



Landscape, Arboriculture and Ecology

Surveys – Plans – Assessments - Mitigation – Solutions – Methodology

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Phase 1 Habitat Survey, Biodiversity Metric Assessment (BMA)

Land to Rear of 25 - 27

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Declaration: The information which I have prepared and provided for this report is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct; I confirm that the opinions expressed are my true and professional bona fide opinions. Printed: Arran Fitzgerald BSc (Hons.), MSc – Assistant Ecologist Signed: 					

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No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of species abundances or habitat management efficacy described in the report.

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This report and all survey work have been prepared to British Standard 42020 and rely on information and methodology from the Joint Nature Conservation Committee and the Chartered Institute of Ecological and Environmental Management.

Additionally, this report relies on information from other third parties, some of which may include, but not be limited to; DEFRA's MAGIC database, local record centres, local wildlife spotter groups such as badger groups, and the NBN atlas.

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EXECUTIVE SUMMARY

- 0.1 Arborweald Environmental Planning Consultancy (AEPC) were commissioned by ECE Planning for Land to Rear of 25 - 27, Perrymount Road, Haywards Heath, West Sussex, RH16 3TP, to undertake:
- Phase 1 Habitat Survey
 - Biodiversity Metric Assessment (BMA)
- 0.2 The habitats present within the site boundary comprise developed land sealed surface, introduced shrub and individual urban trees.
- 0.3 Development plans on site comprise:
- Demolition of existing car park and replacement with 7 storey block of flats with associated amenity areas and hardstanding.
- 0.4 The primary findings of this report were:
- Negligible risk to protected species.
 - All other impacts from development are considered to be negligible subject to the application of appropriate mitigation measures, for which this report provides a brief outline (see section 6).
 - Habitats on site are representative of much of the wider urban landscape comprising hardstanding, introduced shrub and scattered urban trees.
- 0.5 The primary recommendations of this report are:
- No further surveys for protected species required at this time
 - Precautionary measures for breeding birds
 - Biodiversity enhancements should be incorporated into the development and section 6 of this report provides detail on potential enhancements.
- 0.6 A Biodiversity Metric Assessment (BMA) made using the most recently published statutory metric (29/11/23) revealed that Biodiversity Net Gain (BNG) can be achieved.

Enhancement yield		
Total net gain		Offsite enhancement required?
Area habitats	10%	Required
Hedgerows	N/a	Not required
Watercourses	N/a	Not required

Application details	
Pre-development biodiversity value	2.03
Date of on-site biodiversity calculation	18.02.26

If an earlier date than application, please explain why	BMA baseline taken on date of survey
Biodiversity metric publication date	29/11/23

Off-site unit requirement / unit purchase requirement	
Habitats	0.18
Hedgerows	0.00
Watercourses	0.00

1 INTRODUCTION

- 1.1 Arborweald Environmental Planning Consultancy (AEPC) were commissioned by ECE Planning for Land to Rear of 25 - 27, Perrymount Road, Haywards Heath, West Sussex, RH16 3TP, TQ 33068 24245 to undertake:
- Phase 1 Habitat Survey
 - Biodiversity Metric Assessment (BMA)
- 1.2 The objective of the Phase 1 habitat survey was to assess what habitats are found on site, and their respective condition using the BMA condition scoring matrix.
- 1.3 This BNG Report is broadly based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance. The objectives of the BMA were to:
- Summarise the results of the baseline habitat survey and habitat condition assessment survey following the Defra Statutory Biodiversity Metric.
 - Provide an overview of the proposed habitats following completion of the scheme.
 - Present the results of the Metric assessment completed for the proposals.
 - Assess the feasibility of the proposals to achieve a net gain in biodiversity through the Metric.
 - Recommendations for the proposals to maximise their biodiversity potential.
- 1.4 This document has been written with reference to the following documents:
- Location Plan.pdf
 - GEO Square Plan.pdf
 - Proposed Site Layout Plan.pdf

Surveyors and author competency

- 1.5 Surveys were undertaken on the 18th February 2026 by Principal Ecologist Perry Hockin BSc (Hons.), FDSoc, ACIEEM.
- 1.6 Report writing was undertaken by Assistant Ecologist Arran Fitzgerald BSc (Hons.), MSc.

Perry Hockin – Principal Ecologist

Perry Hockin is a qualified and experienced ecologist and the primary ecological contact at Arborweald. With both a BSc in Ecology from the University of Brighton and a FDSoc in Countryside Management from Plumpton Agricultural College, Perry has worked in the countryside sector since 2013 in the fields of tree surgery, landscaping, countryside

management and ecological consultancy where his qualifications have provided him with a balance of both practical and desk-based experience of complex multi-faceted projects.

His experience is focussed primarily on botany, habitat management, biodiversity net gain, and data management, and his holistic approach to projects has earned him high praise from local planning authorities and conservation bodies alike across the south-east.

Arran Fitzgerald – Assistant Ecologist

Arran Fitzgerald is a qualified and experienced ecologist who became associated with Arborweald in 2023 as a part-time surveyor and ecological clerk of works before joining full time in early 2025.

Having achieved a first-class honours degree in Zoology, followed by a master's in applied wildlife Conservation, Arran has since worked in Ecological Landscaping, implementing environmental mitigation measures for medium to large-scale infrastructure and conservation projects across the UK.

Arran's career spans a diverse range of ecological projects, from the installation of hibernacula and newt fencing to woodland/hedgerow regeneration efforts. He has also worked on innovative environmental solutions, such as using hydroseeding techniques to remediate toxic mining tailings. With a balanced approach to conservation and restoration, Arran's dedication extends beyond his professional work, with extensive volunteer experience that has enriched his understanding of ecology from a hands-on perspective.

Legislation and Policy

Protected species

- 1.7 Certain habitats and species including nesting birds, bats, dormice, and great crested newts, are afforded protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended). Further information on the legislation is included in Appendix A.
- 1.8 In general, the above legislation makes it an offence to:
 - Deliberately/intentionally or recklessly kill, injure, or take a protected species;
 - Intentionally or recklessly damage, destroy or obstruct access to any place that a protected species uses for shelter or protection whether the species is present or not;
 - Intentionally or recklessly disturb a protected species while it is occupying a structure or place that it uses for shelter or protection;
 - Deliberately take or destroy the eggs of species protected by this legislation (such as nesting birds).

Natural Environment and Rural Communities Act

- 1.9 Section 41 of the Natural Environment and Rural Communities Act (2006) lists the species and habitats of principal importance for the conservation of biodiversity in England and acts as a guide to local authorities in implementing their duties under Section 40, to have regard to the conservation of biodiversity in England.

Protection of Badgers Act

- 1.10 The Protection of Badgers Act (1992) prohibits reckless and/or intentional cruelty, injury or killing of badgers and the interference with badger setts.

National Planning Policy Framework

- 1.11 Under The National Planning Policy Framework (NPPF, 2024) protected sites and species are a material consideration in determining planning applications in terms of minimising impacts on biodiversity.
- 1.12 National Planning Policy guidance uses a mitigation hierarchy, whereby:
- Potential impacts are first avoided through changes to design plans
 - Unavoidable impacts are mitigated against to reduce the negative effect of the impact;
 - Finally, residual impacts that remain after avoidance and mitigation measures are applied are compensated for (BS 42020, 2013, Section 5.2).
- 1.13 Further to this, it is a requirement under National Planning Policy for developers to actively enhance the biodiversity value of development projects.

The Environment Act 2021

- 1.14 In England, biodiversity net gain is now required under statutory frameworks introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). Under this framework, every grant of planning permission will be deemed to have been granted subject to a general biodiversity gain condition. This requires developments to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of all onsite habitats.
- 1.15 This is a pre-commencement condition requiring the provision of a Biodiversity Gain Plan to be submitted and approved before works can be commenced, but after planning permission has been granted.
- 1.16 In principle, the grant of planning permission is not within the scope of BNG, however it is important to consider as part of the consenting body's decision-making process how a scheme will be able to demonstrate BNG after permission is granted.

Biodiversity Net Gain Hierarchy

- 1.17 The statutory framework allows for the 10% biodiversity gain to be delivered through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits. However, as set out in Articles 37A and 37D of the Town and Country Planning (Development Management Procedure) (England) Order 2015, development must consider the biodiversity net gain hierarchy when designing scheme proposals. This sets out hierarchy of actions as follows:
- First, for all medium, high and very high distinctiveness habitats, the avoidance of any adverse effects.
 - Where these can't be avoided, mitigating any adverse effects on medium, high and very high distinctiveness habitats.
 - Then, for all onsite habitats (including low distinctiveness), adverse effects should be compensated by in accordance with the following hierarchy:
 1. Prioritising the enhancement of existing habitats; then
 2. Creation of onsite habitats;
 3. Allocation of registered offsite unit gains; then
 4. Purchase of biodiversity credits
- 1.18 Proposals must demonstrate how the biodiversity hierarchy has been applied to or provide the reasons for any deviation. This biodiversity net gain hierarchy is distinct from the mitigation hierarchy set out in paragraph 186(a) of the National Planning Policy Framework.

Exemptions from the Biodiversity Metric Assessment

- 1.19 Certain developments are exempt from the Biodiversity Metric Assessment (BMA). They include:
- **Existing planning applications** - If a planning application for a development was made before day one of mandatory BNG on 12 February 2024, the development is exempt from BNG.
 - **Variations of planning permission** - Transitional arrangements also apply for variations to existing planning permissions.
 - **Developments below the threshold** - A development that does not impact a priority habitat and impacts less than:
 - 5 square metres (5m by 5m) of on-site habitat
 - 5 metres of on-site linear habitats such as hedgerowsA development 'impacts' a habitat if it decreases the biodiversity value
 - **Householder applications** - These are applications made by householders as defined within article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2015.

- **Self-build and custom build applications** - You must meet all of the following conditions to qualify for an exemption as a self-build or custom build. The development must:
 - consist of no more than 9 dwellings
 - be on a site that has an area no larger than 0.5 hectares
 - consist exclusively of dwellings that are self-build or custom housebuilding as defined in section 1(A1) of the Self-build and Custom Housebuilding Act 2015
- **Other exemptions** – High speed rail transport network, urgent crown developments, and works under Development Consent Orders (DCOs) such as nationally important infrastructure projects, including permitted development rights.

Site Description

- 1.20 The site is located in Haywards Heath, West Sussex (TQ 33068 24245). The development site is approximately 0.25 ha in area and comprises hardstanding, introduced scrub and scattered individual trees.
- 1.21 The location of the site is shown in Figure 1.1 and the extent of the site boundary is shown in Figure 1.2.
- 1.22 The wider landscape is characterised by continuous urban development with a number of greenspaces surrounding the site including recreational parks and woodland.

Development Proposals

- 1.23 Development plans on site comprise:
- Demolition of existing car park and replacement with 7 storey block of flats with associated amenity areas and hardstanding.

