

**LAND ADJACENT TO WHITE LODGE,
BRIDGE ROAD, BURSLEDON
ECOLOGICAL APPRAISAL**

JANUARY 2025

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ECOLOGICAL APPRAISAL

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1.0 INTRODUCTION

1.1 Background

1.1.1 Aluco Ecology Ltd was commissioned to carry out an ecological appraisal of land adjacent to White Lodge, Bursledon, for a proposed new dwelling.

1.1.2 An 'Ecological Appraisal' is a general investigation of the likely ecological and nature conservation issues associated with the site and its potential development. The aim of an Ecological Appraisal is to:

- highlight any features of particular ecological value;
- identify potential impacts to ecology as a result of the proposed works;
- identify any ecological issues that may have legal or planning implications such as the presence of protected species; and
- recommend any further work (such as targeted protected species surveys) if required in order to fully assess the value of the site.

1.1.3 The Government sets out its objectives for conserving and enhancing biodiversity in the National Planning Policy Framework (revised NPPF). The Government's objectives for planning include an environmental objective 'to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.'

1.1.4 The Framework goes on to state that at the heart of the planning system is a presumption in favour of sustainable development. Planning Practice Guidance on the Natural Environment provides information on taking biodiversity into account in planning (see Section 15 of the revised NPPF).

1.2 Outline of the Scheme and Site Location

1.2.1 The proposal is for a new single dwelling adjacent to White Lodge, in the former grounds of Oak Lodge. Access is through the driveway at White Lodge. The location of the site is shown at **Figure 1** and the proposals are shown at **Figures 2**.



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Figure 1: Site Location

1.3 Relevant Legislation and Policy

- 1.3.1 The outcomes of this Ecological Appraisal will be tested against relevant legislation and policy; namely the Conservation of Habitats & Species Regulations 2017 (as amended) in relation to the protection of European sites (Special Protection Areas SPA, and Special Areas of Conservation SAC) and European protected species (eg Bats, Dormouse, Great Crested Newts) (see **Technical Appendix 1**) and the Wildlife & Countryside Act 1981 (as amended) and Countryside & Rights of Way Act (CROW) 2000 for protected species and the designation and protection of SSSIs (see **Technical Appendix 1**). The Protection of Badgers Act 1992 gives protection to Badgers *Meles meles*.
- 1.3.2 In addition to the National Planning Policy Framework and the legislation outlined above, the strategic and local planning policies are the principal policies against which the outcomes of this ecological assessment will be considered; The Eastleigh Borough Council Local Plan contains policies relating to ecology, these are outlined at **Technical Appendix 2**.
- 1.3.3 Under the Governments duty to conserve Biodiversity, through Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC, 2006) a number of Biodiversity Action Plans have been prepared for habitats and species of conservation concern, including national BAPs, the Hampshire BAP is considered in the general ecological site appraisal.

- 1.3.4 Consideration is also given to the Environment Act 2021. A core element of this is biodiversity net gain through planned development. Further information on provisions within the Environment Act 2021 are provided in **Technical Appendix 1**.

2.0 ASSESSMENT METHODOLOGY

2.1 Introduction

- 2.1.1 The methodology for this appraisal is based on the Guidelines for Ecological Impact Assessment (EcIA) in the United Kingdom published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2021). Regardless of whether a statutory Environmental Impact Assessment is required, these guidelines provide a robust framework for ecological assessment.

2.2 Site Survey Methodology

- 2.2.1 The first stage of the appraisal is a desk study of the proposed development site and associated zone of influence. The desk study provides background information on the site and local environment in order to effectively target field survey and further desk research.
- 2.2.2 The aims of the field survey are to record land-use and broad vegetation types present on the site and in the surrounding areas, and to evaluate the ecological value of the habitats and vegetation communities, along with their potential to support protected species, species of principal importance, and any other notable species. Ecology Appraisals can be undertaken year-round, however during the winter months a limitation of survey is that the likely value of vegetation and habitats can be harder to determine. On this basis experience and knowledge of the surveyor is used to determine likely value of vegetation, habitats and potential for protected species, and degree of precaution in evaluation. Further details of the methodology used can be found in **Technical Appendix 3**.

3.0 BIOPHYSICAL CHANGES AND THE ZONE OF INFLUENCE

3.1 Introduction

- 3.1.1 In order to be able to target relevant ecological survey and assess the impacts of a development, it is necessary to identify the activities that may result in biophysical changes from the development and the area these cover (i.e. the zone of influence). There are three stages of this development scheme that include activities that may have an impact on features of ecological value; namely site preparation, construction and operation / use.

3.2 Biophysical Changes associated with the Development Scheme – Determination of the Zone of Influence

- 3.2.1 The potential zone of influence of the proposal is determined from the predicted biophysical changes brought about by activities associated with construction and post-construction phases. Therefore, the zone is predicted to extend across the development footprint and locally within the scheme. The main potential influence off site is the potential for pollution derived from on-site construction and operation. Consideration is also given to indirect impacts on designated sites in the wider area.
- 3.2.2 Consequently, desk surveys have been carried out within this zone and backed up by field survey where required.

3.3 Site Preparation / Construction Activities and Biophysical Changes

- 3.3.1 During the construction phase, it is predicted that site preparation activities may include localised vegetation clearance. This phase may affect habitat suitable for wildlife, including protected and/or notable species.

3.4 Predicted Operational Activities during Use Phase and Biophysical Changes

- 3.4.1 During the operational phase it is possible that the scheme may result in changes from current site use; and this may have impacts on features of ecological value or designated sites within the wider area through indirect impacts such as disturbance and surface water run-off.



Figure 2: Proposed Development Plan (Red Line Boundary)

4.0 BASELINE CONDITIONS WITHIN THE ZONE OF INFLUENCE

4.1 Introduction

- 4.1.1 This ecological baseline describes the site in the context of the characteristic habitats of the area, and includes descriptions of designated sites and ecological features present within the potential zone of influence of any proposed development. This section provides the current baseline information for the route, taking into account and summarising both field survey data and desktop data.

4.2 Statutory & Non-Statutory Designated Sites

Statutory Designated Sites

- 4.2.1 A number of Sites of Special Scientific Interest (SSSI) designated of regional to national importance is present within 2km of the site. These are the Upper Hamble Estuary and Woods SSSI, which at its closest point is c900m to the north east of the site; and Lincegrove and Hackett's Marshes SSSI, which at its closest point is c790m to the south of the site. The SSSIs are designated for their coastal, wetland and woodland habitats and associated flora and fauna.
- 4.2.2 Citations and conservation objectives detailing the site's special features and operations that may damage the SSSI are downloadable from <https://designatedsites.naturalengland.org.uk/>.
- 4.2.3 Internationally designated sites are present within 10km of the site. Internationally designated sites include Special Protection Areas (SPAs), Special Areas of Conservation (SAC), and Ramsar Sites. The closest site is the Solent & Dorset Coast SPA, which is c290m to the east at its closest point. Other sites include the Solent Maritime SAC, the Solent to Southampton Water SPA & Ramsar, which are both within 1km of the site, the River Itchen SAC (c6.8km to the north west), The New Forest SPA, SAC and Ramsar sites (c8km to the west) and Portsmouth Harbour SPA and Ramsar site (c9.9km to the south east).
- 4.2.4 Citations and conservation objectives detailing the sites special features are downloadable from <https://jncc.gov.uk/>.

Non-Statutory Designated Sites

- 4.2.5 These are designated through the local planning process as being of value to wildlife at the county level. 12 Sites of Importance for Nature Conservation (SINCs) are present within 1km of the site boundary. The closest is Land north of Bridge Road, which is about 120m north of the site at its closest point.

4.3 Habitats and Vegetation

Introduction

- 4.3.1 The following description is based on a site visit carried out on 27 November 2024. The habitats are described below and in **Photos 1-6**, and **Figure 3**. It also has regard to previous ecological survey work undertaken on site (Ecosupport, 2019).
- 4.3.2 The site comprises open space within a new development that is in the latter stages of development. It is predominantly a neutral grassland. Access will be from the adjacent property at White Lodge.

