

A collage of images arranged in a diamond pattern. The images include: a pond with reeds, a yellow and black spotted salamander, a bat being held in a gloved hand, a house under construction with scaffolding, a woodchipper being used by workers in a field, a squirrel eating grapes, and a badger.

Biodiversity Enhancement and Management Plan

Willow Bee, Allington Lane,
Eastleigh

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Report	Biodiversity Enhancement and Mitigation Plan (BEMP)
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1.0 INTRODUCTION

1.1 Brief

A planning application has been submitted by Daniel Bowers to Eastleigh Council for the clearance and construction of a fence and gate with associated vegetation clearance. This report is to support the application in providing a detailed biodiversity enhancement plan for the site as instructed by Lisa Malter from Eastleigh Borough Council.

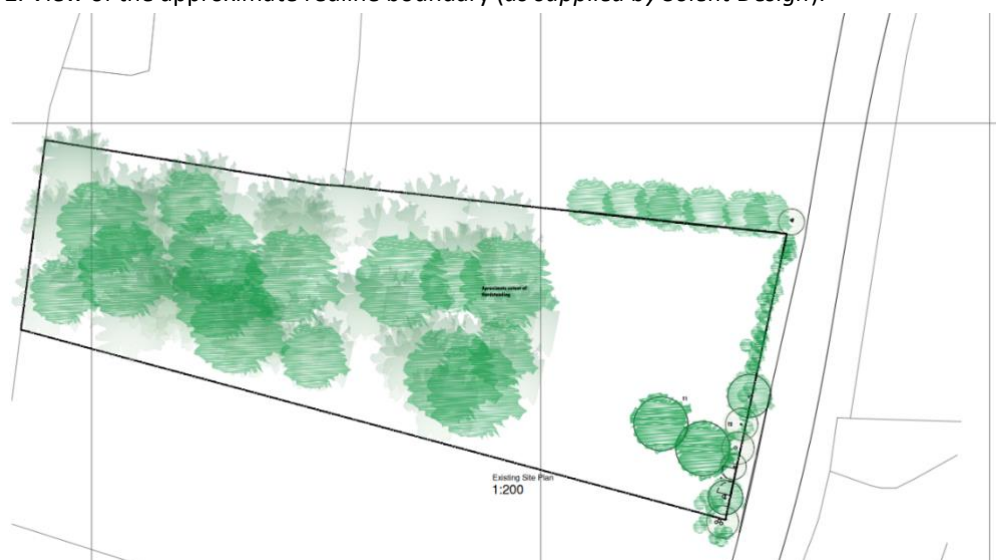
The aim of this Biodiversity Enhancement and Mitigation Plan (BEMP) is to provide further detail on the potential impacts of the development on bats and reptiles, and to provide detailed measures to ensure the delivery and long-term management of recommended mitigation and enhancements measures that will be implemented. The BEMP will be adhered to unless otherwise agreed in writing by the local planning authority.

It should be noted the site has been cleared in recent years and therefore this assessment considers both pre-clearance habitats using a desktop assessment and field observations for post-clearance habitats.

1.2 Site Description & Location

The site comprises of a parcel of land at Allington Lane, Eastleigh, which consists of a mixture of woodland and bramble scrub located in Eastleigh, Southampton, SO30 3HP (centred on OS grid reference SU 47452 16425 5) (**Fig 1**). The site is bound to the north, south and west by industrial properties and to the east by Allington Lane, with an agricultural land and some deciduous woodland.

Figure 1. View of the approximate redline boundary (as supplied by Solent Design).



1.3 Proposed Development

The formal retrospective proposals at this stage entail the construction of a new fence and gate on the east boundary of site and associated clearance. (**Fig 2**).

Figure 2. View of the proposed plans (as supplied by Solent Design).



2.0 RELEVANT LEGISLATION & POLICY

2.1 Legislation

2.1.1 Nesting Birds

All wild birds (resident, visiting and introduced species) in England and Wales are protected under the Wildlife and Countryside Act 1981. Under this piece of legislation, it is an offence to:

- Intentionally kill, injure or take any wild birds
- Intentionally take, damage or destroy the nest of any wild bird while it is being built or in use
- Intentionally take or destroy the eggs of any wild birds
- Have in one's possession or control any wild bird (dead or alive), part of a wild bird or egg unless obtained legally.

