



ecosupport

Queens View, Netley

Biodiversity Enhancement &
Mitigation Plan (BEMP)

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Client:

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1.0 INTRODUCTION

1.1 Aim

The document is intended to provide a site-wide Biodiversity Enhancement & Mitigation Plan (BEMP) to be implemented into the proposed development at Queens View, Netley. This will ensure all features of ecological value and all legally protected species are protected, their presence on site retained in perpetuity with targeted and proportionate recommendations for enhancements made. This document should be read in conjunction with the original Ecological Assessment (Ecosupport Ltd, 2023).

1.2 Site Description

The site is comprised of two dwellings, a garage, a convenience store and a food bank with associated land located off 30-32 Queens view, Netley, Southampton SO31 5EA (Grid reference: SU45869 08814) (**Fig 1**). Residential properties and associated land bound the site to the east, while the site is bound by Queens view to the north and Castle Road to the west. To the south the property is bound by Netley recreational ground. In the wider landscape the site is located within Netley, a coastal town predominantly comprised of residential properties with scattered patches of recreational grassland and trees.

Figure 1. Redline plan of site (Google Earth 2023).



1.3 Proposed Plans

The current proposals are for the demolition of the buildings on site and construction of 18 new dwellings, a ground floor retail unit, vehicle access, parking and associated landscaping.

2.0 RELEVANT LEGISLATION & POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species Regulations 2017 (as amended)*

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.

2.1.2 *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).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 part II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrot's Feather (*Myriophyllum aquaticum*).

2.1.3 *The Countryside and Rights of Way Act (2000)*

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 Natural Environment and Rural Communities Act (2006)

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*.

2.1.5 Protection of Badgers Act

The Protection of Badgers Act (1992) relates to the welfare of Badgers (*Meles meles*) as opposed to nature conservation considerations. The Act prevents:

- The wilful killing, injury, ill treatment or taking of Badgers and / or
- Interference with a Badger sett
- Damaging or destroying all or part of a sett
- Causing a dog to enter a set and
- Disturbing a Badger while it is occupying a sett

Provisions are included within the Act to allow for the lawful licensing of certain activities that would otherwise constitute an offence under the Act.

2.1.6 The Environment Act (2021)

The Environment Act 2021 is the UK's new legislation for environmental protection in the UK, which includes protection of water quality, clean air, and biodiversity among other key protections. This Act provides the government power to set targets to reach long-term aims relating to the environment, which will be periodically reviewed and updated. This legislation also establishes a new environmental watchdog organisation, the Office for Environmental Protection (OEP), which will hold the government accountable on environmental issues.

Part 6 of The Environment Act relates to nature and biodiversity. This section makes provision for biodiversity net gain to be a condition of planning permission in England and a requirement for nationally significant infrastructure projects. Biodiversity net gain will require maintenance for a period of at least 30 years after the completion of enhancement works to be achieved.

The legislation also includes updates to existing environmental legislation, such as the NERC Act 2006, to strengthen biodiversity enhancement rather than just conservation and includes a requirement for local, or relevant, authorities to publish biodiversity reports. Further, The Environment Act places a requirement on responsible authorities to prepare local nature recovery strategies, which will outline nature conservation sites and priorities and opportunities for recovering or enhancing biodiversity within the local area. Within England, the legislation also provides Natural England with the power to publish 'species conservation strategies' and 'protected site strategies' to identify activities that may affect a species or site's status and outline their opinions on measures that would be appropriate to avoid, mitigate or compensate any adverse impacts.

2.2 Policy

2.2.1 National Planning Policy Framework (NPPF) 2023

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.

2.2.2 Local – Fareham Borough Council

The Fareham Local Plan 2037 was adopted in April 2023 superseding the previous Development Sites and Policies Plan that was adopted in June 2015. This outlines the following relevant policies.

Strategic Policy NE1: Protection of Nature Conservation, Biodiversity and the Local Ecological Network

Development will be permitted where:

- a) Designated international, national sites and local sites of nature conservation value are protected and enhanced, reflecting their status in the hierarchy of nature conservation designations; and
- b) Protected and priority habitats and species, including breeding and foraging areas are protected and enhanced; and
- c) Proposals do not prejudice the Ecological Network or result in its fragmentation.

Development within the Borough whose primary objective is to conserve and enhance biodiversity (including the Local Ecological Network), geodiversity and natural resources through restoration, re-creation or management will be supported.

Policy NE2: Biodiversity Net Gain

The development of one or more dwelling or a new commercial/leisure building should provide at least 10% net gains for biodiversity from the existing baseline value of the site and should be maintained for a minimum of 30 years.