Grassland

- 4.3.3 The majority of the site is a occasionally managed damp neutral grassland in the former large grounds of the property Oak Lodge. It was used for horse grazing (Ecosupport, 2019). It is likely that there has been some historical agricultural improvements to the grasslands, and recent neglect in management, with common coarser grasses dominating. The grassland comprises Yorkshire Fog *Holcus lanatus*, Bent Grasses *Agrostis spp.*, Cocks-foot *Dactylis glomerata*, Rye Grass *Lolium perenne*, with some, False Oat Grass *Arrhenatherum elatius* also noted. Given the time of year and recent cutting of the vegetation, other grass species are considered likely. Soft Rush *Juncus effusus* and rarely Pendulous Sedge *Carex pendula* is also present in parts of the grassland. Herb diversity and abundance is moderate, with locally abundant Creeping Buttercup *Ranunculus repens*, and occasional to locally frequent Common Fleabane *Pulicaria dysenterica*, Cuckoo-flower *Cardamine pratensis*, Ribwort Plantain *Plantago lanceolata*, Cleavers *Galium aparine*, Ragworts *Jacobaea sp.*, Willowherbs *Epilobium sp.*, Yarrow *Achillea millefolium*, Docks *Rumex spp.*, Smooth Tare *Vicia tetrasperma*, Lesser Celandine *Ficaria verna*, Creeping Thistle *Cirsium arvense*, Common Sorrel *Rumex acetosa*, and rarely Imperforate St-John's Wort *Hypericum maculatum*. Some Bramble *Rubus fruticosus agg.* and Nettles *Urtica dioica* are present around the grassland and two small saplings (Grey Willow *Salix cinerea* and Silver Birch *Betula pendula*).

Ruderal and Tall Forb habitats

- 4.3.4 Along the proposed access track at White Lodge is a small area of ruderal/developing grassland that is present in the central section of the driveway. This habitat comprises abundant to dominant mosses in places, and some Red Fescue *Festuca rubra*, Yorkshire Fog *Holcus lanatus*, Sedge *Carex sp.*, Daisy *Bellis perennis*, Lesser Trefoil *Trifolium dubium*, Ribwort Plantain, Common Mouse-ear *Cerastium fontanum* and Cat's-ear *Hypochaeris radicata*.
- 4.3.5 At the northern end of the site is an area of tall forbs, which is dominated by Great Willowherb *Epilobium hirsutum*, Nettles, Thistles, with some Common Fleabane and Pendulous Sedge also present.

Scrub

- 4.3.6 A small part of the site comprises Grey Willow scrub, some of which has been relatively recently cut. This merges into areas of Bramble scrub, and a couple of small Hazel *Corylus*

avellana bushes are also incorporated into this habitat. This is adjacent to the trees on site. A single plant of Soft-shield Fern *Polystichum setiferum* was noted on the edge of the scrub.

Trees & Hedgerows

- 4.3.7 Two medium size (>30cm dbh) and one small size Cypress trees and a small deciduous tree (cf. *Salix* sp.) is present at the north end of the site. The Cypress trees are in poor condition and with two at least partially dead.
- 4.3.8 The stump of a former veteran Oak *Quercus robur* is present on the south east corner of the site. This tree fell down during a storm in 2022, and the Eastleigh Council tree officer was aware of this at the time through verbal communications (Matthew Rowden pers. comm.). This tree was originally assessed for the wider development at Oak Lodge (see Hellis Solutions Ltd, 2020).

Watercourses and Ponds

- 4.3.9 No watercourses or ponds are present on site. Off-site waterbodies are present in the wider landscape, and these are discussed in more detail in relation to Amphibians, see below. An open ground-water type trial pit is present (c1mx1m), which is presumed to be ephemeral.

Evaluation

- 4.3.10 The semi-natural grassland and scrub habitats on site are of **local value**, being semi-natural albeit relatively species poor damp grassland and native scrub.



Photo 1: Grassland habitats on site



Photo 2: Bramble scrub and recently cut Willow scrub



Photo 3: Tall herb ruderal (Tall Forb) vegetation



Photo 4: Existing access to White Lodge



Photo 5: Trees on Site



Photo 6: Oak stump

4.4 Protected Species

Birds

4.4.1 Nesting birds are protected under the Wildlife & Countryside Act, with certain species given additional protection (see **Technical Appendix 1**). Species of conservation concern (Stanbury *et al*, 2021) recorded in the zone of influence during the site visit included Dunnock *Prunella modularis* and Song Thrush *Turdus philomelos*.

4.4.2 The majority of habitats on site provide only limited opportunities for commoner widespread bird species and are considered to be of **value within the zone of influence**.

Bats

4.4.3 Bats are protected under the Wildlife & Countryside Act and the Habitat Regulations (see **Technical Appendix 1**). The desktop review has returned a number of records of bats within 2km of the site, including Common, and Soprano Pipistrelle *Pipistrellus pipistrellus*, & *P. pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Whiskered bat *Myotis mystacinus* & *M. brandtii*, Serotine Bat *Epictetus serotinus*, and Noctule Bat *Nyctalus noctula*.

4.4.4 The site visit considered the potential for roosting bats on site and likely value of the site for foraging bats. The site contains no buildings and trees contained no potential bat roost features.

- 4.4.5 The site is small but is linked to open space in the Oak Lodge development, so provides some minor foraging habitat as part of the wider local resource. Survey work for the Oak Lodge development (Ecosupport, 2019a) recorded six species of bat; Common & Soprano Pipistrelle, Myotis sp., Long-eared Bat sp., Noctule and Serotine foraging around the site.
- 4.4.6 Given the size of the site and the habitats present, the site is considered to be of **value in the zone of influence** to bats populations as part of the network of foraging resource in the local landscape.

Badgers

- 4.4.7 Badgers *Meles meles* are protected under the Protection of Badgers Act 1992. Signs of use of the site by Badger were searched for during the site visit. No evidence of Badgers was noted on site or immediately adjacent to the site. Mammal tracks were noted passing through the site, and there is potential for Badgers in the local area to travel through the site. The desktop review has returned a small number of Badger records, from within 2km of the site.

Other Mammal Species

- 4.4.8 There is potential for use of the site by Hedgehog *Erinaceus europaeus* and Fox *Vulpes vulpes*, but there is very limited habitat on site for either.
- 4.4.9 Dormouse *Muscardinus avellanarius* and their habitats are protected under the Wildlife & Countryside Act, and the Habitat Regulations. The habitats on site contain no suitably connected woody habitat for use by Dormice.

Reptiles

- 4.4.10 Commoner reptile species are protected from harm under the Wildlife & Countryside Act. The site contains a small amount of potentially suitable reptile habitat, particularly in grassland edges around scrub/woody habitats. However, a survey of the wider Oak Lodge development site (Ecosupport, 2019b) for reptiles over seven dates in spring 2018, did not record any evidence of reptile use of the wider Oak Lodge site, which included the current site habitats.
- 4.4.11 The habitats on site are considered to be of **value within the zone of influence** for reptile populations, however previous detailed survey of the site in 2018 did not record any evidence of reptiles locally.

Amphibians

- 4.4.12 Great Crested Newt *Triturus cristatus* (GCN) is afforded protection under the Habitat Regulations (see **Technical Appendix 1**). The site small amounts of suitable amphibian habitat, particularly around grassland edges and woody vegetation.
- 4.4.13 The desktop survey has returned Great Crested Newt records from within 2km of the site, with a population known from Burseldon nature haven over 500m from the site. A District Licensing scheme for Eastleigh is in place, and maps for GCN presence have been prepared (www.naturespaceuk.com). The risk map shows the site is likely to be on the edge of a green and amber zone.

4.4.14 Ordnance Survey (OS) mapping and aerial photography was consulted for ponds within 500m of the scheme. A single waterbody has been identified within 500m of the site. This is the ornamental lake in the grounds of Maidenstone Heath, c250m to the east of the site. The waterbody is tree-lined with minimal marginal or aquatic vegetation. It is used by waterfowl and is likely to have fish populations. With the recent development at both Oak Lodge and Cleverly Road, which is between the pond and the site, there has been no records of GCN at this location.