It must be demonstrated that developments have made all the reasonable effort to avoid breaking the law through appropriate surveys and the implementation of mitigation measures before undertaking any works that will affect nesting birds.

2.1.2 Overview of Legal Protection of Bats

All bat species, and their roosts, are afforded full legal protection in the UK, by a selection of legislation (both domestic and international). Under this collection of legislation, it is an offence to:

- Deliberately take, injure or kill a wild bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roost or maternity site (even if bats are not occupying a roost at the time of such impact)
- Intentionally or recklessly obstruct access to a bat roost

This interpretation is provided by the Bat Conservation Trust (2019).

2.1.3 Reptiles

All of Britain's reptile species are legally protected to some degree. The four "widespread" reptile species (Viviparous Lizard (*Zootoca vivipara*), Slow Worm (*Anguis fragilis*), Grass Snake (*Natrix natrix*) and Adder (*Vipera berus*) are protected from killing, injury and sale (including offering/advertising/transporting for sale), including parts or derivatives under the Wildlife & Countryside Act 1981 (as amended). The Countryside and Rights of Way Act (CROW) 2000 strengthened the Wildlife and Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is a likelihood of a protected species being present.

2.1.4 The Conservation of Habitats and Species Regulation (2017)

The Conservation of Habitats and Species Regulations 2017 transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way

that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

The Conservation of Habitats and Species Regulations 2019 (EU Exit) makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue. The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.5 The Wildlife and Countryside Act (1981) (as amended)

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

2.1.6 The Countryside and Rights of Way Act (2000)

This Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.7 NERC Act

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the UK Post – 2010 Biodiversity Framework.

2.2 Policy

2.2.1 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) (2023) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural and local environment by

protecting and enhancing sites of biodiversity, the wider benefits from natural capital and ecosystem services, minimising impacts on and providing net gains for biodiversity.

The NPPF states that plans should distinguish between the hierarchy of international, national and locally designated sites and that the scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

To protect and enhance biodiversity plans should:

- identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;
- and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

The NPPF states determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSI;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

2.3 Local – Eastleigh Borough Local Plan 2016 – 2036

The Eastleigh Borough Local Plan 2016 – 2036 has a number of policies relating to ecology with the relevant ones listed below;

‘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.'

2.4 Biodiversity Action Plans & UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework (JNCC & DEFRA, 2010) supersedes the UK Biodiversity Action Plan 1992-2012 (UKBAP), setting out goals relating to nature conservation at a UK scale, for example the reduction and reversal in the decline of threatened species and improving the status of biodiversity. The specific habitats and species contained within the UKBAP continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework, and are required to be a material consideration in the planning process under the 2021 NPPF.

3.0 ECOLOGICAL BASELINE

The following details the results from the ecology walkover of the area of land to be enhanced by the BEMP which was completed by Ecosupport on the 12th September 2023.

3.1 Habitats

In general, the parcel was considered to support habitats of site ecological value. However part of the site has been cleared prior to the visit on the 12th September 2023. Due to evidence of recent clearance on site, the following ecological baseline is described in accordance with aerial imagery of the site prior to clearance while also noting what was present at the time of the walkover. The following habitats were applicable to this parcel of land during the most recent survey in September 2023.

3.1.1 Walkover (September 2023)

3.1.1.1 Modified Grassland (g4) (secondary code 80, unmanaged)

A section of unmanaged modified grassland is present on-site located to the north of the site. This area of grasses was dominated by Rye Grass (*Lolium perennes*). Forbs were limited to Lady's Mantle (*Alchemilla mollis*), Daisy (*Bellis perennis*), Yarrow (*Achillea millefolium*), and Dandelion (*Taraxacum*) (Fig 3).

Figure 3. View of the isolated area of Modified grassland.



3.1.1.2 Bramble Scrub (h3d)

Bramble (*Rubus fruticosus*) scrub is present along the southern boundary of the site (Fig 4) .

Figure 4. View of the bramble scrub along the southern boundary.



