogs from accidental injury or killing.

4.7 Reptiles

The limited areas of suitable reptile habitat on-site are considered to be sub-optimal and precautionary measures should be made to avoid any killing or injuring of any potentially present reptiles in these areas.



It is recommended that if any proposed development project is likely to impact the scrub/grass margins on the northern boundary or south-west corner, a suitably qualified ecologist should fingertip search the grassland and supervise a 'two-phase strim' of the habitat. This would require the sensitive strimming of grassland in two phases to reduce the suitability for reptiles. The first pass should reduce the grass to 15cm in height to encourage reptiles to move out the area. A second pass would reduce the grass height to 5cm which renders the habitat unsuitable.

In the absence of any reasonable precautionary measures or mitigation, the impact to reptiles is likely to be significant at a site level. If the above avoidance measures are to be implemented, the impact from the development is likely to be neutral.

4.8 Invasive Non-native Species

It is strongly recommended that the Virginia creeper is removed from the site and disposed of appropriately to prevent establishment off-site. This non-native species should be replaced with native species of tree/shrub preferably of local provenance.

4.9 Other Notable Species

In order to maintain the ecological permeability, including the biodiversity corridor at the western side of the site, any close-board fencing must incorporate 'hedgehog highways'. All new garden fencing should contain accessible gaps (10cm x 15cm) at their base to allow movement of hedgehogs between garden plots. An ecological permeability plan (showing hedgehog movement routes) must be developed.

5 BIODIVERSITY ENHANCEMENT MEASURES

The proposed development represents an opportunity for habitat enhancement to benefit insects, birds, and bats. Any planting scheme could include native shrub species and flowering species known to encourage insect diversity. Such enhancement measures are in line with the recommendations of the NPPF and as such would be considered favourably when determining the planning application.

The buildings within the site should incorporate new bat roosting features such as Beaumaris Woodstone Bat Boxes (or similar design), 15 boxes installed as high as possible on the new buildings and away from any external lighting are recommended.

The development also provides an opportunity for enhancement for nesting birds, particularly swifts. It is recommended that 20 swift boxes are installed on the buildings.

Any removed trees that have been processed for timber should be retained on the site and kept for the creation of log piles in an undisturbed corner of the site to attract stag beetles *Lucanus cervus* and other invertebrates.

Any improved or new landscaping scheme that is created as part of any development scheme for the site could include the widespread laying and maintenance of wildflower turf as alternative to grass turf or seeding. This feature would provide an aesthetically attractive and beneficial feature for local wildlife, particularly pollinating invertebrates.



New planting within the scheme should be designed to enhance the site for pollinators such as, bees, hoverflies and moths.

6 CONCLUSIONS

The proposed works at Land at Freemans Close constitute change of use from an education facility to residential housing and are therefore relatively light in terms of their ecological impacts. The overall nature and extent of the site's habitats will not change significantly; however a detailed Biodiversity Net Gain calculation will be required to quantify this impact.

Installation of solar panels on Building's 2 & 3 is considered to present a low-level risk to bats and their roost site given the nature of the proposed works. Reasonable avoidance measures in the form of sensitive timing and careful, supervised works have been prescribed. Reasonable avoidance measures are also recommended for the construction phase with regard to nesting birds and reptiles.

A Biodiversity Corridor, identified by the BENP crosses the site towards its western edge. This area has been retained as part of the development design and will be enhanced into an area of neutral grassland / wildflower which will contribute to foraging habitat and commuting corridors for hedgehogs and bats.