Survey Constraints

General constraints

- 1.24 Due to seasonal behaviour of animals and the seasonal growth patterns of plants, ecological surveys may be limited by the time of year in which they are undertaken.
- 1.25 The information gathered for this ecological survey has facilitated an evaluation of the habitats on site and the likely use of the site by legally protected and notable species. This survey has also given appropriate baseline data for the determination of the requirement for further surveys and/or mitigation and enhancement works.
- 1.26 The UKHab habitat map has been reproduced from detailed field notes and informed by aerial imagery, OS mapping and site maps provided by the client. The accuracy of this figure is therefore ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.

Site specific constraints

- 1.27 There are no site-specific constraints.

2 METHODS

Desk Study

- 2.1 The Multi Agency Geographic Information for the Countryside (MAGIC) website provided by the Department for Environment, Food and Rural Affairs (DEFRA) was consulted for information with regard to protected habitats and species within 2 km of the proposed development (red line) boundary.
- 2.2 Aerial photos of the site (Google, 2020) were examined to determine habitats surrounding the site and hence species likely to be present in order to make appropriate recommendations in the wider landscape context.
- 2.3 Following guidance contained within sections 5.5 and 6.2.1 of BS 42020:2013, records from the local biodiversity record centre may be deemed necessary, in which case the results are screened for relevance. This involves an analysis (in conjunction with DEFRA's MAGIC map software) of connectivity between recorded instances and the site boundary. Records are also screened for age; records are prioritised from the last 10 years, with records from the past 20 and 40 years deemed as less accurate, but still included where possible.

Report lifespan

- 2.4 The lifespan of this appraisal and the ecological survey information contained herein has been determined based on CIEEM's Advice Note: On the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), an assessment of the likelihood of presence of important ecological features on Site and consideration of how the ecological status of these features on Site may change over time.
- 2.5 If the commencement of site works is delayed beyond 18 months from the date of issue of this report, an update site walkover should be undertaken by a suitably experienced ecologist.
- 2.6 Following the update walkover, the ecologist will need to determine whether there have been any material changes to the ecological baseline, the potential impacts of the proposed development and/or the ecology-related legal risks associated with the proposed development.
- 2.7 If there have been any material changes in baseline ecological conditions, the potential ecological impacts of the proposed development and/or associated legal risks, or any material changes to relevant ecology-related legislation, standing advice, best practice and/or guidance, an updated report should be produced by a suitably experienced ecologist.

Biodiversity Metric Assessment

- 2.8 The Natural England 'Biodiversity Metric' tool was utilised to provide a quantified measurement of the biodiversity enhancement offered by the development.

- 2.9 The Lawton Review summarises that that improvements for biodiversity in the UK need to be "more, bigger, better and joined up".
- 2.10 Specifically, with regards to biodiversity offsetting for developments it recommends that "Opportunities should be taken to pool habitat compensation from different developments so that larger habitat blocks can be created".
- 2.11 Following this guidance, a coherent, cumulative strategy is proposed to provide quality habitats which connect into existing ecological networks.
- 2.12 Through utilising a biodiversity metric, conservation activities can be designed to deliver measurable biodiversity benefits in compensation for losses. This provides a traceable record to track cumulative impacts and delivered biodiversity benefits.
- 2.13 Using the biodiversity metric means that a developer employs a standardised formula to calculate the number of biodiversity 'units' to be lost as a result of their development, based on the habitat(s) affected, their condition and extent. The developer then provides an 'offset' (where necessary) to deliver an equivalent number of biodiversity units.
- 2.14 Biodiversity offsetting is used only to compensate for adverse impacts on biodiversity identified after appropriate avoidance, minimisation and on-site rehabilitation measures have been undertaken, according to the mitigation hierarchy as required by National Planning Policy Framework (NPPF, 2023).
- 2.15 The tool accepts values for areas of Natural England habitat types and gives each habitat a value based on its size, rarity, local importance, and condition. Area of loss of each of these habitats is then entered, along with area of enhanced habitat provided by the development and a total percentage change is calculated.
- 2.16 The full methodology used by the Biodiversity Metric can be found on the Natural England website.

Field Survey

Phase 1 habitat survey

- 2.17 The survey was conducted in accordance with The Handbook for Phase 1 Habitat Survey (JNCC, 2016), and included searches for signs of protected species, as described in the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017).
- 2.18 A Phase 1 survey of the site was carried out in order to evaluate any habitat on the site, and to gather data to inform the Biodiversity Metric Assessment.
- 2.19 Consideration was also given to habitats outside the site boundary, in order to evaluate the ecological context of the site within the wider landscape. Adjacent habitats were also considered with respect to their own ecological value and their potential to enhance the ecological value of habitats within the site.
- 2.20 Searches were made for invasive non-native plant species focussing on those species currently listed in the revised Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Species were listed split into non-natives and invasive non-natives with different advice for each.

- 2.21 The plant species nomenclature follows that of Stace (2019). Plant species observed within each habitat type were recorded using the DAFOR system which stands for Dominant, Abundant, Frequent, Occasional or Rare.

All references to relevant literature required to maintain industry best practice and compliance with legislation is listed in the References section of this report

Ground Level Tree Assessment (GLTA)

- 2.22 The methods used in the Ground Level Tree Assessment were based on those recommended in English Nature's Bat Mitigation Guidelines (Mitchell-Jones 2004), the Joint Nature Conservation Committee's Bat Worker's Manual (Mitchell-Jones and McLeish 2004), the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2024), and CIEEM's methodology for breeding bird surveys. The works were undertaken to the standards set out in BS:42020.
- 2.23 The assessment was purely visual from the ground and did not utilise any climbing or aerial equipment.
- 2.24 Holes, gaps, wounds, tear-outs and loose bark were noted on trees, along with patches of dense ivy and other veteran features suitable to support roosting bats. Age and location was also noted, along with tree health and species as some species are more likely to develop attributes suitable to support roosting bats.
- 2.25 Signs of likely bat presence as listed above were noted and investigated further where possible to do so in full compliance with legislation. Trees were given a category as follows:
- None – No significant features recorded with suitability to support roosting bats. Works to these trees do not require specialist methodology.
 - PRF-I – Features with suitability to support roosting bats were recorded, although these opportunities are considered to be suboptimal. No further surveys are required, but specialist soft-felling methodology will be required for felling or trimming of these trees.
 - PRF-M – Features with suitability to support roosting bats were recorded, and these opportunities are considered to be of a high quality and likelihood to support bats. Further surveys will be required to determine presence / absence of roosting bats before any works to these trees to comprise either emergence surveys or licenced aerial inspection.
- 2.26 Assessment for suitability to support birds involved a visual assessment of bird activity in and around the tree over a period of 30 minutes in the morning when birds are most active. Signs of nesting activity, including active / defunct nests, bird courting, and nest material gathering were noted and commented upon.

Recommendation categorisation

2.27 So as to ensure biodiversity net gain for all development projects, the enhancement recommendations outlined in Section 6 of this report are categorised as Red, Amber or Green:

Red recommendations should be designated as conditions attached to a planning consent, and the development must not proceed without these enhancements / compensation measures being put in place, as they form a crucial role in achieving biodiversity net gain targets.

These recommendations are designed to be as effective and swift as possible, whilst taking into account cost and ease of implementation / future management in context with the scale of the development site.

Amber recommendations should be included within the development, however it is not necessary for them to be designated as conditions, as the author believes that their implementation is not key to achieving biodiversity net gain targets. The client / developer should seriously consider including these measures to improve the biodiversity value of the site and to reduce their carbon footprint.

These recommendations are designed to be a good balance between efficacy and cost efficiency.

Green recommendations are additional enhancements which would improve the biodiversity value of the site; however, they are not key to achieving biodiversity net gain targets. These recommendations are aimed at clients wishing to 'go the extra mile' with their site so as to improve visual impact, public engagement, and property value

These recommendations are often more costly, either financially or in terms of time input in context with the size of the site, however they can also deliver longer term benefits for a greater original outlay.

2.28 Recommendations are prioritised into the above categories taking into account multiple factors, including, but not limited to:

- Measurable impact on biodiversity net gain using the methodology of Biodiversity Metric
- Habitat classification factors utilised by the Natural England Biodiversity Metric; for instance, how valuable would the enhancements be from a habitat creation / modification perspective
- Likelihood of the client to undertake or follow through with recommendations, and to maintain recommendations post-development [as appropriate]
- Ease and cost of implementation, such that high impact and swiftly effective recommendations are prioritised over slower or less easily maintained enhancements on smaller development sites
- Surveyor and author experience of effectiveness of enhancement features in areas similar to the site, such as on other sites nearby, or enhancements already implemented as a part of local designated-site management plans (such as AONB strategies)

3 RESULTS

Desk Study

- 3.1 Records of designated sites and European sites within 2 km of the site boundary were obtained from Multi Agency Geographic Information for the Countryside (MAGIC) website provided by the Department for Environment, Food and Rural Affairs (Defra).

Designated sites

- 3.2 There are no international/European designated sites within 2km of the proposed site.
- 3.3 There are three (3) statutory designated sites located within 2km of the proposed development site, three Local Nature Reserves, Blunts and Paiges Wood to the west, Scrase Valley to the east and Ashenground and Bolnore Woods to the south.
- 3.4 The site is not set within the High Weald AONB and Haywards Heath is cut out of the boundary.
- 3.5 The site is not designated for its specific nature conservation interest, and the scale of development is such that it is unlikely to significantly affect local designated sites.

Designated habitats

- 3.6 The habitats in the wider landscape comprises continuous urban development of residential and commercial buildings with railway tracks immediately west of the site. There are a number of greenspaces in the surrounding landscape, consisting mainly of gardens and recreational parks and woodland, the closest being Clair Park to the east.
- 3.7 Further to this, the wider landscape contains four Habitats of Principal Importance (HPIs) covered under Section 41 of the Natural Environment and Rural Communities Act, consisting of coastal and floodplain grazing marsh, deciduous woodland including ancient woodland, traditional orchards, and wood-pasture and parkland.

Waterbodies

- 3.8 There are no waterbodies within 500m of the site. The 500m buffer is shown in Figure 3.1.

Biological Records

- 3.9 Following guidance contained within sections 5.5 and 6.2.1 of BS 42020:2013, it was deemed not necessary to obtain biological records from the local Biological Records Centre for the following reasons:
- Protected species impacts are predicted to be minimal.
 - Development is of a small scale.

- The scheme will be *de-minimis* in terms of habitat 'impacts' as per the biodiversity metric methodology.
- Development can be contained within areas of lowest quality habitat, as existing habitats comprise predominantly built habitats with 'zero habitat value' with the remainder comprising a mixture introduced scrub and scattered trees.
- The site will be subjected to a low-impact scheme and the new development will sit almost entirely within the footprint of the existing car park, resulting in only limited impacts to green habitats.