3.1.1.3 Deciduous Woodland (w1f) (secondary woodland 31)

A portion of the western part of the site consists of an area of secondary deciduous woodland (Fig 5). The woodland consisted of the following tree species, Beech (*Fagus sylvatica*), Conifer, Aspen (*Populus tremula*), Sweet chestnut (*Castanea sativa*) and Silver Birch (*Betula pendula*). The ground flora primarily consisted of Ivy (*Hedera helix*), and Bramble (*Rubus fruticosus*).

Figure 5. View of the deciduous woodland present to the western end of the site.



3.1.1.4 Woodland and Forest (w) Line of trees (33)

A line of trees is present along the boundary of site to the north (**Fig 6**). The trees consisted of solely Conifer spp.

Figure 6. View of the line of conifer trees.



3.1.1.5 Artificial Unvegetated; Unsealed Surface

A driveway was present at the eastern entrance to the site, with a gravel hardstanding which is being used as storage for a number of vehicles and miscellaneous items.

3.1.2 Aerial Imagery (Prior to clearance)

3.1.2.1 Lowland Mixed Deciduous Woodland (w1f)

Within aerial imagery, a small area of deciduous woodland is present to the east of the site. This has been partially cleared as noticed during the September 2023 walkover.

3.1.2.2 Mixed Scrub (h3h)

Within aerial imagery and from evidence during the walkover the main bulk of the site appears to have been dense mixed scrub, with small sections of Blackthorn (*Prunus spinosa*) scrub (where it hasn't been cleared, present during the September 2023 walkover).

3.1.2.3 Bramble scrub (h3d)

From google street view It appears the entrance of the site consisted of dense bramble scrub.

3.1.2.4 Modified Grassland (g4) (secondary code 80, unmanaged).

It also appears there may have been the same isolated section of modified grassland located within the centre of the site.

3.1.2.5 Woodland and Forest (w) (secondary code 33 line of trees)

The conifers along the northern boundary are present from aerial images.

3.2 Bats

3.2.1 Site Assessment - Prior to Clearance

The site was largely dominated by bramble/mixed Scrub and mixed deciduous woodland. The site supports linear features in the form of woodland and shrubs, which could be utilised by commuting and foraging bats. Furthermore, the site borders regular lined tree field edges which provide an important foraging area for bats. Taking the above into account, the site is considered to be of **Moderate** potential for foraging and commuting bats.

3.2.2 Site Assessment - Current Habitats

The site itself has partially been cleared of the original habitats (primarily all of the mixed/bramble scrub) and partially the woodland, however it still somewhat supports deciduous woodland, and some limited bramble scrub. Taking the above into account, the site will be considered to now hold **low potential** for foraging and commuting bats.

3.3 Nesting Birds

3.3.1 Site Assessment - Prior to Clearance

The woodland and shrubs on-site provide ideal nesting habitat for birds on site. Due to the dense scrub and woodland that would have been present on site, the site would have been considered to be of **High** potential for nesting and breeding birds.

3.3.2 Site Assessment - Current Habitats

The site itself has partially been cleared of the original habitats (primarily all of the mixed/bramble scrub) and partially the woodland, however it still supports some deciduous woodland, and some limited bramble scrub. Taking the above into account, the site will be considered to now hold **moderate potential** for nesting and breeding birds.

3.4 Reptiles

3.4.1 Site Assessment - Prior to Clearance

The majority of the site appeared to consist of dense scrub with a grassland mosaic within the centre of site. This habitat is suitable for reptile however the site is surrounded by what appears to be heavily managed grassland within the neighbouring properties as well as a network of roads surrounding the immediate area which will limit any dispersal routes within the wider landscape. The site would have therefore been considered to hold **Moderate potential** for common reptile species.

3.4.2 Site Assessment - Current Habitats

The site itself has partially been cleared of the original habitats (primarily all of the mixed/bramble scrub) and part of the woodland, however it still supports some deciduous woodland, and some limited bramble scrub. However, there is still the area of rough modified grassland to the south east of the site, which contains more structured patches of vegetation and it is possible that any reptiles remaining on site following habitat clearance could utilise this area as shelter. Taking the above into account, the site will be considered to now hold **low potential** for common reptiles.