It is important that no habitat clearance or other site preparation work should be undertaken until planning permission has been granted and all relevant protections for habitats of importance and protected species have been detailed and implemented. Please be advised that any work to remove or modify habitats outside of typical management may undermine a future planning application.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op [REDACTED]



APPENDIX 1 – Wildlife Legislation and National Planning Policy

Introduction

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

The ‘Birds Directive’, ‘Habitats Directive’ and ‘Natura 2000 Sites’

The Council Directive 79/409/EEC on the Conservation of Wild Birds (“the Birds Directive”) sets a framework for the protection of wild birds. Under the Directive, several provisions are made including the designation and protection of ‘Special Protection Areas’ (SPAs) – areas which support important bird populations, and the legal protection of rare or vulnerable species.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the “Habitats Directive”) directs member states of the EU to take measures to maintain the favourable conservation status of important habitats and species. This requires the designation of a series of sites which contain important populations of species listed on Annex II of the Directive (for example Bechstein’s bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus* and white-clawed crayfish *Austropotamobius pallipes*. Together with ‘Special Areas of Conservation’ (SACs), SPAs form a network across Europe of protected areas known as the ‘Natura 2000 sites’.

Annex IV lists species in need of more strict protection, these are known as “European Protected Species (EPS)”. All bat species, common dormice *Muscardinus avellana*, otter *Lutra lutra* and great crested newts *Triturus cristatus* are examples of EPS that are regularly encountered during development projects.

The ‘Habitats Regulations’

The Conservation of Habitats and Species Regulations 2017, as amended (the “Habitats Regulations”) is the principle means of transposing the Habitats Directive and the Birds Directive, and updates the Conservation (Natural Habitats, &c.) Regulations 1994 (“the 1994 regulations”) in England and Wales.

‘Natura 2000’ sites, now known as National Site Network sites under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, receive the highest level of protection under the Regulations which requires that any activity within the zone of influence of these sites would be subject to a Habitats Regulations Assessment (HRA) by the competent authority (e.g. planning authority), leading to an Appropriate Assessment (AA) in cases where ‘likely significant effects’ to the conservation objectives are identified.

For European Protected Species, Regulation 41 makes it a criminal offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb wild animals of such species;
- deliberately take or destroy their eggs (where relevant);
- damage or destroy a *breeding or resting place* of such an animal;
- possess, control, sell or exchange any live or dead animal or plant, of such species;
- deliberately pick, collect, cut, uproot or destroy a wild plant of such species.



The Habitats Directive and Habitats Regulations provide for the derogation from these prohibitions for specific reasons provided certain conditions are met. An EPS licensing regime allows operations that would otherwise be unlawful acts to be carried out lawfully. Natural England is the licensing Authority and, in order to grant a license, ensures that three statutory conditions (sometimes referred to as the ‘three derogation tests’) are met:

- a licence can be granted for the purposes of “preserving public health or safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53 (2) (e);
- a licence can be granted if “there are no satisfactory alternatives” to the proposed action;
- a licence shall not be granted unless the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Wildlife and Countryside Act (1981) as amended.

This remains one of the most important pieces of wildlife legislation in the UK. There are various schedules to the Act protecting birds (Schedule 1), other animals including insects (Schedule 5), plants (Schedule 8), and control of invasive non-native species (Schedule 9).

Under the Wildlife and Countryside Act (WCA) 1981, all wild birds (with the exception of those listed on Schedule 2), their eggs and nests are protected by law and it is an offence to:

- take, damage or destroy the nest of any wild bird while it is in use or being built
- take or destroy the egg of any wild bird
- disturb any bird listed on Schedule 1, while it is nest building, or at a nest with eggs or young, or disturb the dependant young of any such bird.

Schedule 5 lists all non-avian animals receiving protection to a varied degree. At its strongest, the Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturb animals while occupying such places. Examples of species with *full protection* include all EPS, common reptile species, water vole *Arvicola amphibius*, white-clawed crayfish *Austropotamobius pallipes* and Roman snail *Helix pomatia*. Other species are protected from sale, barter or exchange only, such as white letter hairstreak *Satyrrium w-album*.

The Act makes it an offence to intentionally pick, uproot or destroy any plant or seed, and sell or possess any plant listed on Schedule 8. It is also an offence to intentionally uproot any wild plant not listed on Schedule 8 unless authorised [by the land owner]. Species on Schedules 5 and 8 are reviewed every 5 years when species can be added or removed.

Measures for the prevention of spreading non-native species which may be detrimental to native wildlife is included in the Act, which prohibits the release of animals or planting of plants into the wild of species listed on Schedule 9 (for example, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandifera*, New Zealand Pygmyweed *Crassula helmsii*).