4.4.15 On this basis it is considered unlikely that GCN would use the site.

Invertebrates

4.4.16 The site contains some limited semi-natural habitats that are suitable for invertebrates. The data search has returned a number of records of invertebrate species listed on Section 41 of the NERC (2006) Act. The legally protected Stag Beetle *Lucanus cervus* occurs locally.

4.4.17 The habitats on site are considered to be of **value in the zone of influence** for invertebrates.

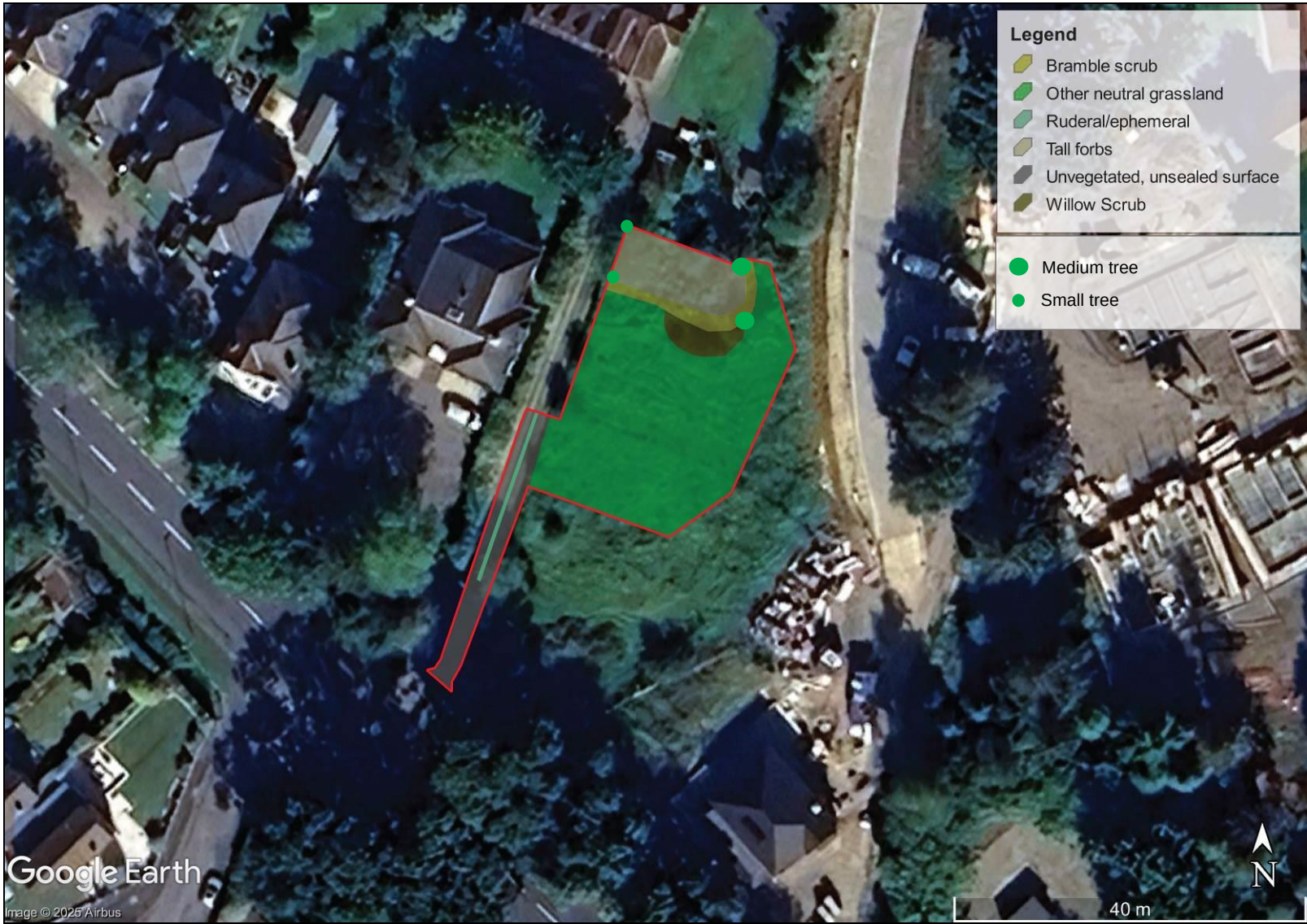


Figure 3: Habitats on Site

(Aerial Imagery copyright Google Earth)

5.0 ASSESSMENT OF LIKELY IMPACTS AND POTENTIAL FOR MITIGATION

5.1 Introduction

- 5.1.1 In view of the predicted activities and the resultant biophysical changes associated with the proposal, as described in Sections 2 and 3, this section identifies potential ecological impacts within the predicted zone of influence on features highlighted in Section 4. Mitigation recommendations are then provided.

5.2 Impacts on Designated Sites

- 5.2.1 There is potential for indirect impacts on the Solent coastal designated sites. The following impact pathways are considered:
- Nutrient neutrality. A nutrient budget calculation should be undertaken to Natural England guidelines to determine whether there is an impact from additional nutrient pollution from the new dwelling. Mitigation should be possible where an increase in nutrient pollution is determined.
 - Recreational disturbance. The site is within 5.6km of the Solent designated sites, and will lead to an increase in residential accommodation by 1 unit. Eastleigh Borough Council has adopted planning policy to mitigate against adverse effects from recreational disturbance on the Solent designated sites, as agreed by the Solent Recreation Mitigation Partnership (SRMP). Where the applicant complies with this policy, which involves payments towards mitigation and avoidance measures, and the Bird Aware Definitive Strategy, the potential adverse effects of the development on the integrity of the Solent designated (European) sites can be avoided.
 - Surface water drainage. As the development is within 400m of the Solent Maritime SAC and Solent and Dorset Coasts SPA, there is potential for poor water quality from surface drainage to impact the features of these sites. In order to avoid this any surface water drainage strategy should be designed to avoid additional poor water quality discharging into the designated sites.
 - Construction pollution. Construction impacts should be addressed and potential reduced and avoided through the provision of a Construction Environment Management Plan (CEMP) that takes into account best practice pollution prevention measures for development adjacent to watercourses and coastal designated sites.
- 5.2.2 There is also potential for indirect impacts on the New Forest designated sites. The site is within the 13.8km zone set by interim Eastleigh Borough Council strategy on the New Forest designated sites, and potential for indirect recreational impacts are predicted to occur cumulatively within this zone. The impacts can be offset through payments to the Eastleigh Borough Council mitigation scheme (See EBC, 2022)
- 5.2.3 Given the size of the development and distance from other designated sites, no additional potential impacts are considered likely.

5.3 Impacts on Habitats & Species on Site

Potential Impacts on Habitats and Vegetation

- 5.3.1 The grassland habitats on site are generally of value within the zone of influence as semi-improved neutral grassland. Loss of such habitats is not considered significant, however, as part of the Biodiversity Net Gain process (see below), such losses will be mitigated for.

Potential Impacts on Birds

- 5.3.2 Woody habitats are likely to be used by local bird populations. If such habitat were to be removed during the breeding season there is potential to destroy bird nests, which would be contrary to Section 1 of the Wildlife and Countryside Act 1981 (as amended). Regard should also be had to potential for birds nesting in the building and shed on site.
- 5.3.3 Mitigation measures for birds include carrying out works on any woody vegetation at an appropriate time of year, usually considered to be between September to February. If the building is proposed for demolition in the bird nesting season, this should be undertaken with checks for nesting birds prior to demolition. Where an active bird nest is located, demolition work should not impact or disturb the nest until the birds have finished nesting.
- 5.3.4 A swift brick is recommended to be installed on the north face of the new dwelling. See **Figure 4** below.