3.5 Great Crested Newts

3.5.1 Site Assessment - Prior to Clearance

The majority of the site appeared to consist of dense scrub with a grassland mosaic within the centre of site. This habitat would be classed as suitable for terrestrial GCN however the site is surrounded by what appears to be heavily managed grassland within the neighbouring properties as well as a network of roads surrounding the immediate area which will limit any dispersal routes to any ponds within the wider landscape. A single GCN record has been recorded within 0.5km of the site to the north-east from what appears to be within Itchen Valley Country Park (From freely available sources within 0.5km). This record however is fairly disconnected from site via a network of minor roads. With the habitats on-site and the levels of disconnectivity it would have been considered to hold **Low potential** for terrestrial GCN.

3.5.2 Site Assessment - Current Habitats

The site itself has partially been cleared of the original habitats (primarily all of the mixed/bramble scrub) and part of the woodland, however it still supports some deciduous woodland, and some limited bramble scrub. However, there is still the area of rough modified grassland to the south east of the site, which contains more structured patches of vegetation which can still hold limited potential for terrestrial. Taking the above into account, the site will be considered to hold **low potential** for common reptiles.

3.6 Dormice

3.6.1 Site Assessment - Prior to Clearance

The isolated deciduous woodland strip would constitute suitable dormouse habitat. However, it is isolated in all directions by residential properties and Allington lane separating it from larger connecting habitat. This limits the ability for any Dormice to disperse and sustain a good genetic gene pool. The statement below highlights the population density for Dormice.

Dormouse live at low numbers, even in the best quality habitat (Dormouse Conservation Handbook, 2006) and the mean spring population density in optimal habitat (diverse deciduous woodland) is approximately 4 to 10 adults per hectare with the average population density across the country being 2.2 per ha, including sub-optimal habitats (Dormouse Conservation Handbook, 2006).

The site as a whole measures 0.6ha which according to the average population density shows only 2 dormice per ha. This indicates the size of the isolated woodland and scrub in the immediate vicinity by itself is not large enough to sustain a population of breeding dormice without a significant corridor linking the woodland to other suitable habitats in the wider landscape. Based on the above it is **unlikely dormice** will be present within the isolated patch of woodland present on site. The site is therefore considered to hold **low potential** to support Dormice.

3.6.2 Site Assessment – Current Habitats

The site itself has partially been cleared of the original habitats (primarily all of the mixed/bramble scrub) and part of the woodland, however it still supports some deciduous woodland, and some limited bramble scrub. Taking the above into account, the site will be considered to now hold **very low potential** for Dormice.

3.7 Badgers

3.7.1 Site Assessment - Prior to Clearance

Due to the dense scrub that appears to have been present prior to the clearance, this could have concealed any potential Badger setts that would have been present on-site. Along with the suitable woodland habitat and neighbouring open fields, the site itself would have been considered to have **moderate potential** for foraging and commuting badgers, as well as **potential** for active setts within the concealed scrub.

3.7.2 Site Assessment – Current Habitats

The site itself has partially been cleared of the original habitats (primarily all of the mixed/bramble scrub) and part of the woodland, however it still supports some deciduous woodland, and some limited bramble scrub. Taking the above into account, the site will be considered to now hold **moderate potential** for foraging and commuting badgers. A thorough search for badger setts revealed no badger setts present on-site.

3.8 Hedgehogs

3.8.1 Site Assessment - Prior to Clearance

The dense scrub that appears to have been present prior to the clearance and woodland would have provided suitable habitat for foraging/sheltering and commuting hedgehogs. The site would therefore be considered to hold **moderate potential** for hedgehogs.

3.8.2 Site Assessment – Current Habitats

The site itself has partially been cleared of the original habitats (primarily all of the mixed/bramble scrub) and part of the woodland, however it still supports some deciduous woodland, and some limited bramble scrub. Taking the above into account, the site will still be considered to hold **moderate potential** for foraging, commuting and sheltering hedgehogs.

4.0 COMPENSATION AND ENHANCEMENTS

This chapter addresses the relevant mitigation, compensation and enhancements required to provide appropriate protection to species found within the site. Mitigation refers to measures that can be undertaken to avoid or reduce ecological impacts. Compensation refers to measures taken in order to offset potential significant impacts and finally enhancements contribute towards a net gain for ecology.

The following compensation and enhancements below are to reflect the unauthorised clearance associated with the retrospective planning application and aim to compensate for the current loss of habitat which has been cleared, as well as to enhance the site to a greater level for biodiversity through targeted enhancements for the protected species likely to be on-site.