Policy NE3: Recreational Disturbance on the Solent Special Protection Areas (SPAs)

Planning permission for proposals resulting in a net increase in residential units will be permitted where a financial contribution is made towards the Solent Recreation Mitigation Strategy.

In the absence of a financial contribution towards the Solent Recreation Mitigation Strategy, proposals will need to avoid or mitigate any 'in combination' negative effects from recreation through a developer-provided package of measures for the lifetime of the development.

Policy NE4: Water Quality Effects on the Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites of the Solent.

Planning permission will be granted where the integrity of the designated sites is maintained, having regard to the effect of nutrients on the designated sites arising from increased wastewater production.

Policy NE5: Solent Wader and Brent Goose Sites

Sites which are used by Solent Waders and/or Brent Geese (as shown on the Policies map) will be protected from adverse impacts commensurate to their status in the hierarchy of the Solent Wader and Brent Geese Network.

Core and Primary Support Areas

Development on 'Core and Primary Support Areas' (as shown on the Policies map) will only be permitted where:

- a) The proposal has avoided or adequately mitigated impacts on-site; or
- b) Where it can be clearly demonstrated that criteria a is not feasible or practicable, a suitable, readily available replacement site which conforms entirely to the specific requirements for the Solent Waders and Brent Geese species concerned and is satisfactorily agreed by the Council in consultation with other appropriate bodies is provided and its management secured for the lifetime of the development.

Secondary Support Areas

Development on 'Secondary Support Areas' (as shown on the Policies map) will only be permitted where either:

- c) Adequate on-site mitigation is provided; or
- d) A suitable replacement habitat is provided on a like for like basis broadly close to the site; or
- e) Where it can be demonstrated that compliance with either criteria c and d is not appropriate, a smaller suitable habitat replacement area is agreed and secured in perpetuity through a costed Habitat Management and Monitoring Plan and a financial contribution (consistent with the approach taken to mitigating and off-setting adverse effects on the Solent Wader and Brent Geese Network) is provided towards a suitable identified site for Solent Waders and Brent Geese.

Low Use

Development on Low Use Sites (as shown on the Policies map) will only be permitted where:

- f) On site mitigation is provided which is agreed by the Council; or
- g) Where it can be demonstrated that criteria f is not appropriate, off-site enhancement and/or a financial contribution (consistent with the approach taken to mitigating and off-setting adverse effects on the Solent Wader and Brent Geese Network) is provided towards a suitable identified site for Solent Waders and Brent Geese.

Candidate Sites

Development on Candidate Sites (as shown on the Policies map) will only be permitted where:

h) Consecutive surveys are undertaken to determine the classification of the site; and the above requirements are met according to the status of the site which must first be established and agreed with the Council.

Indirect effects

Indirect effects to a Solent Wader and Brent Geese site from development proposals shall be avoided or (where this not feasible or practicable) a suitable package of mitigation measures should be agreed and secured.

Policy NE6: Trees, Woodland and Hedgerows

Development will be permitted which:

- a) Retains protected trees, hedgerows and woodland and non-protected trees, hedgerows and woodland, particularly those which have high amenity value; or
- b) Where there is clear justification for their removal, provides for the suitable replacement (in terms of number, species and size) of trees, woodland and hedgerows; and
- c) In either case and where practicable, provides for new and suitable trees, woodland and hedgerows.

The removal of protected trees, groups of trees (including veteran trees), woodland (including ancient woodland) or hedgerows will only be permitted in exceptional circumstances.

3.0 BASELINE DATA

3.1 Habitats

The UKHab habitat survey was undertaken by Kelly Clarke and Lewis Lakudzala BSc (Hons) MRes, ecologists with Ecosupport during June 2023. The survey identified the following habitat types on site:

- Modified grassland (g4) *with secondary codes (32) scattered trees, (81) ruderal / ephemeral, (828) vegetated garden, (847) introduced shrub*
- Bramble Scrub (h3d)
- Hedgerow (h2)
- Developed land; sealed surface (u1b)
- Buildings (u1b5) *with secondary code (818) residential buildings*

Figure 2. Amenity grassland present at the northeast of 30 and 30A Queens View (taken June 2022)



Figure 3. Bramble scrub recorded along the northeastern boundary of the site (taken June 2022).



Figure 4. The hedgerow located along the northwestern boundary of the site (taken June 2022).



Figure 5. Area of hard standing recorded in the garden of 30 Queens View (taken June 2022).