Potential Impacts on Bats

- 5.3.5 The loss of the small area of habitats on site (conversion from semi-natural habitats to vegetated garden) is not considered to be a significant impact on foraging and commuting bats, and the trees on site are proposed to be retained as part of the new garden.
- 5.3.6 Where any external lighting is proposed, design should have regard to best practice guidance on lighting and bats (ILP & BCT, 2023), and consider the following:
- Identify key points in the landscape where artificial light at night disrupts spatial connectivity of dark areas, and reduce or remove lighting in these areas if possible. The key landscape features on site include the northern edge of the site, and site boundaries as well as new vegetated garden habitats.
 - Maintain and create unlit 'dark corridors' between habitat patches where possible. Particular emphasis is given to retained off site habitats and habitats in the wider landscape outside the red line.
 - Avoid use of, and remove where possible, lamps that waste light by emitting vertically or horizontally – ensure that lighting is designed with minimum spill and is downward facing and directional and that retained/planted hedges and trees are not lit.
 - Reduce as much as possible the intensities of light emitted from lamps.
 - Avoid use of white and blue light wherever possible. The broader the spectrum of light that a lamp produces the wider the range of organisms it is likely to affect.
 - Avoid use of lamps that emit in the ultraviolet (UV) range. UV light is not seen by humans but many animals see UV and it may disrupt their natural behaviour.

- 5.3.7 An inbuilt bat brick is recommended to be placed on the new dwelling, on a southerly aspect, see **Figure 4** below.

Potential Impacts on Mammals

- 5.3.8 The following measures are recommended to minimise impacts from construction on mammals:

- trenches in excess of one metre in depth should be covered or secured and a means of escape provided for any animal that does fall in (a suitable escape can be provided by wooden planks placed at a 45 degree angle);
- any temporarily exposed open pipe system should be capped in such a way as to prevent mammals gaining access;
- any chemicals and fuels should be stored carefully and as far away from any setts and badger paths as possible, and in accordance with the Code of Construction Practice; and
- any security lighting (if required) should be directed away from any identified sett or sensitive protection zones.

Potential Impacts on Reptiles & Amphibians

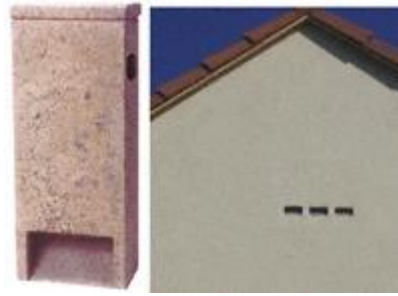
- 5.3.9 Limited suitable habitat exists on the site for reptiles or amphibians, and survey work on the site and surrounding area in 2018 did not record any reptile presence. No potentially suitable waterbodies are present within 500m for Great Crested Newt, therefore no impacts on these features are considered likely.
- 5.3.10 Given that the survey work for herpetofauna is over 5 years old, it is recommended that a method statement is followed for clearance of potentially suitable habitats on site. An example of such a method statement is set out in **Technical Appendix 4**.



Figure 4: Indicative Location of ■ Bird and ■ Bat Boxes (Elevation Plan: R & R Design Studio)

Schwegler Bat Roost Unit 1FR

This Tube system meets the characteristic behavioural requirements of the types of bats that inhabit buildings. Made with Schwegler wood-concrete, the design maintains excellent climatic conditions inside the roost unit allowing the animals to either hang onto the wooden rear or onto the wood-concrete front. The box, once installed is maintenance free and self-cleaning.



The roost unit can be installed within any external walls (brick, block or panelling) either flush or beneath the wall surface (with suitable entrance ramp extension)

Swift Brick: The AfS-S Brick is designed to be installed in the same manner as a normal brick. A lintel is not required. The AfS S-Brick is secured by pointing with mortar.

At no less than 4 metres above the ground (5+ metres is better). Gables are ideal, otherwise high up under eaves

For further information on installation see:
www.actionforswifts.com



6.0 BIODIVERSITY NET GAIN

6.1 Introduction

- 6.1.1 A Biodiversity Net Gain assessment has been undertaken to provide information on proposed biodiversity mitigation and enhancement measures that can be put in place for the development proposals.
- 6.1.2 The Environment Act 2021 (as amended) provides legislation relating to biodiversity net gain for development. The updated National Planning Policy Framework (NPPF) states (paragraph 174) that:

“Planning Policies and decisions should contribute to and enhance the natural and local environment by... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.”

6.2 Methodology

- 6.2.1 The statutory Biodiversity Metric Calculation Tool has been used to determine a quantifiable number of biodiversity units produced during the operational stage of a project. The post-construction/operational value is compared to the baseline biodiversity (pre-construction) value to determine if the proposals will result in a net gain or net loss in biodiversity.
- 6.2.2 The assessment has been undertaken by Aluco Ecology Ltd, with a site visit on 10 January 2025 to classify habitats according to the UKHab criteria (UKHab Ltd, 2023). The matrix assessment is provided as an excel accompanying this report.
- 6.2.3 Baseline habitats are described above, and summarised below in relation to definitions given in UK Hab and the BNG matrix. Proposed habitats are set out in Section 5 and summarised below.

6.3 Headline Results

6.3.1 The Matrix has provided the following headline results:

Land adjacent to White Lodge, Bridge Road,		Return to results menu		
Headline Results				
Scroll down for final results				
On-site baseline	Habitat units	0.83		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.28		
	Hedgerow units	0.02		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	-0.54		
	Hedgerow units	0.02		
	Watercourse units	0.00		
Off-site baseline	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.54		
	Hedgerow units	0.02		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.54		
	Hedgerow units	0.02		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-65.65 %		
	Hedgerow units	N/A		
	Watercourse units	0.00 %		
Trading rules satisfied?		No - Check Trading Summaries		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00 %	0.83	0.91	0.63
Hedgerow units	10.00 %	0.00	0.00	0.00
Watercourse units	10.00 %	0.00	0.00	0.00

6.4 Habitat Degradation

- 6.4.1 When assessing the baseline condition of the site, regard was had to potential habitat degradation from actions that may have occurred to habitats after January 2020. In this case, a description of any potential degradation, and consideration of impacts on baseline habitats is considered in the condition assessment of baseline habitats in the metric and discussed below.

6.5 Irreplaceable Habitats

- 6.5.1 Baseline assessment of the site has considered whether there are irreplaceable habitats on site. A veteran Oak tree was part of the site (Tree 15 in Hellis Solutions Ltd, 2020). However, this tree was extensively damaged by a storm in 2022, and was removed to stump with verbal discussion between Chris Stringer from Eastleigh Borough Council and Matthew Rowden at Rowdens Tree Consultancy and Training. Photos of the storm damage are provided in **Photos 7 & 8** below. On this basis, as a natural loss of this feature, the baseline does not include this tree.



Photo 7: Oak tree (photo from Matthew Rowden)



Photo 8: Oak tree (photo from Matthew Rowden)

6.6 Baseline Metric Assessment

6.6.1 The following baseline habitats are present on site (see **Figure 3**). Condition assessments are reproduced at **Technical Appendix 5**:

- Other neutral grassland. This relates to the existing grasslands on site. The habitats on site are considered to be in poor condition, however they are subject to a maintenance plan as part of the Oak Lodge development for enhancements through some over seeding and management of open space areas. This has been taken into account as potential condition, and the condition assessment for the metric is adjusted to 'moderate condition'.
- Bramble scrub. A small area of Bramble scrub at the northern end of the site.
- Willow scrub. Adjacent to the Bramble scrub. The area of this habitat has been extended to include recently cut areas, as the habitat was present from January 2020 until recently.

- Tall forbs. A small area of tall ruderal vegetation at the northern edge of the site.
- Ruderal/ephemeral habitats. A very small strip along the access road.
- Artificial unvegetated, unsealed surface. Existing drive to White Lodge.

6.7 Retained, Created & Enhanced Habitats

6.7.1 The following measures are incorporated into the scheme design to help ensure that the project provides biodiversity gain. These are detailed in the Proposed Landscape Plan for the site (see **Figure 5**), which represents the created habitats post intervention plan for the biodiversity net gain assessment:

- Developed land, sealed surface. New buildings and hardstanding on site.
- Vegetated garden. New garden areas on site.
- Artificial unvegetated, unsealed surface. New section of gravel drive.
- Non-native hedgerow. Specification for this is not provided. As such it is set at its lowest value.

6.8 Off-site Habitat Creation or Credit Purchasing

6.8.1 In order to achieve 10% net gain a total of 0.91 credits will be required in total. The metric provides for a biodiversity deficit of 0.63 habitat credits. Therefore, it is recommended that the applicant seeks provision of suitable credits from either an off-site location or a third-party provider registered under the BNG register.