Any updates to / deviations from this strategy must be undertaken by a suitably experienced Ecologist and agreed in writing with Eastleigh Council prior to implementation.

4.1 Nesting Birds

4.1.1 Enhancements

The erection of a four nest boxes within the woodland will provide further enhancements. Where possible this nest box could be tailored to provide opportunities for red listed/BAP species known from the local area. Vivara open fronted and circular fronted bird boxes will be used (**Fig 7**). This will provide suitable nesting opportunities for a variety of bird species and will increase the nesting opportunities for birds on site.

Figure 7. Example suitable bird boxes: Vivara open fronted and circular fronted bird boxes.



4.2 Bats

4.2.1 Enhancements

To act as biodiversity enhancement four bat boxes, with two Schwegler 2F boxes and two Schwegler 1FF boxes will be erected on retained mature trees within the woodland, although alternative similar boxes may be used should these not be available, as recommended by a qualified ecologist. Woodcrete or Woodstone boxes are preferred which will not rot, leak,

crack or warp, and will last for a longer period of time, making it suitable for long-term mitigation projects (**Fig 8**). They also provide a rough surface for bats to cling on to and climb.

Figure 8. Example of Bat boxes to be installed; Schwegler 2F(left) and Schwegler 1FF (right)



4.3 Hedgehogs

4.3.1 Enhancements

Two hedgehog homes will be included on site (such as the Igloo Hedgehog home or Hogitat Hedgehog house) (**Fig 9**). This will be provided within or adjacent to areas of planted / trees / shrubs and will provide a rapidly declining species with a place to shelter / hibernate.

Figure 9. Example of Igloo hedgehog home.

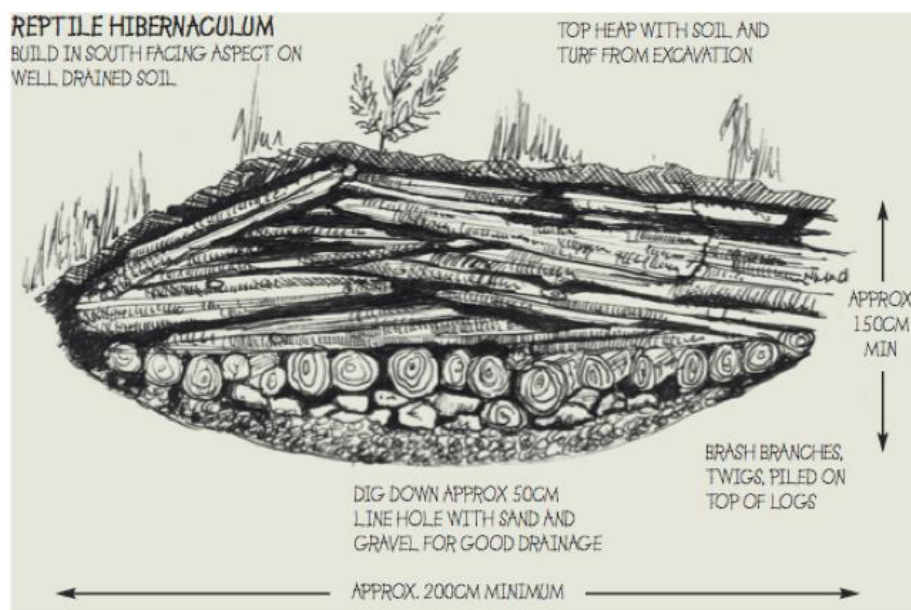


4.4 Reptiles

4.4.1 Enhancements

Based on the nature of the existing habitats within the boundaries, the only potential enhancement anticipated would be the creation of 2 No wood-based hibernacula to provide reptiles with a suitable area to hibernate within. This will be created following the specification outlined within *Reptile Habitat Management: Guidelines for Landowners* (HART, 2009) (Fig 10).

Figure 10. Reptile hibernaculum design as provided in HART (2009).



4.5 Great Crested Newts

4.5.1 Enhancements

A small pond will be created within the centre of site and will be seeded with a suitable marginal aquatic mix to encourage establishment of a wet, marshy margin to the pond area. Selected wetland species of plants will be used to establish emergent and marginal vegetation around the pond. Aquatic species will be allowed to colonise naturally. The pond vegetation will need to be allowed to reach equilibrium over a period of 2-3 years after which further introduction of species may be needed as well as management to remove any non-native invasive species or other undesirable species that colonise. This will help enhance the site for wildlife and will enhance the suitability on-site for all amphibian species.