Figure 6. Front (southwestern) elevation of 30 and 30A Queens View (taken June 2022).



3.2 Bats

As the building on site was identified as having potential for roosting bats, one emergence survey was carried out in August 2022. The results are outlined in the phase II bat report (Ecosupport 2023) and summarised below:

Foraging and Commuting

*Overall, the levels of foraging and commuting bats recorded on site during the surveys was moderate and comprised predominantly of only two common species, the Common Pipistrelle and Soprano Pipistrelle. Given the size and nature of the development, and the surrounding urbanized habitat, it is considered there will only be **minor adverse impact** at the **Local Scale** for foraging and commuting bats.*

Roosting

Based on the results of the PEA and follow up emergence survey, the building on site is not considered to be used by roosting bats and no further survey work in regards to roosting bats within buildings is considered necessary. However, in order to ensure no impacts to bats occurs, it is recommended that a non-licensed precautionary working method is followed.'

4.0 MITIGATION & ENHANCEMENTS

The chapter addresses the relevant mitigation and enhancement 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 and enhancements result in a net gain for ecology.

An ecological enhancement plan map has been included alongside this report (**Appendix I**). The plan provides approximate locations for all the enhancement features recommended within the site.

4.1 Bats

No bats were recorded within the buildings on site during the bat surveys and therefore no specific mitigation is required. However, to ensure no impact to roosting bats occurs, a precautionary working method statement has been recommended as per the bat report (Ecosupport 2023). General enhancements have also been outlined below.

4.1.1 Precautionary Working Method

Timing

As there were no roosts identified, no timing restrictions will be required (Reason and Wray, 2023). If, however, larger numbers of bats are encountered during the destructive search which may indicate a roost of higher importance, timing restrictions may be required.

Supervision

Prior to any works getting underway the licensed bat worker will give a Toolbox talk which will detail best practice methods of sensitive stripping/removal of roofing tiles/materials of the building (i.e tiles around the new roof skylight and the new extension) once the areas surrounding the roost have been stripped and identifying signs of bats. Personnel will be educated on signs of bats and that, in the unlikely event a bat is found whilst the licensed ecologist is not on site, that all works should stop immediately until the licensee returns to site.

The licensed bat worker will then assist contractors with the removal of construction materials surrounding the roost and any other areas which are considered to be high risk for roosting bats.

Capture (if required)

If during the sensitive removal of construction materials bats are discovered, the supervising ecologist will place the individuals into a holding bag (a soft cloth bag with closure-strings and with seams on the outside (Mitchell-Jones and McLeish, 2004)) to ensure the bat keeps calm and will not take flight during daylight hours. They will then immediately transport the bat to the bat box where the bat will be released and left undisturbed. During this time, the licensed bat worker will be wearing appropriate bat handling gloves to ensure the bat does not come to any harm. The licensed bat worker will have ample experience in handling a variety of bats and is confident in doing so.

Bat boxes

Prior to works getting underway 1 large Multi chamber bat box will be installed onto a tree or building being retained on site. (**Fig 7**) (Location indicated in **Fig 8**). These bat boxes are designed as summer roosting spaces for crevice-dwelling species such as Pipistrelles. The bat boxes maintain a stable temperature inside and are painted black to absorb warmth. This box should be erected 3-6m high and in an open, sunny position (preferably facing a southern direction). Once the works have been completed this box should be left in perpetuity to provide additional long-term enhancements for local bats.

Figure 7. Large Multi-chambered bat box to be installed (NHBS).



Figure 8. Suggested location for the bat box on site (yellow circle) (proposed site plan, MH Architects)