3.10 Local records may be required at a later stage in development to further inform protected species presence in the wider landscape.

Field Study

Phase 1 Habitat Survey

- 3.11 The habitats present on site are shown in Figure 3.2 and are described in detail below.
- 3.12 The site comprises a car park adjacent to a commercial tower block in the centre of Haywards Heath. It is almost entirely hard surfaced and is demarcated from the adjacent car parks by introduced shrub beds with occasional mature trees.
- 3.13 Habitats comprise: developed land sealed surface, introduced shrub and urban trees.

Developed land sealed surface

- 3.14 The majority of the site comprises tarmac surface in fair condition for its age and construction. It has minimal vegetation coverage limited to the edges where scrubby species have begun to encroach and in spoil piles in the centre of the site which have begun to become colonised by buddleia (see introduced shrub).

Introduced shrub

- 3.15 Introduced shrubs can be found at the southern and northern boundaries of the site in overgrown beds and beginning to encroach at the western boundary in areas of disturbed ground. The overgrown beds were clearly well kept at one time, having fallen out of management, becoming leggy.
- 3.16 **Dominant:** wilson's honeysuckle *Lonicera nitida*; **Abundant:** buddleia *Buddleja davidii* var., bramble *Rubus fruticosus*, ivy *Hedera helix*; **Frequent:** garden privet *Ligustrum ovalifolium*, herbaceous clematis *Clematis Blue River*; **Occasional:** silver birch *Betula pendula*, rosebay willowherb *Chamerion angustifolium*, herb-robert *Geranium robertianum*, snowberry *Symphoricarpos albus*; **Rare:** oregon-grape *Mahonia aquifolium*, cherry laurel *Prunus laurocerasus*, holly *Ilex aquifolium*, evergreen oak *Quercus ilex*, calathea / peacock plant *Goeppertia makoyana*.

Urban tree

- 3.17 Scattered trees can be found in and amongst the introduced shrub on southern and northern boundaries.
- 3.18 **Abundant:** English oak *Quercus robur*, ash *Fraxinus excelsior*; **Frequent:** sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*; **Rare:** western red cedar *Thuja plicata*

Bat roosting

Trees

- 3.19 Standardly as a part of a Preliminary Ecological Appraisal, a Ground Level Tree Assessment (GLTA) for bats is undertaken on all trees on site of an age or condition that they are likely to hold features suitable to support roosting bats. No PEA was

necessary at Perrymount Road as the site is almost entirely developed or consists of low-quality habitats. Nevertheless, the presence of mature trees necessitated a GLTA.

- 3.20 These features are most typical on larger trees or those that have been wounded or veteranized, and their prevalence is also affected by the species of tree as some are more likely to survive the aging or veteranizing process than others.
- 3.21 Features searched for include lifted bark, lesions and cracks, holes, dead wood, cavities, and missing limbs.

Survey effort

- 3.22 No trees are being removed to facilitate development at Perrymount Road, however the surveyor considered it prudent to assess all woody assets as identified to ensure lighting impacts as well as any potential facilitation pruning works could be appropriately mitigated.
- 3.23 Suitability scoring followed the methodology outlined in Section 2.
- 3.24 This section has been written with reference to the Arboricultural Impact Assessment reference OS2480-22-Doc1 by Open Spaces Landscape Architects.
- 3.25 Where trees were identified as having 'PRF-M' suitability and require immediate works to facilitate development, photographs of these features are provided so as to aid identification of features. The results of the GLTA are detailed in Table 3.0

Table 3.0: Ground Level Tree Assessment survey results

#	Species	Features	Category	Removal / works planned?	Recommendations
T1	English yew	No features recorded, likely due to species type and lack of wounds.	None	No works planned	No further surveys.
T2	Sycamore	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
T3	Sycamore	No features recorded due to vitality and relatively young age	None	No works planned	No further surveys.
T4	Sycamore	No features recorded due to vitality and relatively young age	None	No works planned	No further surveys.
T5	Sycamore	No features recorded due to vitality and relatively young age	None	No works planned	No further surveys.
T6	Sycamore	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
T7	Dead	No features recorded at the time of survey, however as this tree is dead it may develop features at any time. As such, a precautionary approach is required.	PRF-I	Removal	No further surveys. Precautionary approach required for removal
T8	False acacia	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
T9	False acacia	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
T10	English oak	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
T11	English oak	No features recorded due to vitality and relatively young age	None	No works planned	No further surveys.
T12	Fir	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
T13	Sycamore	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
T14	Sycamore	No features recorded due to vitality and relatively young age	None	Facilitation pruning	No further surveys.
G1	English oak, silver birch	No features recorded due to vitality and relatively young age and / or species type	None	Facilitation pruning	No further surveys.
S1	Mixed scrub	No features recorded due to structural form	None	Facilitation pruning	No further surveys

Summary of works

#	Species	Category	Recommendations
T2	Sycamore	None	Facilitation pruning – no further actions required
T6	Sycamore	None	Facilitation pruning – no further actions required
T7	Dead	PRF-I	Marked for removal – precautionary approach required
T8	False acacia	None	Facilitation pruning – no further actions required
T9	False acacia	None	Facilitation pruning – no further actions required
T10	English oak	None	Facilitation pruning – no further actions required
T12	Fir	None	Facilitation pruning – no further actions required
T13	Sycamore	None	Facilitation pruning – no further actions required
T14	Sycamore	None	Facilitation pruning – no further actions required
G1	English oak, silver birch	None	Facilitation pruning – no further actions required
S1	Mixed scrub	None	Facilitation pruning – no further actions required

- 3.26 None of the trees on site were considered suitable to support roosting bats on account of their lack of features due to their young age, species or good vitality and lack of injury. The only exception to this was T7, a dead tree with the potential to degrade further and provide additional features not visible at the time of survey.
- 3.27 Subject to the application of appropriate mitigation measures, the works required to facilitate development are not considered to pose a threat to potential bat usage of trees, and all impacts can be avoided.
- 3.28 No further surveys are required at this time.

Other items

- 3.29 The following invasive non-native species of concern were recorded on site; buddleia, snowberry and cherry laurel.

Biodiversity Metric calculator from Natural England

- 3.30 To ensure compliance with the requirement for biodiversity net gain, a calculation was made using the Natural England 'Biodiversity Metric' calculator.

Restrictions

Curtilage

- 3.31 Biodiversity net gain cannot be achieved within residential curtilage, as enhancements cannot be secured for the 30-year BNG period. As such, the only habitats allowed within residential curtilage are 'Developed Land, Sealed Surface' (Buildings, hardstanding etc.), and 'Vegetated Garden' (all aspects of a garden, including lawn and ornamental planting).
- 3.32 Retained habitats can be retained within curtilage, however no *enhancement* to those habitats can be included *e.g. individual trees*.

Unit trading

- 3.33 Units cannot be traded between types, and sites must (as a minimum) achieve 10% net gain for habitats, hedgerows and watercourses where applicable. Enhancement is only required where there is already that habitat type on site.

E.g. site with habitats and hedgerows, no watercourses = 10% net gain for habitat units AND 10% net gain for hedgerow units but no new watercourses necessary.

Habitat degradation

- 3.34 Habitat degradation, whereby human actions have reduced the value of a habitat prior to a biodiversity metric assessment needs to be accounted for when discussing habitat value. In some instances, it can be necessary to backdate a habitat's value to before the degradation occurred; this is the case if:
- The degradation occurred on or before the 30th January 2020 without planning consent.
 - The degradation occurred after 25th August 2023 as a part of an approved planning consent, where the development has not yet finished.

Backdating can be difficult. If remnants of the original habitats are still visible, a condition score for what was historically there can be gleaned from any remaining or similar adjacent habitat. Where this is not the case, industry best practice states that it must be assumed that habitats were of the highest condition score possible for their type.

BNG calculation

- 3.35 The biodiversity net gain calculation has been completed using area measurements gained from QGIS covering the whole red-line site boundary (Figure 3.2). The baseline

is outlined in table 3.1. For clarity, the JNCC habitat type is listed next to the BM habitat type.

Table 3.1 – Existing baseline habitat areas and units:

Habitat type	Existing area (ha)	Baseline habitat units
Urban - Developed land; sealed surface	0.216	0.00
Urban - Introduced shrub	0.0399	0.08
Individual trees - Urban tree	0.1629	1.95
TOTAL Baseline habitats:	0.4188ha	2.0346

3.36 Condition scoring was undertaken using the BM Technical Annex 1 condition score sheet. The results of which are outlined in Table 3.2.

Table 3.2 – Existing baseline habitat conditions:

Habitat type	Sheet	Condition	Justification
Urban – Developed land, sealed surface	N/a	N/A - Other	Automatic N/A – Other condition due to type, no assessment required.
Urban – introduced shrub	N/a	Condition Assessment N/A	Automatic N/A – Other condition due to type, no assessment required
Individual tree – Urban tree	9A	Good	Scored 4 out of a possible 6 points. Gained points for: + At least 70% of the trees on site are native + The tree canopies are predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5m wide + More than 50% of the trees on site are mature + There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. + More than 20% of the tree canopy area is oversailing vegetation beneath. Lost points due to: - Natural ecological niches for vertebrates and invertebrates are not present, such as presence of deadwood, cavities, ivy or loose bark.

3.37 The new habitats that will be created are detailed in Table 3.3 below. This includes habitats that will be created by the development, such as the new buildings, hardstanding and grassland, as well as new habitats that should be created as a part of the compensation and enhancement process such as hedgerows.

Table 3.3 – New habitats created:

Habitat type	Created (ha)
Urban - Vegetated garden	0.0258
Urban - Developed land; sealed surface	0.076

3.38 The full biodiversity metric calculation is shown in table 3.4 below.

Table 3.4 Biodiversity Metric - Habitats:

Habitat type	Baseline		Area		Units		Units enhanced
	Area (ha)	Habitat units	Kept (ha)	Enhanced (ha)	Kept	Lost	
Urban - Developed land; sealed surface	0.216	0.00	0.1272	0	0.00	0.00	0.00
Urban - Introduced shrub	0.0399	0.08	0.0272	0	0.05	0.03	0.00
Individual trees - Urban tree	0.1629	1.95	0.1629	0	1.95	0.00	0.00
TOTAL:	2.03	2.03	0.32	0	2.01	0.03	0

Habitat units

Currently the site scores 2.03 habitat units. Development of the site loses 0.03 habitat units, leaving 2.01 remaining. As such, the new habitats (including compensation and enhancement) must deliver a minimum of 0.223 units for a new total of 2.233

Hedgerow units

There are no hedgerows on site.

Watercourse units

There are no watercourses on site.