6.8.2 Where the above options are not possible, the purchase of Statutory Credits may be possible to achieve 10% gain. For the current application the metric suggests that there is a 1.28 Tier A1 unit shortfall. On site BNG to 10% is not possible in this case because of:

- The small size of the site;
- The nature of the development (single dwelling);

6.8.3 Where relying on Statutory Credits, evidence must be provided that a local solution has been researched and cannot be provided (eg three requests for 3rd party supplier).

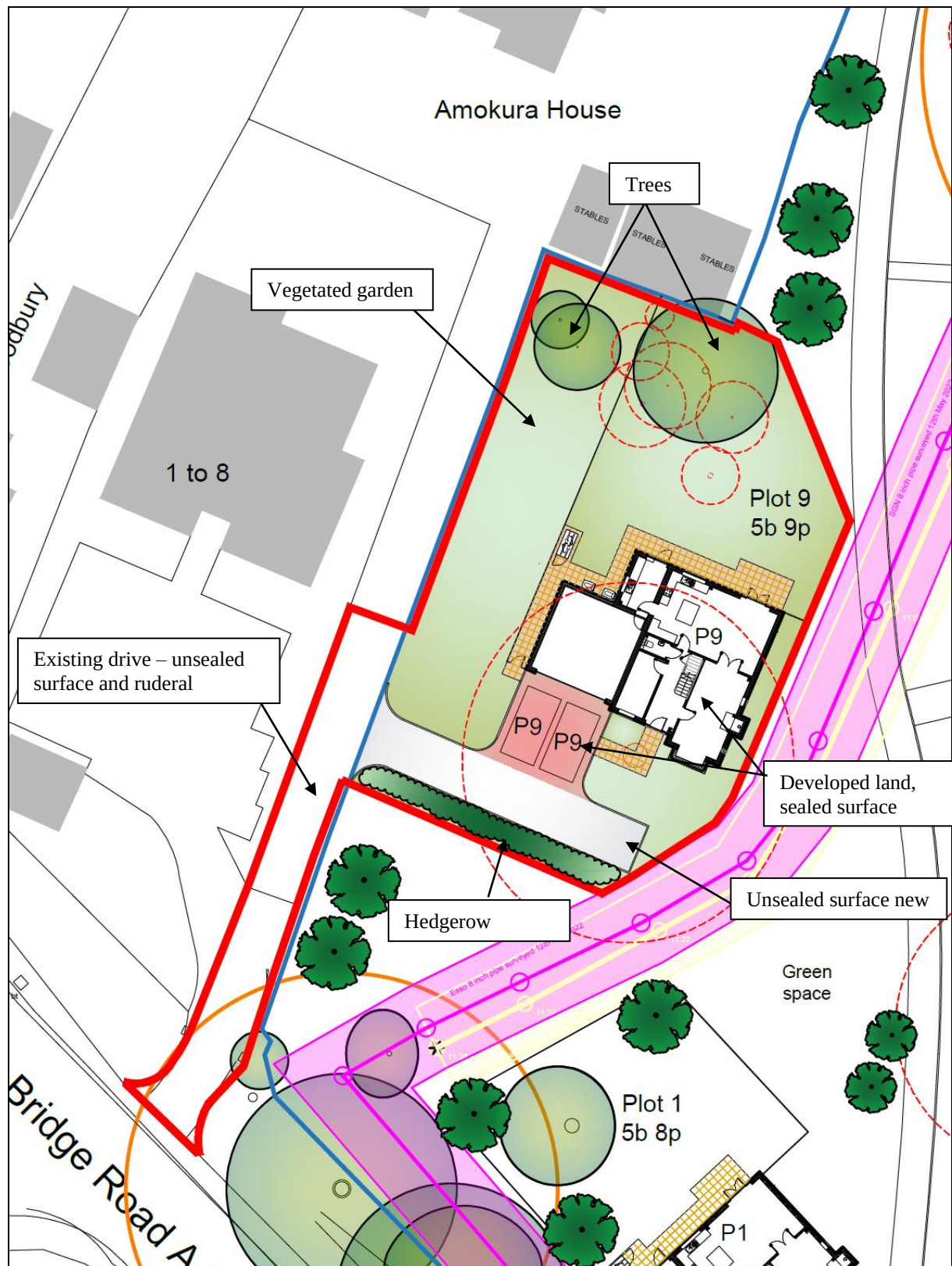


Figure 5: Proposed Habitats

7.0 CONCLUSIONS

- 7.1 An Ecological Appraisal was undertaken of the site, with a site visit in January 2025. The site comprises an area of neutral grassland, scrub and tall ruderal habitats. Potential for protected species and species of conservation has been considered and the zone of influence contains a number of ecological features and protected species, including potential for nesting birds, foraging and commuting habitat for bats. The site is also adjacent to the Solent designated sites and the New Forest designated sites, and potential impact pathways and options for mitigation are proposed to ensure that impacts on this feature can be reduced to non-significant. A Biodiversity Net Gain assessment has shown that the site currently has a deficit of 0.63 habitat credits and options are recommended to purchase 3rd party credits.

8.0 REFERENCES

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Report Author
Gareth Knass LLb (hons) MSc MCIEEM
Aluco Ecology Ltd

Technical Appendix 1

Wildlife & Countryside Act Habitats Regulations and Schedule 2 Species Natural Environment & Rural Communities Act 2006 Environmental Act 2021

WILDLIFE & COUNTRYSIDE ACT 1981 (AS AMENDED)

The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principle legislation in Britain for the protection and conservation of our wildlife and its habitats of national importance. The legislation adopts a habitat and species based approach to nature conservation. Habitats and some species are protected in designated Sites of Special Scientific Interest (SSSI). Other species are afforded some protection from harm or disturbance by way of inclusion in either Section 1 (birds), Schedule 1 (specially protected birds), Schedule 5 (specially protected animals) or Schedule 8 (specially protected plants).

Protection Afforded to SSSIs

The presence of an SSSI on or near to a development is a material consideration, and this is discussed further in planning policy (see National Planning Policy Framework)

Law Relating to Protected Species

The WCA provides protection to such species in Part 1 of the Act. These sections provide protection from intentionally:

- killing, injuring or taking any wild bird or taking, damaging or destroying the nest or eggs of a wild bird
- disturbing any wild bird in Schedule 1 whilst building, on or near a nest, or disturbing dependant young of such birds
- damaging, destroying or obstructing access to any structure or place of shelter or protection of a schedule 5 animal, or disturbs any such animal whilst it is occupying a structure or place it uses for that purpose
- killing, injuring or taking any animal listed in Schedule 5
- Having in possession or control any live or dead wild bird or egg, or any wild animal in Schedule 5, or trading in any animal under Schedule 5.
- Damage to plants listed in Schedule 8 or uprooting of wild plants unless an authorised person.

Exemption and licences for development can be obtained in certain circumstances. Protected species are also a material consideration in planning applications.

Disturbance & Recklessness

The Countryside and Rights of Way Act 2000 (CRoW Act 2000) adds to protected species legislation in the WCA. The lesser test of 'Recklessness' is added to the protection from disturbance in three circumstances. These are:

- disturbance to Schedule 1 birds and their nests, eggs and dependant young,
- disturbance to Schedule 5 animals in their place of shelter/protection, and
- disturbance to the places of shelter/protection of Schedule 5 animals.

This addition means that any person who deliberately takes an unacceptable risk or fails to notice an obvious risk is falls under the Section irrespective of intention. The CRoW Act also provides greater protection to SSSIs from operations (and non operations) of owners, occupiers and third party users of the SSSI.

For further information see: <https://www.legislation.gov.uk/ukpga/1981/69>

HABITAT REGULATIONS 2017

General

The Conservation of Habitats and Species Regulations 2017 ('The Habitat Regulations') consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

European Protected Species

Species listed under Annex II of the Habitats Directive were formally afforded protection by the Habitat Regulations. European protected species include the great crested newt, dormice and all species of bats. The provision relating to wild animal offences is reproduced below:

Protection of certain wild animals: offences

43.—(1) A person who—

- (a) deliberately captures, injures or kills any wild animal of a European protected species,
 - (b) deliberately disturbs wild animals of any such species,
 - (c) deliberately takes or destroys the eggs of such an animal, or
 - (d) damages or destroys a breeding site or resting place of such an animal,
- is guilty of an offence.