The Wildlife and Countryside Act 1981 (as amended) also prohibits certain inhumane methods of traps and devices for the capture or killing of wild animals and certain additional methods such as fixed trap, poisoning with gas or smoke, or spot-lighting with vehicles for killing species listed on Schedule 6 of the Act (this includes all bat species, badger, otter, polecat, dormice, hedgehog and red squirrel).



Natural Environment and Rural Communities (NERC) Act (2006)

The NERC Act (2006) created the statutory nature conservation body Natural England, and places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of *habitats and species of principal importance for the conservation of biodiversity* in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Environment Act (2021)

The Environment Act sets a target of halting the decline in species through the inclusion of a legally binding 2030 species abundance target. Aiming to restore natural habitats and enhance biodiversity, the Act requires new developments to improve or create habitats for nature (through mechanisms such as mandatory Biodiversity Net Gain), and tackle deforestation. Going forwards, UK businesses will need to look closely at their supply chains as amongst other measures they will be prohibited from using commodities associated with wide-scale deforestation. Woodland protection measures are also strengthened through the Act.

The Act enables the reform of the Habitats Regulations and further improves protection for nature through the establishment of Local Nature Recovery Strategies that support national Nature Recovery Networks. In addition, the Act provides for the production of Protected Site Strategies and Species Conservation Strategies, aimed at supporting the design and delivery of strategic approaches to deliver better outcomes for nature.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2024)⁸ sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

⁸ HM Government (2024). National Planning Policy Framework. Department for Communities and Local Government. Available online at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf



Paragraph 192b, states that council plans should “*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.*”

The Office of the Deputy Prime Minister (ODPM) Circular 06/2005, 2005)⁹. In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- minimising impacts on existing biodiversity and habitats;
- providing net gains in biodiversity and habitats, wherever possible;
- establishing coherent ecological networks that are more resilient to current and future pressures.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK’s response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government’s response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade.

Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

Birds of Conservation Concern (BoCC)

In 1996, the UK’s leading non-governmental bird conservation organisations listed the conservation status of all bird species in the UK against a series of criteria relating to their population size, trends and relative importance to global conservation. The lists, known as the ‘Red’, ‘Amber’ and ‘Green’ lists (in order of decreasing concern) are used to inform key conservation policy and decisions. The lists are reviewed every five years and are a useful reference for determining the current importance of a particular site for birds. The most recent review was undertaken in 2021 (Stanbury et al, 2021), which provides an up to date assessment of the conservation status of birds in the UK.

References

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⁹ HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf.



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APPENDIX 2 – Arun District Council – Relevant Policies

Table 1.

Policy Number/Title	Policy Summary
C SP1- Country	Outside the Built-Up Area Boundaries (as identified on the Policies Maps) land will be defined as countryside and will be recognised for its intrinsic character and beauty. Development will be permitted in the countryside where it is: a) for the operational needs of agriculture, horticulture, forestry, the extraction of minerals or the management of waste as part of a waste site allocation within the West Sussex Waste Local Plan; or b) for quiet, informal recreation; or c. for green infrastructure; or d. for the diversification of the rural economy; or e. for road and/or cycle schemes; or f. in accordance with other policies in the Plan which refer to a specific use or type of development. 7 Settlement Structure & Green Infrastructure The Council will take into account cumulative impact of development in the consideration of planning applications. To ensure better management of the rural-urban fringe in those areas where significant new development is proposed, early consideration will need to be given to landscape and biodiversity enhancement, woodland management, recreation provision and access routes.
ENV SP1 - Natural Environment	Arun District Council will encourage and promote the preservation, restoration and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it protects sites listed in Tables 17.1-17.7 that are recognised for the species and habitats contained within them.