Table 3.5 Biodiversity Metric – Unit creation:

Habitat type	Created area (ha)	Units created
Urban - Vegetated garden	0.0258	0.049794
Urban - Developed land; sealed surface	0.076	0
Habitat creation subtotal:		0.05

Table 3.6 Biodiversity Metric – Net change:

Site baseline:		Post intervention:		Percentage change:	
Habitat units	2.0346	Habitat units	2.06	Habitat units	1.25%
Hedgerow units	0	Hedgerow units	0	Hedgerow units	0%
River units	0	River units	0	River units	0%

Habitats

3.39 In total, the scheme fails to achieve biodiversity net gain for habitats within the development site. As such, off-site enhancement will be required.

3.40 A minimum of 0.18 habitat units of 'low' distinctiveness or higher will need to be purchased from a nationally recognised provider.

Reason: To meet habitat trading conditions due to the area of habitat lost on site

What is being removed?

In their current form, development will require removal of the following habitats:

- Developed land sealed surface
- Introduced shrub

What does it mean?

3.41 The proposed development is such that mandatory 10% net gain cannot be achieved on site. As such, off-site measures will be required to comprise unit purchase.

Table 3.7 Biodiversity Metric – Net change – With Off-site Enhancement:

Site baseline:		Post intervention:		Percentage change:		Legislatively compliant?
Habitat units	2.0346	Habitat units	2.24	Habitat units	10%	Yes
Hedgerow units	0	Hedgerow units	0	Hedgerow units	0%	
River units	0	River units	0	River units	0%	

3.42 In total, the development can potentially achieve biodiversity net gain for habitats through unit purchase.

What needs to happen?

On-site

- Creation of new areas of vegetated garden.
- Retention of existing scattered trees.

As such, these elements should be a condition of planning consent, as without them achieving net gain and satisfying trading conditions is not possible.

- Purchase of a minimum of 0.18 'low' units, or units from a higher distinctiveness habitat.

Other information

- 3.43 The calculation takes in lots of information including about the surroundings of the site, as outlined above. However, it does not take account of any enhancement works to the buildings, bat / bird boxes, or other green initiatives discussed with the client.
- 3.44 A brief explanation of how conditions of existing habitats will be improved to achieve the enhancement criteria is detailed in Section 6 of this report, with further detail provided as a part of a Habitat Management and Monitoring Plan (HMMP) at a later stage.

4 EVALUATION

Habitats

- 4.1 The habitats present on site are of low ecological quality and comprise locally abundant species typical of the wider landscape.

Biodiversity Metric

- 4.2 The habitats on site were all intact at the time of survey, therefore it is the author's professional opinion that the survey presents a true representation of the habitats present.
- 4.3 The existing habitats are typical of outgrown and derelict brownfield sites, and as such have a relatively low value.
- 4.4 Due to the need to remove habitats of 'low' distinctiveness it is necessary for off-site areas to be enhanced to satisfy trading standards. Off-site units can be purchased from a nationally recognised provider.
- 4.5 The proposed development will allow management of the habitats on site to a higher biodiversity value, coupled with the addition of enhancement features.

Limitations of the BMA

- 4.6 The Biodiversity Metric Assessment (BMA) system was devised by Natural England in 2021 as a part of the new Environment Act 2021 legislation. It has been designed to enforce a mandatory 10% biodiversity net gain such that developments are proportionately compensated for based upon the value of the habitats that were originally there.
- 4.7 Different elements are considered within the BMA such as:
- The habitat's rarity (how much there is in the UK),
 - It's distinctiveness (how different is it to other habitats),
 - It's condition (how representative of the 'ideal' it is).
- These elements affect the 'value' of the habitats concerned.
- 4.8 As such, the BMA provides a method for comparing the pre-development baseline and the post-development 'value' of a site, and for comparing two separate sites.
- 4.9 However, the system is imperfect as the BMA is a mathematical approach that is used to standardise an issue that is esoteric and cannot always be standardised due to the complexity and nuances of ecology. Some limitations of the system are outlined below:
- The tool uses Natural England's habitat classifications, rather than those outlined in the JNCC Phase 1 Habitat Survey Guidelines used by Stace et al as a part of the PEA methodology. Whilst this isn't a direct issue, it does mean that habitats have to be put into their category of best fit;

- Not all enhancements are directly supported, including things such as bat roof voids, bat and bird boxes, and wildflower planting – whilst the latter is indirectly encouraged through grassland encouragement, more urban sites can have this element overlooked. Therefore, the biodiversity value of the development could be artificially lower as the author has had to put enhancements in the category of best fit within the metric, or miss them entirely;
- The system relies on units which, although chosen and calculated by a committee of Natural England staff, can be perceived as arbitrary. This is because of the complexity and nuances of the field of ecology, and the fact that a mathematical approach cannot encompass and summarise a site in its entirety.
- The metric doesn't take into account the grey area of how, or in what way, a habitat is lost as some methods of loss are more destructive to biodiversity than others, whereas others would not necessarily be counted as a 'loss', but more of a change;
- Some man-made habitats such as 'Artificial un-vegetated, unsealed surface' i.e. hardstanding are considered to have 'very low' biodiversity value such that they require no form of loss based compensation, despite the fact that industry best practice states that herptiles can utilise these areas as basking habitat.

- 4.10 Despite these limitations, the metric has provided a means of quantifying the enhancement *potential* of a development and removes bias that could otherwise skew the impact of the development in the developer's favour.
- 4.11 The metric results provided are for indicative purposes only, and do not provide an accurate representation or guarantee of biodiversity success and should only be used for comparative purposes at this stage. Further works will be required to secure these enhancements for the BNG period of 30 years.
- 4.12 Successful implementation of the enhancements contained within this report will however guarantee an increase in biodiversity compared with a development with no associated enhancements.

Other Items

- 4.13 The invasive non-native species buddleia, snowberry and cherry laurel were recorded throughout the site. The Japanese knotweed is under a management plan and has been chemically treated within the last 12 months, and this should be continued until plan renewal, at which point it should be reassessed.
- 4.14 These species should be removed and eradicated.

5 CONCLUSION

Site summary

- 5.1 The proposed development site is currently considered to have low ecological value within a local context as it comprises locally common habitats supporting locally abundant species typical of the wider landscape.
- 5.2 The biodiversity value of the total site area is largely attributed to the following factors:
- The poor diversity of species and sward heights within the habitats on site when compared to the wider landscape.
 - The poor vegetative structure and connectivity within the development boundary; and
 - The ease with which biodiversity enhancement measures can be implemented within the overall site boundary without compromising amenity value.

Development proposals

- 5.3 Development plans on site comprise Demolition of existing car park and replacement with 7 storey block of flats with associated amenity areas and hardstanding.

Habitat impacts

- 5.4 Impacts to non-built habitats are predicted to be minimal comprising small areas of introduced shrub, with onward management of the other retained habitats in line with the landscape / proposals plan for the site.

Species likely present

- 5.5 In the absence of mitigation, the current development proposals have the potential to affect protected species. To reduce the risk of an offence being committed, recommendations are outlined in Section 6 of this report. These should be followed to ensure that any potential impacts to protected species are adequately addressed during the planning stage, development and post-development stage.
- 5.6 The following species require no specific mitigation, and can be discounted from future consideration:
- Dormice
- 5.7 The following species require 'standard' mitigation, such that subject to application of a combination of non-site-specific measures, a precautionary approach, and toolbox talks no impacts are predicted on these species:
- Bats
 - Badgers
 - Breeding birds

- Great crested newts
- Hedgehogs
- Reptiles

5.8 The following species required additional mitigation measures, being a combination of additional surveys and / or additional site-specific mitigation measures due to the fact that the development presents unique risks to them:

- Not applicable

6 RECOMMENDATIONS

6.1 Section 6 discusses the following separate elements:

- Biodiversity enhancement measures to achieve Biodiversity Net Gain.

Biodiversity enhancement and compensation

Necessity for planning conditions – note to the LPA

Sometimes it can be deemed necessary for biodiversity enhancements and compensation measures to be recommended to be designated as conditions attached to a planning consent.

The following symbols will be utilised below, with categorisation methodology explained in Section 2:

Red recommendations should be designated as conditions attached to a planning consent, and the development must not proceed without these enhancements / compensation measures being put in place, as they form a crucial role in achieving biodiversity net gain targets.

Amber recommendations should be included within the development, however it is not necessary for them to be designated as conditions, as the author believes that their implementation is not key to achieving biodiversity net gain targets. The client / developer should seriously consider including these measures to improve the biodiversity value of the site and to reduce their carbon footprint.

Green recommendations are additional enhancements which would improve the biodiversity value of the site; however, they are not key to achieving biodiversity net gain targets. These recommendations are aimed at clients wishing to 'go the extra mile' with their site so as to improve visual impact, public engagement, and property value.

In all cases, effort should mainly be concentrated on planting native species where possible. We have created an 'Alternative Planting List' covering trees, hedgerows, and wildflower species suggestions, available on request.

Mandatory enhancements

Hedgehog highways should be a part of the development, with any and all new fencing and walls having a minimum 13cm x 13cm hole integrated into their design to allow access and egress from the site. Hedgehogs are a species of principal importance under Section 41 of the NERC Act 2006, and their conservation is of paramount importance due to severe declines in their populations and range.

Bird boxes, bat boxes, and bee bricks should be a part of the development, including dedicated swift boxes for hirundines, multi species bird boxes, and bat boxes.

Bird boxes

Bird boxes should be placed at a minimum height of 4.5 metres i.e. first floor / eaves height away from doors and windows and areas of high disturbance (footpaths, lighting etc.).

Bird boxes should be placed on the eastern or western aspects of buildings so that they remain partially shaded during parts of the day to reduce the risk of overheating. They should comprise built-in features as they are better for security, longevity, reduced maintenance, reduced predation, thermal stability and aesthetic integration with the building design.

It is recommended that bird boxes are constructed of woodcrete / woodstone similar to such boxes as the Schwegler 1SP nest box, which is suitable for both built-in and hung installations.

The swift box should be similar to the Vivara Pro WoodStone built-in swift nest box, or the Schwegler 17A triple cavity box, which is suitable for both built-in and hung installations.

One brick is the equivalent of one nesting cavity, thereby where a multiple cavity brick is provided, this would result in the same provision but with a lower number of bricks.

As a minimum, eight (8) bird boxes should be provided along with a minimum 24 swift cavities / swift boxes / bricks on the eastern aspect of each new building.

Multi-species bird boxes and swift boxes should be placed away from each other where possible.

Bat boxes

As bats prefer more sheltered and less disturbed areas to roost, it is recommended that bat boxes are placed at a height of 4 metres on the southern side of the building. This will ensure that bats remain undisturbed by usage of the buildings.

It is recommended that bat boxes are of the Schwegler 1FR built-in type, as built in features have a higher efficacy than hanging features. Alternatively, where this is not possible due to a lack of suitable opportunities for built-in features, hanging boxes can be utilised such as the Schwegler 1FF or 2F flat hanging box on either buildings or mature retained trees.