(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely—

- (a) to impair their ability—
 - (i) to survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate;
- or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

(3) It is an offence for any person—

(a) to be in possession of, or to control,

(b) to transport,

(c) to sell or exchange, or

(d) to offer for sale or exchange,

anything to which this paragraph applies.

(4) Paragraph (3) applies to—

(a) any live or dead animal or part of an animal—

(i) which has been taken from the wild, and

(ii) which is of a species or subspecies listed in Annex IV(a) to the Habitats Directive;

and

(b) anything derived from such an animal or any part of such an animal.

(5) Paragraphs (1) and (3) apply regardless of the stage of the life of the animal in question.

(6) Unless the contrary is shown, in any proceedings for an offence under paragraph (1) the animal in question is presumed to have been a wild animal.

(7) In any proceedings for an offence under paragraph (3), where it is alleged that an animal or a part of an animal was taken from the wild, it is presumed, unless the contrary is shown, that that animal or part of an animal was taken from the wild.

(8) A person guilty of an offence under this regulation is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine, or to both.

(9) Guidance as to the application of the offences in paragraph (1)(b) or (d) in relation to particular species of animals or particular activities may be published by—

(a) the appropriate authority; or

(b) the appropriate nature conservation body, with the approval of the appropriate authority.

(10) In proceedings for an offence under paragraph (1)(b) or (d), a court must take into account any relevant guidance published under paragraph (9).

(11) In deciding upon the sentence for a person convicted of an offence under paragraph (1)(d), the court must in particular have regard to whether that person could reasonably have avoided the damage to or destruction of the breeding site or resting place concerned.

Section 44 provides certain defences to the above.

The granting of a licence under Part 5 Section 55 of the Habitat Regulations

In order to carry out a lawful operation (e.g. development work which has full planning permission) that may result in any of the offences above, it is necessary to obtain a licence from Natural England to allow the operation to proceed.

However, in accordance with the requirements of the Habitats Regulations, a licence can only be issued after the following conditions have been satisfied:

- that there is no satisfactory alternative, and
- that the action authorized will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

- that the action is required in preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;

Full planning permission is required to apply for a Natural England licence (where such a consent is necessary for the work to be carried out). In addition, a method statement which details the survey results, methodology of work to be undertaken, mitigation and compensation measures, must be submitted to Natural England with the licence application.

Plans and Projects & Designated Sites

The Regulations provide procedure whereby designated SAC or SPA and other European Protected Sites are afforded protection from plans and projects that may be likely to have a significant effect on the Features for which these sites are designated. Where a significant effect is considered likely in combination with other projects an appropriate assessment is required to be undertaken. Details of this procedure can be found at Part 6 of the Act onwards, see link below.

For Full details of the 2017 Habitat Regulations see:

http://www.legislation.gov.uk/ukxi/2017/1012/pdfs/ukxi_20171012_en.pdf

NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006

This Act places a specific duty to conserve biodiversity on all public bodies, including Local Planning Authorities. In order to aid with this process Section 41 of the Act requires the Secretary of State to publish lists of living organisms and habitats which are of principal importance for the purpose of conserving biodiversity. These are the national Biodiversity Action Plan (BAP) lists, and BAP projects are also undertaken at a County, Borough or District level.

For further information see: <https://www.legislation.gov.uk/ukpga/2006/16/part/3>

ENVIRONMENT ACT 2021

Royal Assent 9 November 2021

The Environment Act 2021 has recently received Royal Assent and will introduce a number of nature conservation initiatives. These include Biodiversity Net Gain assessments. The following measures are part of the Act (see www.gov.uk, 2021):

- Strengthened biodiversity duty;
- Biodiversity net gain to ensure developments deliver at least 10% increase in biodiversity;
- Local Nature Recovery Strategies to support a Nature Recovery Network;
- Duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Conservation Covenants;
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature;
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation;

- Requires regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system;
- Long-term targets to improve air quality, biodiversity, water, and waste reduction and resource efficiency;
- A target to halt the decline of nature by 2030;
- Environmental Improvement Plans, including interim targets;
- A cycle of environmental monitoring and reporting;
- Environmental Principles embedded in domestic policy making;
- Office for Environmental Protection to uphold environmental law;
- Air and Water pollution measures.

For further information see:

https://www.legislation.gov.uk/ukpga/2021/30/pdfs/ukpga_20210030_en.pdf

Biodiversity Net Gain under the Environment Act

Mandatory biodiversity net gain in England is likely to become law in 2023 (through amendments to the Town & Country Planning Act). The key measures include (see eg www.gov.uk & www.local.gov.uk):

- Minimum 10% gain required using Biodiversity Metric;
- Habitat secured for at least 30 years via obligations/ conservation covenant;
- Habitat can be delivered on-site, off-site or via statutory biodiversity credits;
- Creation of a national register for net gain delivery sites;
- Continued use of mitigation hierarchy - avoid, reduce, off-set (mitigation and compensation);
- Will apply to Nationally Significant Infrastructure Projects (NSIPs)
- Will not apply to marine development;
- Works alongside existing legal environmental and wildlife protections.

Technical Appendix 2

Local Planning Biodiversity Policy

Core Strategy & Local Plan 2022

Policy DM11, Nature conservation

General Approach

1. The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:
 - a. protect, conserve and enhance all:
 - i. international, national and local nature conservation designations; and
 - ii. networks of natural habitats and features, including the Local Ecological Network, Priority Biodiversity Areas and Priority Biodiversity Links, watercourses, wetland complexes, woodland trees, and trees and hedgerows important to biodiversity and local character; and facilitate their adaptation to climate change wherever possible;
 - b. assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);
 - c. seek a net gain of biodiversity on all development sites (including sites for redevelopment) through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils; and
 - d. contribute to major elements of the PFSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements (see strategic policy S9).

International Designations

2. Development which is likely (either individually or in combination with other developments) to adversely affect the integrity of an international or European nature conservation site will not be permitted subject only to imperative reasons of overriding public interest and securing any necessary compensatory measures in the absence of alternative solutions. A 'project level' Habitat Regulations Assessment will be required where there are likely significant effects or uncertainty. Any mitigation measures required to ensure no adverse impact must be implemented at the appropriate time.
3. The Council will work with PFSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement with developers a strategic approach to the protection and enhancement of international and European sites from the direct and indirect effects of development. Within Eastleigh Borough this will include:
 - a. implementing:
 - i. the Solent Recreation Mitigation Strategy (requiring contributions from residential developments within 5.6 kilometres of the Solent Special Protection Area to the Strategy); and
 - ii. the interim and any future New Forest Recreation Mitigation Strategy if

- required;
- or alternative agreed site specific measures to address recreational disturbance;
- b. preserving the water quality and flows within the Itchen and Hamble, Southampton Water and Solent;
- c. protecting the River Itchen SAC, in particular the maintenance and where appropriate restoration of habitats and qualifying species to favourable conservation status (as defined by article 1 of the Habitats Directive); and
- d. seek contributions towards measures set out in the Southern Damselfly Conservation Strategy (or other strategy) specifically to deliver biodiversity net gain.

National and Local Designations

4. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:
- a. there are no alternative solutions;
 - b. the adverse effects are unavoidable;
 - c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;
 - d. there is an overall biodiversity net gain; and
 - e. if there are any residual adverse effects which cannot be avoided, mitigated or compensated, the benefits of the development must clearly outweigh the adverse effects on the nature conservation value of the site and any broader impacts on national and local designations.

Priority habitats, protected and priority species and the local ecological network

5. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on priority habitats, protected or priority species, or on the local ecological network unless it can be demonstrated that:
- a. there are no alternative solutions;
 - b. the adverse effects are unavoidable;
 - c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;
 - d. there is an overall biodiversity net gain; and
 - e. if there are any residual adverse effects, the benefits of the development clearly outweigh the adverse effects on priority habitats, priority and protected species, and the local ecological network.

Irreplaceable habitats

6. Development will not be permitted if it results in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees), unless there are wholly exceptional reasons and a suitable compensation strategy

exists.

Buffers

7. Buffers free from development will be provided to designated sites to avoid/mitigate impacts, including recreational impact and impacts on edge habitats, and to maintain dark skies.