ENV DM1 - Designated Sites of Biodiversity or Geological Importance	a) Proposed development likely to have an adverse effect on land with the designated features of any Site of Biodiversity or Geological Importance as listed in Tables 17.1 - 17.7 or any subsequently designated sites (either individually or in combination with other developments), will not normally be permitted. Consideration will be given to the exact designated features present on the site, their scarcity/rarity and recognition of the protection offered by their existing status. Development on wildlife sites with the highest value will only be permitted exceptionally where the following can be demonstrated: i. There is no alternative solution (which shall be adequately demonstrated by the developer). ii. There are reasons of public health or public safety or iii. There are benefits of primary importance to the environment or iv. There are imperative reasons of overriding public interest. Notwithstanding the above however, the presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.
	b) b. In determining any planning application affecting Sites of Biodiversity or Geological Importance the Council will ensure that the intrinsic natural features of particular interest are safeguarded or enhanced having regard to; i. The European, National or Local status and designation of the site; ii. The nature and quality of the site's features, including its rarity value; iii. The extent of any adverse impacts on the notified features of interest; iv. The need for compensatory measures in order to recreate remaining features of habitats on or off the site. c. Where appropriate the Council will ensure the effective management of designated sites through the imposition of planning conditions or Section 106 agreements as appropriate.



ENV DM3 - Biodiversity Opportunity Areas	Development shall: a) Retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and stepping stones b) Be designed in order to minimise disturbance to habitats Development proposals that do not reasonably address opportunities for enhancing these through their design, layout and landscaping or access/management shall not be permitted. Where a development scheme would result in a habitat loss, mitigation measures will be proposed as part of the proposed scheme and such measures agreed with the Local Planning Authority prior to the determination of any planning application. Within Biodiversity Opportunity Areas (BOAs) identified on the Policies Maps or where likely to have an impact on species or habitats within the BOAs, any application for planning permission shall include a properly conducted survey of the presence of that species and habitat and impact(s) that development may have on the BOA.
ENV DM4 - Protection of Trees	Development will be permitted where it can be demonstrated that trees protected by a Tree Preservation Order(s), (TPO) identified as Ancient Woodland, in a Conservation Area or contributing to local amenity, will not be damaged or destroyed now and as they reach maturity, unless development: a) Would result in the removal of one or more trees in the interests of good arboricultural practice. This shall be demonstrated by the developer following the advice of a suitably qualified person which shall be guided by BS 5837 (2012). Details of any advice received having regard to BS 5837 (2012) shall be submitted, in writing, as part of a planning application; or b) Would enhance the survival and growth prospects of other protected trees; c) The benefits of the proposed development in a particular location outweigh the loss of trees or woodland, especially ancient woodland. d) Where planning permission is granted in any of the above instances, conditions shall be used to ensure that, for any trees which are removed as part of a development, at least an equivalent number of a similar species and age (where practical) are planted on the proposed development site. Sufficient space for replacement trees to



	mature without causing future nuisance or damage shall be provided. The planting of new trees shall form an integral part of the design of any development scheme. e) Proper provision must be made for the protection and management of trees or areas of woodland on-site when undertaking development. A management plan shall be provided as part of a planning application in accordance with BS 5837 (2012) in order to ensure that trees are adequately protected during development and appropriately maintained in the future. Conditions for the continued protection of trees on sites shall be included in any planning permission given. f) Where there are existing trees on or adjacent to a development site, developers shall be required to provide: g) Land and tree surveys h) A tree constraints plan i) An arboricultural impact assessment to include a tree protection plan and arboricultural method statement j) These will ensure that development is planned to take a comprehensive view of tree issues at an early stage in the design process and that development works do not have a negative impact on existing trees.
ENV DM5 - Development and Biodiversity	Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement. Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person. All developments shall have regard to Natural England's standing advice for protected species.
W SP1 - Water	Arun District Council will encourage water efficiency measures in order to protect the District's water resources and enhance the quality of the water environment which supports a range of habitats and ecosystems. Development will be encouraged to make active use of surface water as a design feature and permitted where it identifies measures to improve and enhance waterbodies, coastal habitats or provides additional flood relief. The Council will also support development that: a) is appropriately located, taking account of flood risk and promotes the incorporation of appropriate mitigation measures into new development, particularly Sustainable Drainage Systems that reduces the creation and flow of surface water and improves water quality; 63 Water stressed areas - final classification (July 2013)



	b) reduces the risk to homes and places of work from flooding whilst increasing biodiversity; c. delivers a range of community benefits including enhancing the quality of life and providing greater resistance to the impact of climate change.
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APPENDIX 3 – UKHab Secondary Codes