Recommended species planting of wetland species may include:

- Greater Pond-sedge (*Carex riparia*)
- Sharp-flowered Rush (*Juncus acutiflorus*)
- Meadow Foxtail (*Alopecurus pratensis*)
- Marsh Foxtail (*Alopecurus geniculatus*)
- Creeping Bent (*Agrostis stolonifera*)
- Rough Meadow-grass (*Poa trivialis*)
- Marsh-marigold (*Caltha palustris*)

- Yellow Iris (*Iris pseudacorus*)
- Ragged-robin (*Silene flos-cuculi*)
- Cuckooflower (*Cardamine pratensis*)
- Water Mint (*Mentha aquatica*)
- Greater Bird's-foot-trefoil (*Lotus pedunculatus*)
- Meadowsweet (*Filipendula ulmaria*)

4.6 Compensation for the loss of habitats on-site.

4.6.1 Planting

4.6.1.1 Scrub Planting

Scrub planting to recover the lost, previously cleared, habitat on site. To act as an Enhancement, species will comprise those that produce berries, fruit and nectar to provide feeding opportunities for a range of wildlife. Evening-scented species will enhance the site's potential to support foraging bats. Increasing opportunities for insects and, in turn, foraging Badgers and bats. As a general enhancement, all new planting should favour native species over non-natives and ornamentals. Species that can be considered within any planting include: Rowan (*Sorbus aucuparia*), Alder (*Alnus glutinosa*), Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Bird Cherry (*Prunus padus*), Dog rose (*Rosa canina*), Dogwood (*Cornus sanguinea*), Holly (*Ilex aquifolium*), Elder (*Sambucus nigra*), Silver Birch (*Betula pendula*), Small-leaved Lime (*Tilia cordata*), Quercus spp. and Willow (*Salix* spp.). Areas to be enhanced can be seen in **Appendix 1**.

4.6.1.2 Woodland Planting

The native mixed woodland that has been partially cleared to the east of the site is to be enhanced to its former state through native species understory planting and more favourable understory management to create a more diverse age range which can be seen in **Appendix 1**.

4.6.1.2.1 Woodland Planting Species Mix

The recommended species to be planted as woodland understorey comprise (reflective of those found on-site and in the wider area); Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Holly (*Ilex aquifolium*), Wild Privet (*Ligustrum vulgare*), and climbers such as, Dog Rose (*Rosa canina*), Honeysuckle (*Lonicera periclymenum*), Alder Buckthorn (*Frangula alnus*), Common Broom (*Cytisus scoparius*), Field Maple (*Acer campestre*), Guelder Rose (*Viburnum opulus*) and Wayfaring Tree (*Viburnum lantana*).

4.6.1.2.2 Management

To ensure a successful establishment of the newly planted woodland understorey, all trees must have a 1- metre exclusion zone whereby weeds are routinely removed for the first 2 – 3 years. Additionally, all trees must have tree guards installed to act as a form of protection from extreme weather or excessive foraging from wildlife. During weed removal, tree guards should also be routinely checked to ensure they are maintained in good condition and are firmly positioned within the soil. If the guards begin to split, they must be removed and disposed of responsibly.

4.6.1.2.3 Coppicing

All Hazel will be managed on a rotational coppicing scheme. This involves cutting young trees down to ground level to promote new growth and prevent over-shading. This will be rotationally implemented, with only a small portion approximately 30% of Hazel coppiced every 3 years during winter months (November to March), but only once the Hazel has grown to a size that will be beneficial and appropriate. Coppice management is best carried out on a rotation of approximately every 6-10 years for each tree, with timing staggered for plants to ensure there is continued connectivity at any given time. Retain some of the dead wood on site for habitat creation. Include some larger horizontal trunks and limbs as well as log piles and discarded brash. Leave wood piles in shady areas.

4.6.1.3 Wildflower Planting

In combination with the scrub planting, areas of wildflower grassland will be created through the sowing of Emorsgate EM1 – Basic General Purpose Meadow Mixture, or a similar native seed mix, at a density of 4g/m². Areas that are to be enhanced can be seen in **Appendix 1**.