Surveys

8. Development will not be permitted unless it can be demonstrated that:
 - a. there have been thorough habitat and species surveys;
 - b. the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and
 - c. the strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat networks.

Technical Appendix 3

Ecological Appraisal Method

Introduction

The methodology for this appraisal is based on the Guidelines for Ecological Impact Assessment (EcIA) in the United Kingdom published by the Chartered Institute of Ecology and Environmental Management (IEEM June 2006, CIEEM 2016). Regardless of whether a statutory Environmental Impact Assessment is required, these guidelines provide a robust framework for ecological assessment at any scale.

Desk Study

The first stage of the appraisal is a desk study of the proposed development site and associated Zone of Influence. This provides background information on the site and local environment so as to more effectively target field survey and further desk research.

The Multi Agency Geographical Information for the Countryside (MAGIC) database is searched for information regarding nationally or internationally designated sites within proximity of the development site.

The National Biodiversity Network (NBN) data base is searched to provide background information on local protected species records. The NBN provides access to a substantial volume of biodiversity data for the UK. Although rarely site specific, it does provide valuable background information on the local occurrence of protected species.

Where appropriate, the local environmental/biological records centre is consulted to provide information regarding locally identified sites and records of protected and/or notable species within the zone of influence of the proposed development.

Site Survey Methodology

The aims of the survey are to record land-use and broad vegetation types present on the site and in the surrounding areas, and to evaluate the habitats and vegetation communities ecological value along with the potential to support protected species, species of principal importance, and any other notable species.

Where relevant, habitat immediately adjacent to the site is also assessed as this can have a bearing on the possible presence of protected species on the site and the ecology of adjacent areas can be affected by development nearby.

Habitats and Vegetation

Habitats and vegetation communities are recorded on a broad scale by visually noting contrasting land uses, vegetation zones and landscape features, such as hedgerows and trees. Dominant plant species are recorded in each of the areas identified, as are any notable plant species, such as protected species and habitats or notifiable weeds.

Protected Species

Many plant and animal species are legally protected in the UK. Some, such as bats, badger, water vole and great crested-newt are commonly encountered on development sites.

Case law has established (Regina vs. The Cornwall County Council ex parte Hardy 2001) that “It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

For the most regularly encountered protected species, a brief summary of methods follows:

Bats

Bats use buildings and trees for roosting and breeding, and so the potential for any of these features on site to support bats was considered, as was the sites potential for providing bat foraging habitat. An Appraisal survey will consider potential features that could support a Bat roost, and this may include external inspections of the trees and buildings on site. The Appraisal survey will also consider bat habitats in relation to foraging and commuting potential, with semi-natural vegetation features considered and evaluated.

Where an inspection is undertaken this will look for the presence of bats as well as signs of their presence such as Bat droppings, e.g. within cavities and buildings; Staining at potential roost access points; Lack of bat evidence cannot be taken to mean the lack of use by bats because of a number of potential limitations:

- Signs of bats can be easily washed off by wind or rain;
- Droppings are hard to see where rubble and other floor debris may obscure them;
- Low numbers of droppings can easily be missed especially where they may become damp and deteriorate;
- Evidence of bats may not be apparent where bats roost out of view, such as in tree cavities etc.

Badgers

An initial inspection is undertaken during the Appraisal survey for evidence of the presence of Badgers *Meles meles*, in particular Badger setts, on or near to the site. The Appraisal will search for presence of Badger foraging activity and territorial behaviour. Such signs include foraging trails, foraging scrapes in short grass, which are commonly known as 'snuffle holes' (shallow scrapes in soft ground or even turf rolling created by foraging for ground-dwelling invertebrates such as worms and grubs), footprints, hairs caught under fences, sett entrances, and latrine sites.

Dormice

The Appraisal survey will consider the potential for presence of Dormouse on or near the site, principally through habitat suitability, combined with data on occurrence within the area from the data search. Where suitable habitat occurs, further survey for feeding signs on hazel nuts where Hazel occurs, and searches for arboreal nests. If a site is considered suitable, further Phase 2 survey work may be required.

Other Mammals

Consideration is also given in an Appraisal survey to the potential for habitats to support other legally protected mammals, and those of nature conservation significance. Where waterbodies and

watercourses occur on or near to the site, the potential presence of species including Water Vole *Arvicola amphibious* and Otter *Lutra lutra* are considered. Depending upon the geographic location consideration is also given to species such as Red Squirrel.

Breeding Birds

Any notable bird species seen during the Appraisal survey are recorded. The type and quality of breeding, foraging and roosting habitats available for birds is also considered and interpreted with particular reference to protected or notable bird species, and birds of conservation concern.

Consideration is given to any features which could support nesting birds, including buildings and other structures, and areas of vegetation that may be affected by a development.

Reptiles

Any areas of habitat considered suitable for supporting reptiles are noted (for example, areas of rough grassland and scrub, banks, burrows, and rubble piles, compost heaps). If a site is considered suitable, further Phase 2 survey is usually required if an impact from the development or project is considered likely.

Great Crested Newt

An Appraisal Survey considers habitat suitability, through the occurrence of suitable ponds and/or terrestrial habitat, and this will be combined with knowledge on their distribution from biological records for the area. If a site is considered suitable, further Phase 2 survey is usually required if an impact from the development or project is considered likely.

Invertebrates

A very small proportion of invertebrates are afforded legal protection under the Wildlife and Countryside Act 1981 (as amended), although a relatively high number of invertebrates are included within the UK and local BAPs, and many more species are identified as being Nationally Scarce. Most invertebrates require specialist knowledge in order to identify them, although some groups, including butterflies and dragonflies, can be readily identified by generalists. Therefore, apart from recording any species of these readily identifiable groups, an Appraisal Survey concentrates on recording the presence of any key habitats of nature conservation importance considered suitable for supporting more scarce and restricted invertebrates, for example bare ground, dead wood and botanically rich habitats.

Survey Constraints and Limitations

An Appraisal survey is carried out during a brief window of time. Therefore the survey can only provide a snapshot of the range of plants and animals that might be present. However, professional judgement is used to interpret the habitat features recorded, and their likely value for supporting protected and notable species, including species of principal importance. Survey can also be restricted through land access as it is unusual to have a landowner owning land surrounding that which is being surveyed.

Assessment Guidelines

Introduction

The IEEM guidelines (2006) and updated in 2016 (CIEEM, 2016) provide three principal reasons for an ecological feature being valued and therefore included: biodiversity value, social/community value, and economic value.

The evaluation and assessment undertaken assigns one of a number of value labels based on a geographic scale as follows:

- International
- National
- Regional
- County
- District
- Local (Parish)
- Within the zone of influence

Value is determined with reference to the following factors:

- level of designation (sites) or biodiversity-based protection (legal and policy);
- biodiversity value (e.g. inclusion in Biodiversity Action Plans, rarity, position in ecosystem, assemblages and communities, size and diversity);
- social and economic value;
- legal issues (eg protected sites).

All impacts of the scheme on features of local importance or greater are assessed in the impact assessment stage

Assessment of Likely Impacts

The ecological impact assessment methodology used is based on the following considerations.

Characterisation of Likely Impacts

The potential impacts identified as a result of the proposals are characterised according to the following parameters:

- Positive or negative
- Magnitude (and extent if not synonymous)
- Duration
- Reversibility
- Timing and frequency

Significance of Impact

A significant impact on a valued ecological feature (whether negative or positive) is defined in CIEEM's guidelines as an impact on the integrity of a defined site or ecosystem, and/or the

conservation status of habitats or species within a given geographical area. These terms are defined below.

Integrity

Integrity is defined as follows. ‘*The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.*’ A site or ecosystem that achieves this is considered to be at favourable conservation status.

Conservation Status

For habitats, conservation status is determined by the sum of the influences acting on the habitat and its typical species, which may affect its long-term distribution, structure and functions as well as the long-term survival of its typical species within a given geographical area.

For species, conservation status is determined by the sum of the influences acting on the species, which may affect the long-term distribution and abundance of its populations within a given geographical area.