Category Type	V2.0 code	Habitat Name
Grasslands and Heathlands	100	Grazed
	101	Cattle grazed
	102	Sheep grazed
	103	Horse grazed
	104	Other grazed
	105	Burnt
	106	Mown
	107	Mown and collected
	108	Frequently mown
	109	Hay
	110	Silage and haylage
	111	Hedgebank
	112	Earthbank
	113	Stone-faced bank
	114	Dry stone wall
	115	Grazing and browsing enclosure
	116	Flailed hedgerow
	117	Laid hedgerow
	118	Species-rich hedgerow ground flora
	119	Green lane
	120	Grouse moor
	121	Calcareous-acidic mosaic
	122	Ridge and furrow
	123	Water meadow irrigation
	124	Anthills
	125	Flower forage abundant
	126	Seed forage abundant
	127	Sward type mosaic
	128	Tall or tussocky sward
	129	Wet moss lawns
	130	Waxcap grassland
	131	Arable reversion grassland
Woodlands and Trees	200	Tree
	201	Young trees – planted
	202	Young trees – self-set
	203	Mature tree
	204	Veteran Tree
	205	Ancient tree
	206	Felled
	207	Forest brash



Category Type	V2.0 code	Habitat Name
	208	Ground prepared for planting
	209	Avenue
	210	Coppice
	211	Coppice with standards
	212	High forest
	213	Complex woody structure
	214	Fallen dead wood abundant
	215	Standing dead wood abundant
	216	Large hollows or cavities
	217	Woodland open space
Freshwater	300	Lowland rivers with shallow gradients and rich geology
	301	Meso-eutrophic rivers on sandstone and hard limestone
	302	Mesotrophic and oligo-mesotrophic rivers
	303	Acid and nutrient-poor rivers
	304	Unobstructed river system
	305	Spring
	306	Headwaters
	307	Waterfall
	308	Active shingle rivers
	309	Riffles
	310	Gravel beds
	311	Coarse woody debris in-channel
	312	Base-rich water
	313	Backwaters
	314	Mudbanks
	315	Exposed riverine sediments
	316	Shallow pools
	317	Tidal river
	318	Canalside
	319	Watercourse buffer strip
	320	Lakes and ponds buffer
	321	Timber sluice
	322	Re-meandering
	323	Riverbank re-profiling
Wetlands	400	Topogenous
	401	Soligenous
	402	Rich fen
	403	Poor fen
	404	Fertile fen
	405	Infertile fen
	406	Swamp
	407	Tall fen
	408	Small-sedge fen
	409	Bryophyte-dominated
	410	Open water fen
	411	Transition fen
	412	Basin fen



Category Type	V2.0 code	Habitat Name
	413	Floodplain fen
	414	Basin raised bog lagg fen
	415	Floodplain raised bog lagg fen
	416	Spring fen
	417	Surface flow spring fen
	418	Percolation spring fen
	419	Surface flush or rill or soakaway
	420	Valley fen
	421	Ladder fen
	422	Cutover peat
	423	Grip
	424	Grip blocking
	425	Beaver-made wetland
All Habitats	500	Dry
	501	Mesic
	502	Seasonally wet
	503	Wet
	504	Waterlogged
	505	Inundation vegetation
	506	Nutrient-poor substrate
	507	Nutrient-enriched substrate
	508	Base-rich substrate
	509	Acidic substrate
	510	Bare ground
	511	Compacted substrate
	512	Landslips
	513	Rock outcrop
	514	Snow patch
	515	High humidity levels
	516	Active Management
	517	Recent Management
	518	Neglected
	519	Abandoned
	520	Ancient management
	521	Unmanaged
	522	Native
	523	Non-native
	524	Invasive non-native species
	525	Invasive species control
	526	Accessible natural greenspace
	527	Nature reserve
	528	Walking or cycling route
	529	Golf course
	530	Ecotone
	531	Cave open to the public
	532	Scattered grass
Farming	600	Ploughed