Recommended species planting of grass species for this habitat type may also include Perennial Rye-grass (*Lolium perenne*), Common Bent (*Agrostis capillaris*), False Oat-grass (*Arrhenatherum elatius*), Yorkshire-fog (*Holcus lanatus*), Rough Meadow-grass (*Poa trivialis*) and Cock's-foot (*Dactylis glomerata*). Herb planting may include Yarrow (*Achillea millefolium*), Ribwort Plantain (*Plantago lanceolata*), Red Clover (*Trifolium pratense*), Common Knapweed (*Centaurea nigra*), Bird's-foot Trefoil (*Lotus corniculatus*), Common Mouse-ear (*Cerastium fontanum*), Meadow Buttercup (*Ranunculus acris*), Self-heal (*Prunella vulgaris*) and Creeping Thistle (*Cirsium arvense*).

Planting a mixture of flowering plants will support pollinators and encourages a diversity of insects to sustain bats. This will also reflect the habitat prior to the clearance works taken place.

4.6.1.3.1 Management

Wildflower areas do not require any additional watering or fertilizer. Cutting a meadow and removing the clippings retains low nutrient levels in the soil and suppresses coarse grasses which would otherwise out-compete the wildflowers. It is recommended the wildflower grassland undergoes two annual cuts. The growth should be cut back to a height of 50-75mm. The cut grass should be dried on site. Cuttings should be left in situ for approximately one week, after this the arisings are to be removed from site.

First year management: Perennial species take at least a full year to establish. For newly sown areas the first summer will be dominated by annual weeds arising from the soil seed bank and by grass growth. This should be controlled by mowing throughout the first year to minimise competition and weed seed production.

Management Once Established: Once established (from year 2 to 3), wildflower areas can undergo a spring cut in late March/early April however it is recommended that it is instead left to flower and will be cut in mid-summer. This will allow plants to flower and set seed.

However, the wildflower area should not be cut in May or early June due to nesting birds. Mowing in mid-June brings a premature end to the flowers and can compromise nesting birds, which do not fledge until late July, insects and other wildlife. If some mowing has to take place at this time, sections should be cut at different dates to prolong the overall flowering season and give wildlife a chance to move. The second annual cut should be undertaken during late Autumn.

Grassland which is consistently cut late in the season, in August and September, year on year reduces species diversity as late cutting gives more time for coarse grasses and other dominant plants to grow unchecked. To maintain maximum diversity and flowering interest the buffer should be managed in sections at different times from late June to the end of August. Varying the mowing times from year to year is the best way to maintain a diverse balanced sward.

4.7 Safeguarding

The safeguarding of the bat and bird box's will be included within the a condition of planning permission so the client knows of their ecological sensitivity and protect them in perpetuity.

Please note once occupied, bat boxes are legally protected and can only be disturbed by a licensed Ecologist.

All newly planted habitats should be maintained and monitored by the client for a minimum period of 5 years following granting of the planning permission. Any plants that have failed must be replaced like-for-like and any ecological features that become damaged should be replaced.

5.0 CONCLUSION

This document has been prepared to bring together all the existing ecological information for the site otherwise known as 'Willow Bee, Allington Lane, Eastleigh' with the aim of addressing all the ecological constraints identified and to provide opportunities for enhancement that are consistent with the aims of national and local planning policy. It is considered that should all aspects of this document be implemented, adequate compensation and enhancement can be achieved to minimise impacts to the favourable conservation status of protected and notable species, and a net gain in the site's biodiversity value will be achieved.

6.0 REFERENCES

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Legend

- Site Boundary
- ◆ Schwegler 2F boxes (2 No)
- ◆ Schwegler 1FF boxes (2 No)
- ◆ Vivara open fronted bird nest boxes (4 No)
- ◆ Reptile hibernacula (2 No)
- ◆ Hedgehog home (2 No)
- Woodland planting
- Suggested Pond creation
- Wildflower Grassland Planting
- Scrub planting
- Hardstanding



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Map	Biodiversity enhancement and mitigation map
Site	Willow Bee
Client	Daniel Bowers
Date	26/09/2023

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* Or similar as approved by an ecologist alternatives