Impact Prediction

For guidance as to whether an impact is likely to result in an adverse effect on the integrity or conservation status of a feature, reference has been made to the conservation objectives for that feature where they are available, for example in habitat and species action plans. Otherwise professional judgement has been made based on available information.

The confidence in the prediction that an activity will give rise to a significant adverse impact on a valued ecological feature is given based on a four point scale:

- Certain (or near-certain);
- Probable;
- Unlikely; and
- Extremely unlikely

Drawing Assessment Together

The above factors – value, integrity and conservations status of the feature, prediction and characterisation of the impact and overall significance of the impact is brought together in the final assessment. This is done without additional mitigation measures that may be proposed. An impact is then summarised as significant or not.

Mitigation, Compensation and Enhancement

Where impacts are characterised as significant mitigation or compensation may be offered to prevent, reduce or offset such impacts. In addition enhancement measures may be built into a scheme to ensure that the scheme is compliant with the proactive measures outlined in the latest Government policy on nature conservation (National Planning Policy Framework).

Technical Appendix 4

Reptile & Amphibian Pre-Construction Ecological Method Statement

Introduction

The ecological survey work on site has determined that there is a low/negligible potential for reptiles and/or Great Crested Newt presence.

On this basis a suitable construction method statement has been prepared to ensure that legal provisions relating to the protection of reptiles and amphibians is adhered to as part of the development process.

Mitigation Method Statement

The following method statement will be followed to ensure that reptiles and amphibians are not impacted by the development (having regard to NatureSpace - Best Practice Principles – NatureSpace Nov 2019 (www.naturespaceuk.com)):

1. Prior to any works, an update survey will be undertaken by the suitably qualified ecologist to determine any baseline changes relating to protected species, particularly Badgers, Bats, nesting birds and herpetofauna. Where there are any significant changes to the baseline, the method statement will be reviewed having regard to: best practice for the relevant species group, any additional survey and licensing requirement, and seasonal timing;
2. Where any woody vegetation is to be cut that could contain nesting bird habitat (ie trees, shrubs, Bramble scrub and associated edges of this habitat), this should be undertaken outside the main nesting season, being undertaken between September and end of February. A small amount of such vegetation clearance may be possible during the active bird nesting season, but only following pre-clearance checks that no nesting birds are present by the suitably qualified ecologist;
3. In advance of works, vegetation should be managed to reduce suitability for newts and reptiles, in order to discourage them from impacted areas. This should be by cutting vegetation to no lower than 150mm and carefully removing arisings;
4. All cut areas should be left undisturbed for 48 hours;
5. Undertake a destructive search, which involves a directional vegetation clearance (remaining vegetation) and soil stripping (avoiding very wet or cold weather);
6. Destructive searches should only take place during the active herpetofauna season between April – early Oct, and in appropriate weather conditions, to avoid killing/injuring reptiles and newts;
7. The direction of work will be from the northern boundary to the south boundary (where suitable retained habitat exists adjacent to the site);
8. Hand searches, destructive searches (see also below) will be undertaken ahead of site works, to reduce the risk of newts and reptiles being on the site during construction;

9. Hand searches, destructive searches and initial site stripping should be supervised by a suitably qualified ecologist;
10. Destructive searches and initial soil stripping should be undertaken using a machine with a 'toothed' bucket. The machine should avoid tracking on potential habitat;
11. Any reptile or newt that is found during the process should be relocated to the retained habitats just outside the southern boundary;
12. **If a Great Crested Newt is found at any point during the works, works will need to stop immediately, and the suitably qualified ecologist and Natural England should be contacted straight away;**
13. Working areas should avoid any retained habitat on site, which should be protected by fencing demarcating retained habitat areas;
14. Pollution protection measures should be implemented to avoid indirect impacts on retained or off-site habitats, such as run-off or accidental encroachment from working vehicles, material or operatives;
15. Machinery, materials, equipment and any waste should be stored on areas of hardstanding or raised off the ground on pallets where possible and not on potentially suitable reptile or amphibian habitats;
16. Excavations should be backfilled, covered overnight, or ramps placed in to allow any animals to escape;
17. Excavations and working areas should be managed so as not to create temporary waterbodies which may attract newts onto site;
18. Access roads should use existing roads and tracks and keep habitat disturbance to a minimum, avoiding any areas of sensitive or potentially valuable habitat.

Hand Searching

This is the careful searching and dismantling, by hand, of potential refuges and suitable habitat features. Hand searching may be done throughout the active season where weather conditions are suitable (e.g. not during very hot dry or cold weather). Hand searches are ineffective on large expanses of habitat and are suited to searching distinct habitat features, such as log piles and small areas of debris.

Destructive searches

This is the careful searching and dismantling of features including stumps of hedgerows, any rubbles piles on site, with ongoing supervision to check for animals as works progress. Destructive searching may be undertaken throughout the active season, where weather conditions are suitable (e.g. not during very hot dry weather or cold weather) and is combined with hand searches.

Technical Appendix 5

Condition Assessments

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)			
Habitat Description			
Condition Assessment Criteria		Existing	Potential
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	n	y
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	n	n
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	y	y
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	n	y
E	Combined cover of species indicative of suboptimal condition ³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	y	y
Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	n	n
Essential criterion for Good condition achieved (for non-acid grassland)			
Number of criteria passed		2	
Condition Assessment Result	Condition Assessment Score	Score Achieved x/√	
Acid grassland types (Result out of 5 criteria)			
Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)		y
Passes 2 or fewer criteria	Poor (1)	y	
Non-acid grassland types (Result out of 6 criteria)			
Passes 5 or 6 criteria, including essential criterion A and	Good (3)		
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)		
Passes 2 or fewer criteria;	Poor (1)		

Quadrat = 6.67 species per 1m x 1m (n=3)

Condition Sheet: SCRUB Habitat Type									
Limitations (if applicable)		Habitat parcel reference							
		Bramble	Willow						
		Criterion passed (Yes or No)							
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	n	n						
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	n	n						
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	y	y						
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	y	y						
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	n	n						
Number of criteria passed									
Condition	Condition Assessment Score	Score Achieved x/√							
Passes 5 criteria	Good (3)								
Passes 3 or 4 criteria	Moderate (2)								
Passes 2 or fewer criteria	Poor (1)	y	y						
Suggested enhancement interventions to improve condition score									

Condition Sheet: INDIVIDUAL TREES Habitat Type		
Condition Assessment Criteria		Criteria on passed (Yes or No)
A	The tree is a native species (or at least 70% within the block are native species).	n
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	n
C	The tree is mature (or more than 50% within the block are mature) ¹ .	y
D	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.	n
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	n
F	More than 20% of the tree canopy area is overhanging vegetation beneath.	y
Number of criteria passed		
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/√
Passes 5 or 6 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	y
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.		

Sparsely vegetated land == Ruderal/Ephemeral == Tall forbs == Urban - Various			
Condition Assessment Criteria		Tall Forb	Ruderal
Core Criteria - must be assessed for all urban habitat types :			
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	n	n
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	n	n
C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a	y	y
Additional Criterion - must be assessed for Open mosaic habitat on previously developed land only:			
D	The parcel shows spatial variation and forms a mosaic of bare substrate PLUS: - At least four early successional communities (a) to (i); Communities: (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland, (i) pools		
Additional Criteria - must be assessed for Bioswale and SuDS habitat types only:			
E1	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife ⁴ .		
E2	The vegetation is comprised of plant species suited to wetland or riparian situations.		
Additional Criterion - must be assessed for Intensive green roofs only:			
F	The roof has a minimum of 50% native and non-native wildflowers. 70% of the roof area is soil and vegetation (including water features).		
Additional Criterion - must be assessed for Biodiverse green roofs only:			
G	The roof has a varied depth of 80 – 150 mm; at least 50% is at 150 mm and is planted and seeded with wildflowers and sedums or is pre-prepared with sedums and wildflowers. Note – to achieve Good condition some additional habitat, such as sand piles,		
Condition Assessment Result	Condition Assessment Score	Score Achieved x/√	Score Achieved x/√
Results for habitats requiring assessment of 3 core criteria only (all listed urban habitats except Open			
• Passes all 3 core	Good (3)		
• Passes 2 of 3 core	Moderate (2)		
• Passes 0 or 1 of 3	Poor (1)	y	y