Care should be taken when erecting bat boxes to ensure they remain sheltered, but accessible with clear flight paths and without damaging surrounding trees during erection. Tertiary branches that block the flight path to the box should be trimmed, with the whole area remaining unlit.

As a minimum, eight (8) bat boxes / bat brick should be provided on the southern aspect of each new building. Where built in boxes are not possible, two (2) hanging boxes should be provided instead.

Arborweald receive no commission for recommendation of brands of wildlife boxes, and other brands are available.

Bee bricks

Bee bricks should be included on the new building(s) to comprise four (4) Ibstock EcoHabitat bricks at a minimum of 1m above ground level adjacent to landscape planting that is of benefit to wildlife, comprising native species as detailed in the 'Wildflower planting' section below.

For buildings without a suitable brick face for installation, a Woodstone Insect Block or similar should be installed externally in a suitable location.

Habitat enhancement:

No habitat enhancement will be undertaken across the site boundary, and therefore a Habitat Management and Monitoring Plan (HMMP) will not be required. The calculated off-site unit requirement is contingent on the current plans for the site which includes the following elements:

On-site

- Creation of new areas of vegetated garden.
- Retention of all scattered trees.

Off-site

0.18 grassland units of 'low' distinctiveness must be purchased from an appropriate and nationally recognised biodiversity unit provider.

Non-mandatory enhancements

New trees; the development should include new trees to ensure an appropriate level of cover for bats and to provide a micro-climate between trees to support insect species. Fruit trees also work well within linear boundaries such as hedgerows.

These should be scattered throughout the site boundary, and comprise robust native woody species such as hornbeam, field maple, or lime *Tilia cordata*, or fruiting species such as pear *Pyrus spp.*, apple *Malus spp.*, or mountain ash *Sorbus aucuparia*. These could include historically important varieties rare in the county. These species provide foraging opportunities for badgers, birds and small mammals.

Sward management around planted trees should be careful to avoid damage to trees and should be as varied as the rest of the amenity grassland within the wider site boundary.

Hedge planting; the development should include new hedge planting along linear boundaries using a native species-rich hedgerow mix to include a minimum of 7 species from the following list: hazel, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, spindle *Euonymus europaea*, wayfaring tree *Viburnum lantana*, crab apple *Malus sylvestris*, hornbeam *Carpinus betulus*, dog rose, field maple *Acer campestre* and wych elm *Ulmus glabra*. Furthermore, any existing hedgerows in the wider site boundary should be gap planted and bolstered with species from the list above.

These species are hardy allowing them to be managed in multiple ways and provide excellent privacy once full grown. If further privacy is required in specific areas, then yew *Taxus baccata* and beech *Fagus sylvatica* should be considered. Non-native species should be avoided.

Scattered mature standards comprising hornbeam *Carpinus betulus*, field maple, or lime *Tilia cordata* var. 'Green Spire' should be planted across the site to increase woody coverage and connectivity. These species are hardy, low maintenance and also do not risk dominating the landscape in later life as they can be coppiced or pollarded effectively.

Additionally, honeysuckle *Lonicera periclymenum* should be included in hedgerow mixes.

Areas of hedgerow with non-native invasive species should have these species removed and replaced with native species.

New hedgerows should be planted at a density of 10 plants per metre in two rows of 5 plants each, with rows 30cm apart and plants 20cm apart. Bolster planting should be undertaken at the same density taking into account existing mature individuals as contributing to this density;

e.g. existing hedgerow has density of 3 plants per metre, bolster planting would comprise 7 additional plants.

Mowing regime; areas of grassland on site should be mown on a scheme that benefits both biodiversity and the usage of the site. Areas away from roadways should be left long and cut once in October to allow the soil nutrients to be removed. These measures can also be supplemented for 'planting of a wildflower meadow' below.

Hedge cutting; Existing and new hedgerows on site should be cut biannually (every 2 years) except around gateways (annually). Hedgerows gradually lose their shape and density at the cost of amenity and functionality as they mature; therefore, hedge laying in the traditional Kent or Sussex style should occur every 10 years on rotation to maintain hedge structure.

Planting of a wildflower meadow; an increase in invertebrate habitat should be a key part of the plan, to include wildflower planting for bees and other pollinators within the site boundary to the east and south of the development to help increase the number of foraging opportunities available for bats.

Wildflower meadow mixes are available online, and should preferably focus on native bee-friendly mixtures to include the following species:

Common agrimony	Cornflower	Wild marjoram
Borage	Ox-eye daisy	Meadow cranesbill
Wild clary	Wild foxglove	Musk mallow
Red clover	Common knapweed	Common poppy
White clover	Greater knapweed	Ragged robin
Corn cockle	Purple loosestrife	Sainfoin
Field scabious	Bird's-foot trefoil	Yarrow

Wildflower mixes should focus on supporting invertebrates (such as bees, ants, wasps, butterflies and flies) and birds, and should ideally not contain non-native species as these can out-compete native plants for pollination.

Climbing plants should be trained up the walls of the new buildings or fences using trellis. Species could include; passion flower, honeysuckle, hops, ivy, star jasmine, wisteria, climbing roses, or clematis. These species all provide feeding opportunities for invertebrates and small mammals, and nesting opportunities for birds once they reach maturity.

Butterfly planting should focus on species rare in Sussex and Kent such as the silver-spotted skipper *Hesperia comma*, dingy skipper *Erynnis tages*, grizzled skipper *Pyrgus malvae*, Adonis blue *Polyommatus bellargus*, chalk hill blue *Polyommatus coridon*, small heath *Coenonympha pamphilus*, and fiery clear wing *Pyropteron chrysidiformus*. Plant species to encourage these butterflies should include the following in a large planter or area of ornamental planting (species that support more than one of these butterfly species are in bold):

Common sorrel	Tormentil	Birds foot trefoil
Curled dock	Salad burnet	Horseshoe vetch
Sheep's fescue	Agrimony	Wild strawberry

REFERENCES

- Amphibian and Reptile Group UK (ARG UK). (2010). ARG UK Advice Note 5 Great Crested Newt Habitat Suitability Index, ARG UK
- ARG UK (2010). Advice note 5: Great crested newt habitat suitability index. Amphibian and Reptile Groups of the United Kingdom.
- Barn Owl Trust. (2012). Barn Owl Conservation Handbook, Pelagic
- Bat Conservation Trust (BCT) (2023). Bat surveys for Professional Ecologists: Good Practice Guidelines. 4th edition. BCT, London.
- BCT & Institution of Lighting Professionals (ILP) (2023). Bats and artificial lighting at night. Guidance Note GN08/23. BCT, ILP, Warwickshire.
- British Standards Institute (2012). BS 5837:2012 Trees in relation to design, demolition and construction.
- British Standards Institute (2013). BS 42020: 2013 Biodiversity - Code of practice for planning and development.
- Chanin P. (2003). Ecology of the European Otter. Conserving Natura 2000
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2017a). Guidelines for Ecological Report Writing. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2017b). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1 (September 2019). Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2019). Advice Note: On the Lifespan of Ecological Reports and Surveys. [April 2019]. Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins J. (Ed). (2024). Bat surveys: good practice guidelines. London, Bat Conservation Trust
- Construction Industry Research and Information Association (CIRIA) (2011). Working with wildlife: guidance for the construction industry. CIRIA, London.
- Construction Industry Research and Information Association (CIRIA) (2023). Environmental good practice on site guide (fifth edition) (C811D). CIRIA, London.
- Corbet G. B. and Harris S. (1991). The handbook of British mammals, Blackwell Scientific
- Dean M, Strachan R, Gow D and Andrews R; Mathews F and Chanin P (Ed). (2016). The Water Vole Mitigation Handbook, The Mammal Society
- Defra (2024a). Statutory biodiversity metric condition assessments. Defra, London. Accessed via: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>
- Defra (2024b). Statutory Biodiversity Metric User Guide (draft), November 2023. Defra, London.

Department for Environment, Food and Rural Affairs (Defra) (2010). Guidance on section 14 of the Wildlife and Countryside Act, 1981. London.

Department for Levelling Up, Housing and Communities (2023). National Planning Policy Framework. December 2023. Department for Levelling Up, Housing and Communities, London.

Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.

English Nature (2001). Great crested newt mitigation guidelines. English Nature, Peterborough.

English Nature (2004). An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus*. Report 576. English Nature, Peterborough.

Froglife. (2001). Great Crested Newt Conservation Handbook, Froglife

Gent T. and Gibson S. (2003). Herpetofauna Workers Manual, Joint Nature Conservation Committee (JNCC)

Harris S. and Yalden D. (2008). Mammals of the British Isles, Mammal Society

Harris, S, Cresswell, P and Jeffries, D. (1986). Surveying Badgers, Mammal Society

Jehle, R and Arntzen, JW (2000). 'Post-breeding migrations of newts (*Triturus cristatus* and *T. marmoratus*) with contrasting ecological requirements. Journal of Zoology London, 251, 297-306.

JNCC. (2016). Phase 1 Habitat Survey Handbook, JNCC

Joint Nature Conservation Committee (JNCC) (2010). Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit. Revised print, JNCC, Peterborough.

Joint Nature Conservation Council (JNCC). (2003). Herpetofauna Workers Manual, JNCC

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

Madsen, T. (1984). Movements, home range size and habitat use of radio-tracked grass snakes (*Natrix natrix*) in southern Sweden. Copeia 1984, 707–713.

Mitchell - Jones A. J. and McLeish A. P. (2004). Bat workers' manual. Peterborough, JNCC

Mitchell-Jones A.J (2004) Bat Mitigation Guidelines. English Nature.

Multi-agency Geographic Information for the Countryside (MAGIC) Interactive Map. Department for Environment, Food and Rural Affairs. Accessed via: <http://magic.defra.gov.uk>

Natural England (2011). Natural England Guidance Note: European Protected Species and the Planning Process: Natural England's Application of the Three 'Tests' to Licence Applications. Guidance Note ref: WML-G24(01/11).

Natural England (2018). Ancient woodland, ancient trees and veteran trees: protecting them from development. Published 13/10/2014. Last updated 05/11/2018. Accessed via: <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>

Natural England (NE). (2006). The dormouse conservation handbook, NE

Natural England (NE). (2011). Reptile mitigation guidelines, NE

NE. (2014) Otters standing advice, NE

NE. (2015) Water vole standing advice, NE

NE. (2015). Bats standing advice, NE

NE. (2015). Bats: surveys and mitigation for development projects, NE

NE. (2015). Great crested newt Standing Advice, NE

NE. (2015). Great crested newts: surveys and mitigation for development projects, NE

NE. (2015). Reptiles Standing Advice, NE

NE. (2015). Reptiles: surveys and mitigation for development projects, NE

NE. (2015). Standing Advice Species Sheet Wild Birds (including Barn Owls). NE

NE. (2015). Standing Advice: Badger, NE

NE. (2015). Standing Advice: Dormouse, NE

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

Ransome, R. (1990). The natural history of hibernating bats. London, Christopher Helm

Rivers Ecology Series No. 10. English Nature, Peterborough

Schmidt, B. R., et al. (2017). Spatial capture-recapture analysis of artificial cover board survey data reveals small scale spatial variation in slow-worm *Anguis fragilis* density. *Royal Society Open Sciences*. 4, 1-8.