Category Type	V2.0 code	Habitat Name
	601	Minimum tillage
	602	No tillage
	603	In-field fallow plot
	604	Whole-field fallow
	605	Mid-field bund
	606	Mid-field swale
	607	Beetle bank
	608	Under-field drainage
	609	Cover crops
	610	Catch crops
	611	Soil erosion
	612	Fence
	613	Fish farm
	614	Permanent agricultural grassland
	615	City farm
	616	Allotments
	617	Agroforestry
	618	Paludiculture
Coast	700	Port or marina
	701	Sea wall
	702	Saline influence
	703	Shelter from wave action
Built environment	800	Road
	801	Road verge or island
	802	Railway
	803	Railside
	804	Car Park
	805	Development site
	806	Urban park
	807	Pocket park
	808	Neighbourhood park
	809	Community park
	810	District park
	811	Regional park
	812	Country park
	813	Educational building
	814	Educational premises open space
	815	Commercial building
	816	Commercial premises open space
	817	Industrial building
	818	Residential building
	819	Residential premises open space
	820	Natural sports pitches
	821	Artificial sports pitches
	822	Recreation ground
	823	Children's Play Space
	824	Adventure playground



Category Type	V2.0 code	Habitat Name
	825	Ruined building
	826	Castle or historic building or monument
	827	Garden
	828	Vegetated garden
	829	Unvegetated garden
	830	Community garden
	831	Landfill
	832	Airport
	833	Barn
	834	Oil or gas drilling or extraction
	835	Mine
	836	Quarry – hard rock
	837	Quarry – sand and gravel
	838	Disused quarry
	839	Track
	840	Caravan park or permanent campsite
	841	Green wall
	842	Ground-based green wall
	843	Façade-bound green wall
	844	Balcony green
	845	Ground level planters
	846	Flower bed
	847	Introduced shrub
	848	Sustainable drainage system
	849	Bioswale
	850	Rain garden
	851	Culvert
	852	Water treatment filter bed
	853	Mortared wall

APPENDIX 4 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts to other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness.

Guidelines issued by the Bat Conservation Trust¹⁰ should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

¹⁰ Bat Conservation Trust and Institute for Lighting Professionals (2023) Guidance note 8. Bats and Artificial Lighting. <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>



Avoid lighting key habitats and features altogether

There is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation; however, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species.

Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- dark buffers, illuminance limits and zonation;
- sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill;
- consideration of the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consideration should be given to the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cat's eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times;
- screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding;
- glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features;

-
- creation of alternative valuable bat habitat on site, whereby additional or alternative bat flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development;
 - dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

Demonstrate compliance with illuminance limits and buffers



- *Design and pre-planning phase*; it may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking*; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

Lighting Fixture Specifications

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- lighting spectra: peak wavelength >550nm
- colour temperature: <2700k (warm)
- reduction in light intensity
- minimal UV emitted • upward light ratio of 0% and good optical control.

Further reading:

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Institution of Lighting Professionals (2021) Guidance Notes for the Reduction of Obtrusive Light GN01:2011. Available at: <https://www.theilp.org.uk/resources/free-resources/>

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End.



APPENDIX 5 – GCN eDNA RESULTS

Folio No: 3110-2025
 Purchase Order: P10153
 Contact: The Ecology Co-Operation
 Issue Date: 11.07.2025
 Received Date: 27.06.2025



GCN eDNA Analysis

Summary

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analyzing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

Results

Lab ID	Site Name	OS Reference	Degradation Check	Inhibition Check	Result	Positive Replicates
GCN25 9101	Winter Egg Farm	SU 95769 06064	Pass	Pass	Negative	0/12
GCN25 9103	The Pines	SU 95888 06699	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: Amy Bermudez

Approved by: Consuela Sopronyi