Secretary of State, (1981 [as amended]). Wildlife and Countryside Act, HMSO

Secretary of State, (1992). Badger Act, HMSO

Secretary of State, (2000 [as amended]). Countryside and Rights of Way Act, HMSO

Secretary of State, (2010/2017) The Conservation of Habitats and Species Regulations, HMSO

Secretary of State, (2021). Environment Act, HMSO

Shawyer C R. (2011). Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting, IEEM

Stace, C (2019) New Flora of the British Isles 3rd Edition, Cambridge University Press, Cambridge.

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

Stone, E.L. (2013). Bats and lighting: Overview of current evidence and mitigation guidance.

UKHab Ltd (2023). UK Habitat Classification Version 2.0. Accessed via: <https://ukhab.org/>

Woodland Trust (2017). Planning for Ancient Woodland Planners' Manual for Ancient Woodland and Veteran Trees. Grantham, Lincolnshire.

FIGURES

Figure 1.1 Location of site

Figure 1.2 Extent of site boundary

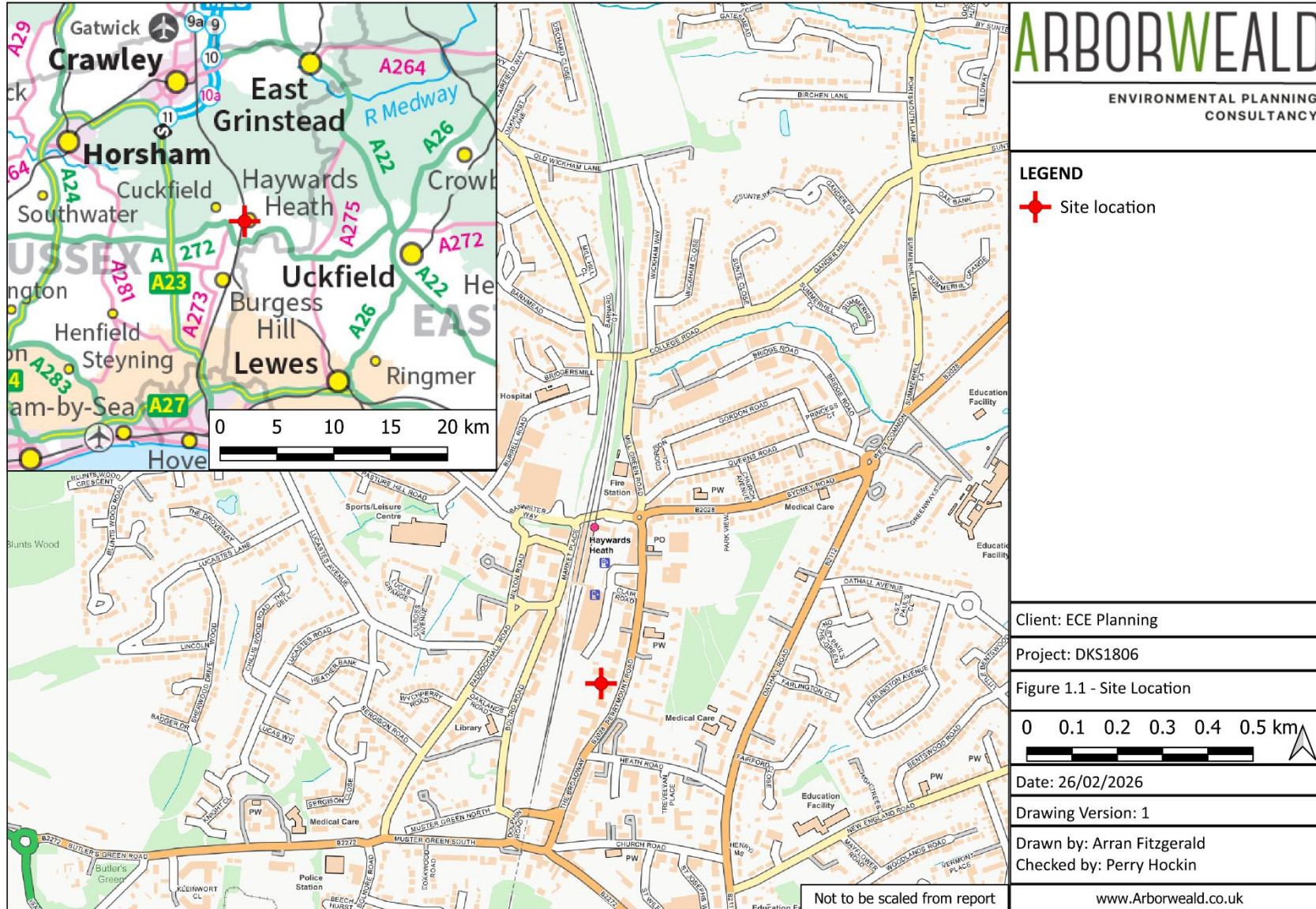
Figure 3.1 Waterbodies within 500 m of site boundary

Figure 3.2 Phase 1 Habitat Survey results

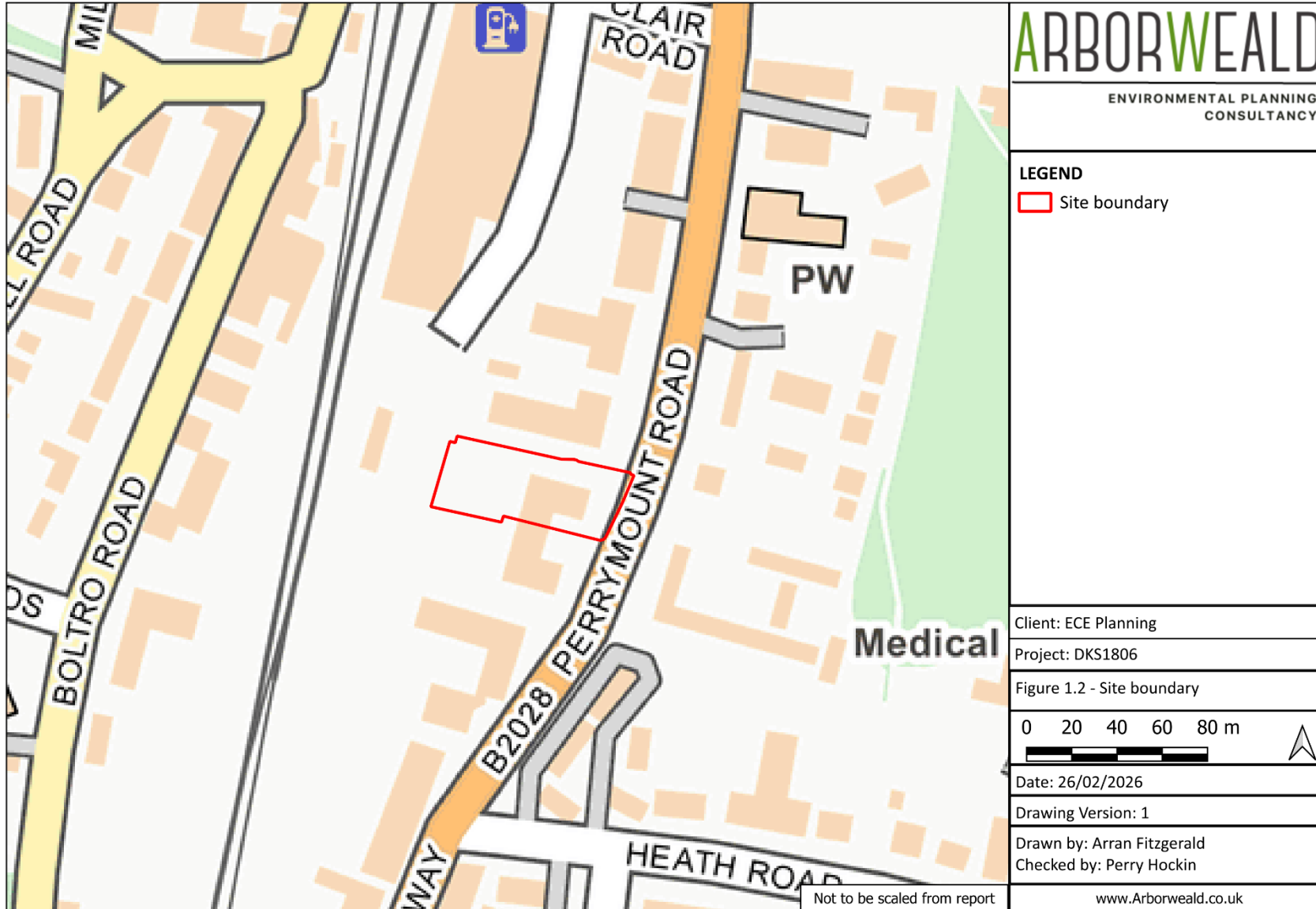
Figure 6.1 Proposals*

*For the purposes of the proposals drawing, habitats from any landscape plans have been assigned their category of best fit as per Stace et al.

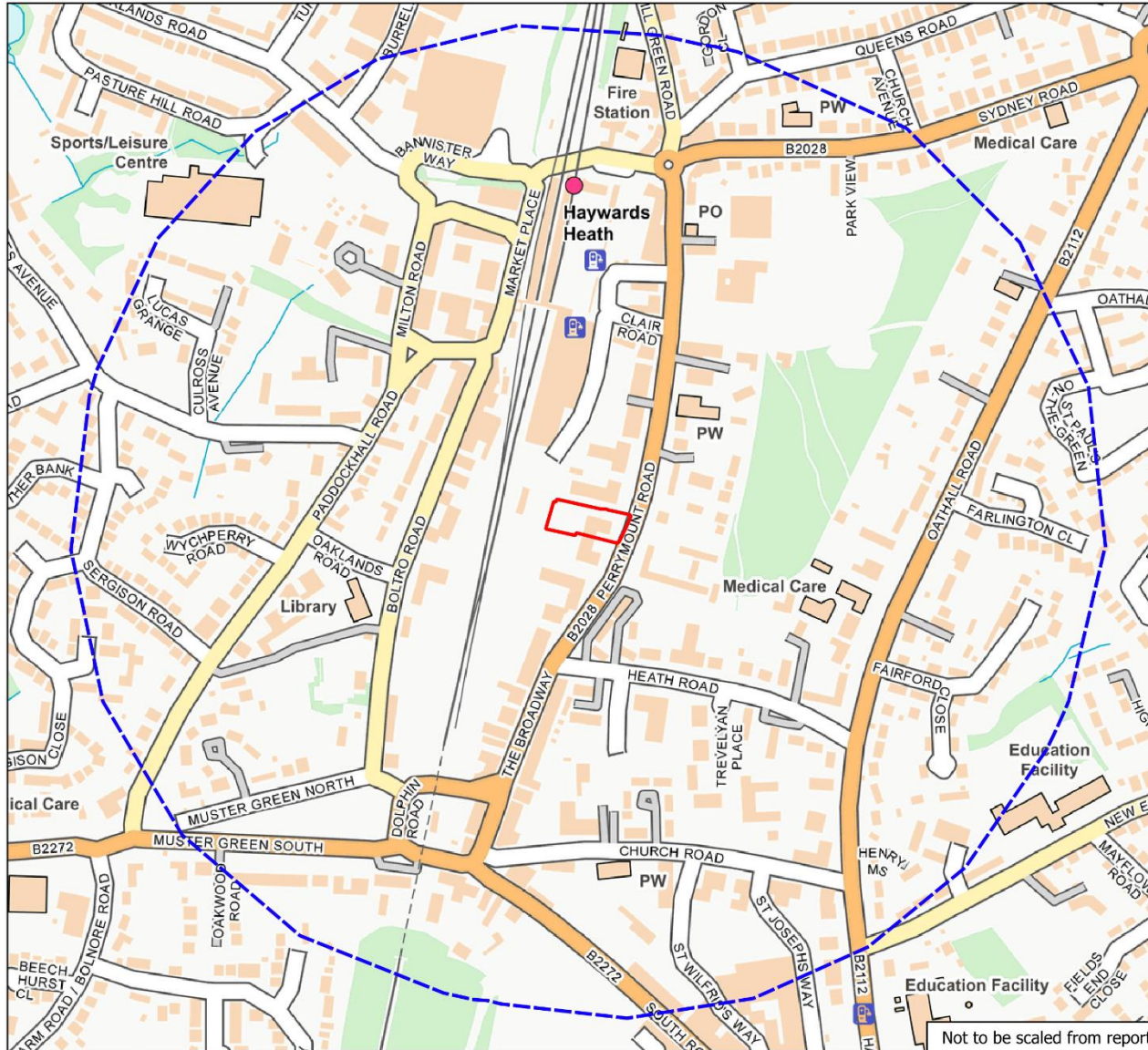
In the absence of full and finalised development plans, the author will have to make assumptions. As such, habitats displayed are suggestions and comprise habitats that the author feels would best fit the proposed landscape without compromising the usage of the site. These habitats will have been used to undertake the Biodiversity Metric Assessment (BMA), and as such adjustment to the calculation may be required should plans change. – this may come at cost to the client.



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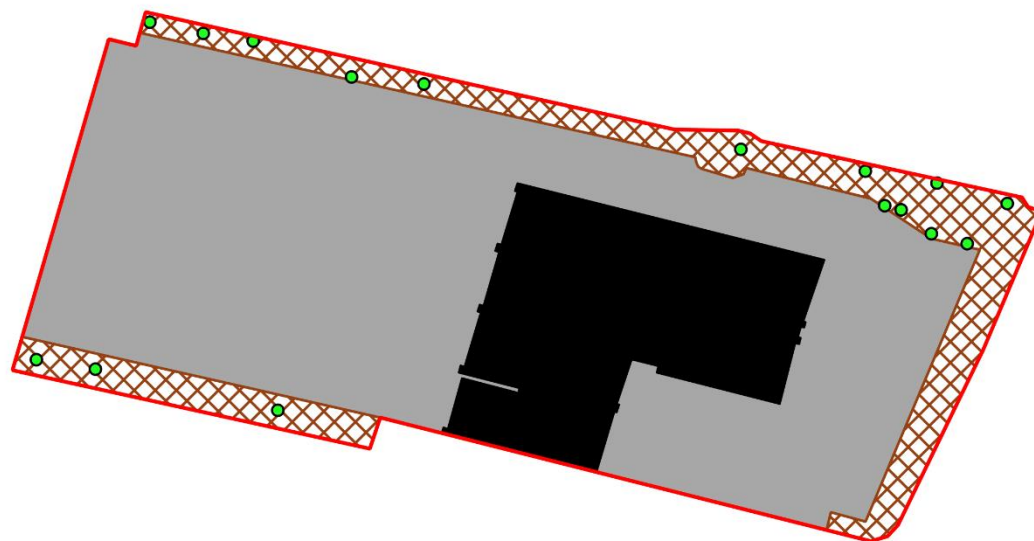
ENVIRONMENTAL PLANNING
CONSULTANCY

LEGEND

- Site boundary
- 500m buffer
- Waterbodies within 500m (0)

Client: ECE Planning
Project: DKS1806
Figure 3.1 - Waterbodies within 500m
0 100 200 300
Date: 26/02/2026
Drawing Version: 1
Drawn by: Arran Fitzgerald Checked by: Perry Hockin
Not to be scaled from report www.Arborweald.co.uk

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LEGEND

- Site boundary
- Sealed surface (Buildings)
- Sealed surface (Hardstanding)
- Individual trees

Client: ECE Planning

Project: DKS1806

Figure 3.2 - Phase 1 habitats

0 5 10 15 20 m



Date: 03/03/2026

Drawing Version: 1

Drawn by: Arran Fitzgerald

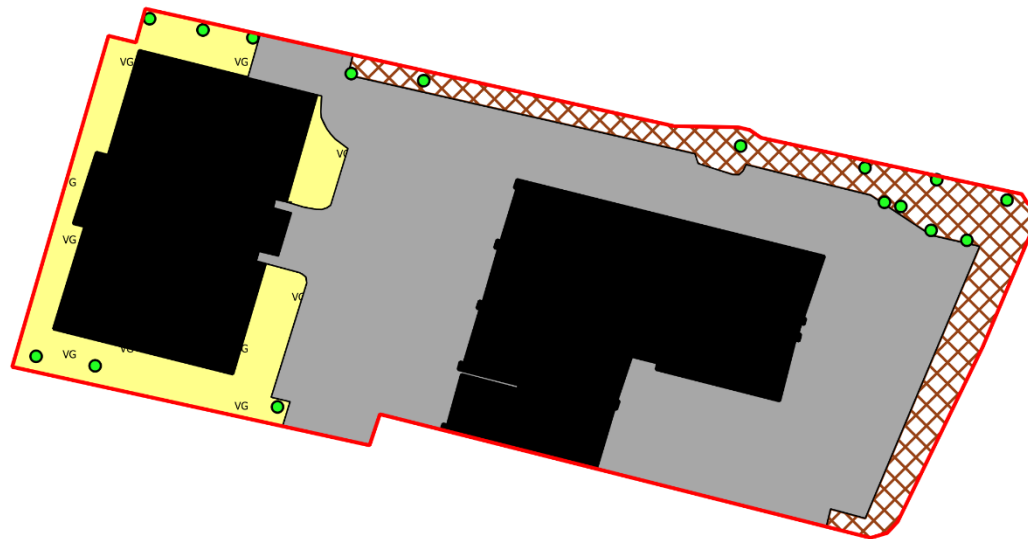
Checked by: perry Hockin

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LEGEND

- Site boundary
- Sealed surface (Buildings)
- Sealed surface (Hardstanding)
- Vegetated garden
- Individual trees



Client: ECE Planning

Project: DKS1806

Figure 6.1 - Proposals

0 5 10 15 20 m



Date: 03/03/2026

Drawing Version: 1

Drawn by: Arran Fitzgerald

Checked by: APerry Hockin

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APPENDIX A Wildlife Legislation

Strict Liability vs Mens Rea

Wildlife offences are classified in one of two ways;

Some are *strict liability*, meaning that a person can be found guilty regardless of intent or knowledge. In strict liability cases, the defendant cannot argue lack of knowledge as a defence (e.g., not knowing a bird was protected). However, statutory defences may apply (e.g., under Section 4 for acts done for humane reasons).

Other offences require intention, recklessness, or knowledge, and are governed under *Mens-rea* law whereby the offence must be proven to have been committed intentionally, through recklessness (such as not seeking prior knowledge), or when already in possession of that knowledge e.g. *having had a toolbox talk prior to undertaking works*.

The following table outlines which wildlife offences are Strict Liability, and which are Mens-rea.

Species	Primary protection legislation	Liability
Bats	<i>Wildlife and Countryside Act 1981</i> (WCA 1981) – Schedule 5 <i>Conservation of Habitats and Species Regulations 2017</i> (Habitats Regulations)	Strict liability - WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking bats. - Habitats Regulations – Regulation 43(1): Prohibits deliberate capture, killing, or disturbance of bats.
		Mens-rea - WCA 1981 – Section 9(4): Prohibits damage to or destruction of a bat's place of shelter but requires intent or recklessness. - Habitats Regulations – Regulation 43(2): Prohibits damage to or destruction of breeding sites or resting places, requiring intent or recklessness.
Birds	<i>Wildlife and Countryside Act 1981</i> – Section 1	Strict liability - Section 1(1): Prohibits killing, injuring, or taking any wild bird. - Section 1(2): Prohibits taking, damaging, or destroying an active nest. - Section 1(3): Prohibits taking or destroying eggs.
		Mens-rea Section 1(5): Prohibits disturbing birds at nest sites (for Schedule 1 birds), requiring intent or recklessness.
Badgers	Protection of Badgers Act 1992	Mens-rea - Section 1: Prohibits wilfully killing, injuring, or taking a badger (requires intent). - Section 3: Prohibits interfering with a badger sett (requires intent or recklessness).
Dormice	<i>Wildlife and Countryside Act 1981</i> (WCA 1981) – Schedule 5 <i>Conservation of Habitats and Species Regulations 2017</i> (Habitats Regulations)	Strict liability - WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a dormouse. - Habitats Regulations – Regulation 43(1): Prohibits deliberate capture, killing, or disturbance.
		Mens-rea - WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required). - Habitats Regulations – Regulation 43(2): Prohibits destruction of breeding/resting sites (intent or recklessness required).
Great-crested newts	<i>Wildlife and Countryside Act 1981</i> (WCA 1981) – Schedule 5 <i>Conservation of Habitats and Species Regulations 2017</i> (Habitats Regulations)	Strict liability - WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a dormouse. - Habitats Regulations – Regulation 43(1): Prohibits deliberate capture, killing, or disturbance.
		Mens-rea - WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required). - Habitats Regulations – Regulation 43(2): Prohibits destruction of breeding/resting sites (intent or recklessness required).
Reptiles	<i>Wildlife and Countryside Act 1981</i> – Schedule 5	Strict liability WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a protected reptile (e.g., sand lizard, smooth snake).
		Mens-rea WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required).
Invasive species	<i>Wildlife and Countryside Act 1981</i> (WCA 1981) – Section 14, Schedule 9	Strict liability WCA 1981 – Section 14: Prohibits the release or escape of invasive non-native species (e.g., Japanese knotweed, grey squirrel)
		Mens-rea WCA 1981 – Section 14: Prohibits causing the spread of invasive non-native species (e.g., Japanese knotweed, grey squirrel)
Other species	<i>Wildlife and Countryside Act 1981</i> (WCA 1981) – Schedule 5 <i>Conservation of Habitats and Species Regulations 2017</i> (Habitats Regulations)	Also covered under Section 9 of the WCA 1981 are otter, water vole, red squirrel, pine marten, sturgeon, lamprey, and certain invertebrates. For all these species, they are protected as follows: Strict liability - WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a protected reptile (e.g., sand lizard, smooth snake). Mens-rea - WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required).

Schedule 8

Specific species of plants listed in Schedule 8 are protected. It is an offence: to intentionally pick, uproot or destroy a wild plant listed in Schedule 8.

Schedule 9

Invasive non-native species are listed under Schedule 9. It is an offence:

- to plant or otherwise cause to grow in the wild.
- If soils are contaminated by invasive non-native plant species it becomes classified as '*controlled waste*' under the Environmental Protection Act 1990 (England, Wales & Scotland), and must be disposed of accordingly.

APPENDIX B Site photographs

			
Figure B1	Site view looking south	Figure B2	Site view looking south-west
			
Figure B3	Northern boundary of site	Figure B4	Northern boundary of site – trees to be retained

APPENDIX C Species habitat suitability criteria

For the purposes of this report, Arborweald have developed habitat suitability criteria for protected species where specific categorisation methodology is not provided by the generally accepted literature (such as for bats or great crested newts).

Reptiles

Suitable reptile habitats include the following habitat types:

Heathland;	Sand dune;
Moorland;	Hard and soft cliffs;
Grasslands;	Vegetated shingle;
Scrub;	Open mosaic habitats; and
Woodland;	Coastal lagoon.
Wetlands;	

These habitats can be found within a broad range of land use types, including:

Farmland;	Churchyards;
Brownfield sites;	Mineral sites;
Gardens and allotments;	Road and rail embankments; and
Parks and grounds;	River and sea walls.

Other habitat and land use types may be utilised by reptiles, if their basic ecological requirements (foraging, shelter, protection, basking, breeding and/or hibernation) are met by the habitat. It is therefore imperative that all sites / habitats are assessed based on their ecological functionality for reptiles, rather than making hard and fast judgements based on broad habitat and/or land use type.

The below suitability criteria have been devised to provide a structured way of assessing ecological functionality for reptiles, which can be applied by suitably experienced ecologists.

Reptiles require large areas, or closely spaced patches, of suitable habitat to support viable population in the long term. Therefore, habitat connectivity is important on a landscape level but also within a site.

The below has been adapted from the *Reptile Habitat Management Handbook* and details the habitat requirements of reptiles (Edgar, Foster and Baker, 2010).

The factors cited in the first table (C1.1) have been used to develop the suitability criteria that are set out in the second table (C1.2).

Requirement	Description
Insolation (exposure to sun)	Reptiles bask openly in direct sunlight or seek warm sites under cover (in vegetation or under object) or partially exposed amidst dense vegetation (mosaic basking). Varied topography (south-facing slopes are particularly favoured by reptiles) and a mosaic of open, sunny areas and dense cover provide the best range of basking opportunities.
Shelter from the elements (heat, dry weather and wind), predators	Reptiles need vegetation cover and open areas in close proximity to each other. The best habitats are structurally diverse habitats, or mosaics of vegetation of differing heights, ages or types. Thorny or prickly plants such as gorse and bramble can provide particularly good refuge from predators and may be used as sheltered basking sites.
Hibernation opportunities (shelter during the winter)	Hibernation sites must be climatically stable, frost-free, humid (but not wet) and safe from flooding and predators. Typical hibernation sites include mammal burrows, rotted tree stumps and root holes, fissures in soil / substrate, large grass tussocks, anthills, old walls and building foundations, piles of rubble and other debris and under large logs and fallen trees. Sand lizard, grass snake, smooth snake and adder usually make seasonal movements to hibernation sites. Slow worm and common lizard may also make shorter distance migrations to hibernation features, but the location of hibernation features normally corresponds with the areas used during the active season.
Food	Legged lizard (common lizard and sand lizard): Main prey items are insects and other invertebrates such as spiders. Legless lizard (slow worm): Main prey items are soft-bodied invertebrates such as slugs and worms. Smooth snake: Main prey items are reptiles and small mammals. Grass snake: Main prey items are amphibians and fish. Adder: Main prey items are small mammals and occasionally lizards.
Breeding habitat	Breeding sites are more likely to be found where structurally diverse habitats encourage high population densities. Reptiles require secluded areas close to, or under, secure cover for courting and mating. Grass snakes need access to decomposing material to lay their eggs. Typical egg-laying sites include manure heaps, compost heaps, piles of grass clippings, sawdust, cut reed and, in coastal areas, seaweed heaps. Sand lizards require areas of exposed sand (or similar loose substrate) with good sun exposure in which to lay their eggs.

The below habitat suitability criteria have been adapted based on the ecology and specific ecological requirements of reptiles (as described in C1).

Habitat suitability category	Ecological Functionality for Reptiles (one or more species)	Typical Characteristics of habitats within this Category*
High	Provides significant opportunities for foraging; shelter / protection; basking; breeding; and hibernation.	Heterogenous habitat (e.g. grassland, scrub, woodland edges). Structurally diverse habitats, mosaics of vegetation of differing heights, ages or types (e.g. tussocky grassland, dense scrub/islands). Extensive landscape connectivity to suitable off-site reptile habitat.
Moderate	Provides significant opportunities for two or three of the above key ecological functions.	Homogenous / slightly heterogenous habitat (one to two dominant habitats e.g. grassland and scrub). Habitat structure is diverse, but habitat type is uniform (e.g. tussocky grassland only). Sub-optimal landscape connectivity to suitable off-site reptile habitat.
Low	Provides significant opportunities for one of the above key ecological functions or some limited (minimal) opportunities for two or more of these functions.	Uniform habitat composition (e.g. grassland). Limited vegetative structure (e.g. closely mown or grazed grassland). Possess limited landscape connectivity to suitable offsite habitat.
Negligible	Negligible Does not provide any opportunities for reptiles.	Unvegetated areas, such as bare ground and buildings.
*Note that the characteristics given in Column 3 of this Table are typical characteristics of high, medium, low and negligible suitability habitats, and are provided for illustrative purposes to aid the assignment of a habitat suitability category. They are not absolute criteria or universal rules that will always dictate the suitability category that the habitat within a given survey site must fall within.		

Hazel dormouse

The content of the below Table has been taken from the Hazel Dormouse Conservation Handbook and details trees and shrubs of value to dormice (Bright et al., 2006). The presence and percentage cover of tree and shrub species listed in this Table informs the suitability criteria that are set out within the following 'Hazel Dormouse Habitat Suitability Criteria' Table.

Species	Description
Hazel	Where present, this is the principal source of food (nuts) for fattening up prior to hibernation. Hazel also supports many insects, including caterpillars, which are potential dormouse food. Hazel forms a continuous understorey of sprawling poles, easy for arboreal activity and is a very valuable (but not essential) species for the dormouse.
Oak	An important source of insect food (including caterpillars). Dormice also eat oak flowers, but acorns are of little value
Honeysuckle	The plant's finely shredded bark is the preferred nesting material used by dormice. Honeysuckle flowers also provide food at a time when few other things are available, with berries later. The climbing strands also offer convenient routes into the trees and provide dense shelter in which to nest.
Bramble	Its flowers and fruits are very important dormouse foods and tend to be available for a long period (especially where the site has slopes which vary the amounts of sunlight on the shrubs) and the thorns provide good protection for nests. Bramble often flowers late, when many other species are over, and dormice also eat the berries and seeds in autumn. Dormice seem to thrive where blackberries are abundant, even in the absence of hazel. Bramble is best if scattered among hazels and trees.
Sycamore	A valuable source of insect food and pollen. A useful tree: dormice can survive in habitats with many sycamores. However, sycamores cast a dense shade which reduces the understorey. Thus sycamores should be kept few and scattered, perhaps coppiced to prevent seeding and to reduce the extent of shading.
Ash	Ripening seeds ('keys') are eaten whilst they are still on the tree, but ash supports few food insects. The canopy does not cast a dense shade, but generally ash woodlands are not good habitat.
Wayfaring tree	Fruits in late summer when little else may be available. Dormice eat the seeds and probably also the flowers. Yew The fruits are a favoured food and dormice will make special excursions to reach them, but the seeds are not eaten.
Hornbeam	Seeds are small and hard, but dormice eat them. The advantage is that they are too small to be attractive to squirrels, so they may form an alternative food where squirrels have taken most of the hazel nuts. Fruiting is erratic.
Broom	Flowers are eaten in early summer.
Sallow	Unripe seeds are eaten from the flowers in early summer. Sallow also supports many insects

Species	Description
Birch	The catkins are over too early in the year to be much use to dormice, but they can eat the seeds. These are too small to attract squirrels and may provide support where squirrels compete for hazel nuts.
Sweet chestnut	Chestnuts are an excellent food source and dormice may also eat the flowers.
Blackthorn	Fruits (kernels) are eaten but the flowers come too early in the year. Dense blackthorn thickets tend to be avoided where alternative shrubs are available.
Hawthorn	Flowers are an important food in the spring. The fruits are eaten occasionally.
Conifers	Little is known about the use made of these trees by dormice, but they often support many aphids and caterpillars – potential dormouse food. The trees may also provide shelter from the wind and rain in exposed sites.
Other species such as cherry, crab apple, holly, ivy.	Little is known about the value of these trees to dormice, but it is likely that they will eat the pollen (stamens) and perhaps fruits. Ivy is a useful source of food insects and its evergreen tangles among tree branches are often used for summer nesting sites.

The below habitat suitability criteria have been adapted based on the ecology and specific ecological requirements of the hazel dormice.

Suitability Category	Ecological Functionality for hazel dormice	Typical Characteristics of habitats within this Category
High	Provides significant opportunities for: - - foraging; - shelter / protection; - breeding; and - hibernation.	5 or more native tree and/or shrub species of value to dormice present (as per list provided in Table 8). Dense canopy, understorey and/or shrub layer (as present) with good aerial connectivity.
Medium	Provides opportunities for two or three of the above ecological functions.	Between 2 and 4 native tree and/or shrub species of value to dormice present. Sub-optimal aerial connectivity (non-continuous / 'gappy' canopy, understorey and/or shrub layer (as present)).
Low	Provides opportunities for one of the above ecological functions.	0 or 1 native tree or shrub species of value to dormice present. Canopy, understorey and/or shrub layer (as present) are 'sparse,' with poor / infrequent aerial connectivity.
Negligible	Does not provide any opportunities for hazel dormouse.	Un-vegetated areas, includes bare ground and buildings



Landscape, Arboriculture and Ecology

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