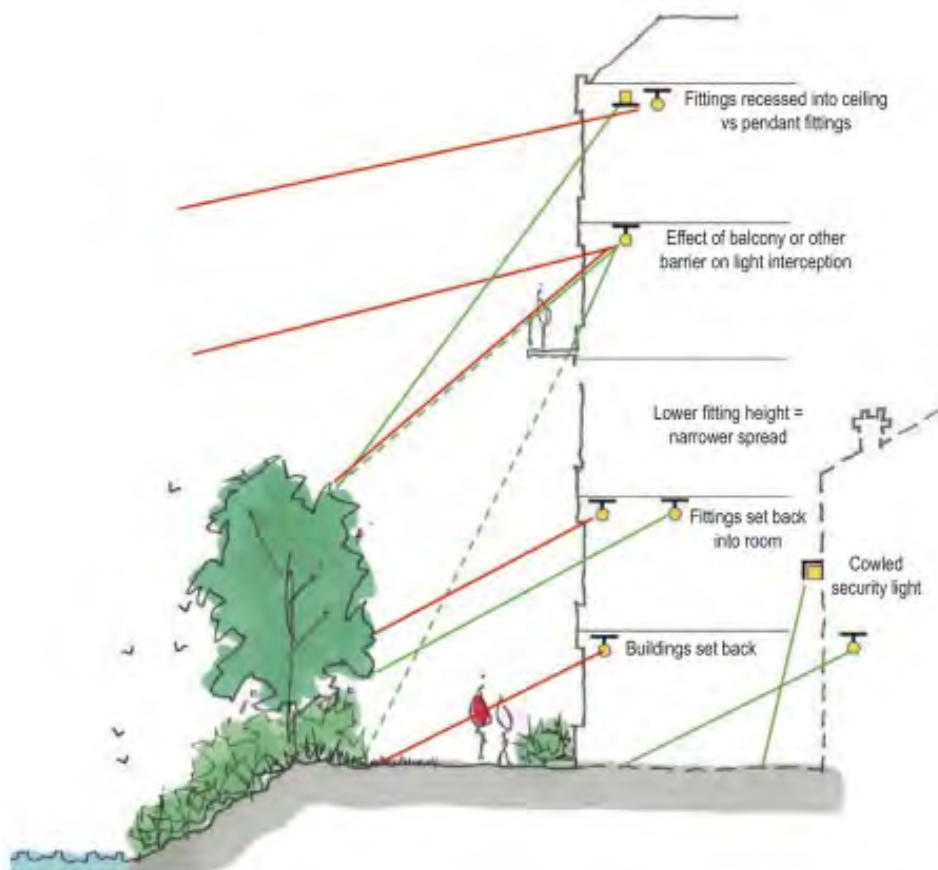
4.1.2 Sensitive Lighting

It is recommended that any lighting complies with the following the newly published *Guidance Note 08/23 Bats and Artificial Lighting at night* (ILP / BCT, 2023) produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented as far as is practicable:

'Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- *All luminaires will lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used*
- *LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability*

- *A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component*
- *Light sources will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)*
- *Internal luminaires can be recessed (as opposed to using a pendant fitting - See **Fig 9**) where installed in proximity to windows to reduce glare and light spill*
- *Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1)*
- *Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards*
- *Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01*
- *Luminaires will always be mounted horizontally, with no light output above 90° and/or no upward tilt*
- *Where appropriate, external security lighting will be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate*
- *Use of a Central Management System (CMS) with additional web-enabled devices to light on demand Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS*
- *The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues. See Case Study 6*
- *Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely'*

Figure 9. Internal lighting mitigation options (ILP 2023).

4.1.3 Roof Underlining

In-line with Natural England guidance non-bitumen coated roofing membrane that has passed a 'snagging propensity test' (2022) or bitumen roofing felt (2015) should be utilised as opposed to Breathable Roof Membrane (BRM) for all roofing works as there is considerable evidence to suggest that BRM poses a threat to bats occupying a structure due to entanglement in the fibres (Natural England, 2015).

4.1.4 Bat Bricks

To act as biodiversity enhancement, four bat bricks will be included in the newly built apartments. As per the Bat Conservation Trust (BCT) Guidelines (2023), the bat bricks will be positioned on the southwest of the building, so they are exposed sunlight for part of the day. The bat bricks used should be the ibstock bat brick B as they are available in a variety of different brick colours and requires no maintenance (**Fig 10**). These will be positioned as close to the eaves as possible, away from windows and in a position that will receive direct sunlight. These will also be positioned away from the proposed retail unit which will likely be illuminated at night.

Figure 10. The Ibstock bat brick 'B' that will be incorporated into the newly built apartments.



4.2 Nesting & Notable Birds

4.2.1 Mitigation

In order to avoid disturbance of nesting birds or damage to their nests, clearance of any hedgerow / scrub / tree vegetation or impacts to buildings will be undertaken outside of the bird nesting season (typically March – August dependent on weather). If this is not possible, sections to be cleared will be thoroughly checked by a suitability qualified ecologist immediately prior to clearance. If any active nests are found they will be left undisturbed with a suitable buffer of vegetation (5m) until the nestlings have fledged.

4.2.2 Enhancements

As a general enhancement, three Swift bricks will be incorporated into the newly built dwelling. The swift bricks will be positioned out of direct sunlight on the northeast elevation of the building. The 'CJ Wildlife swift maxi nesting box' with entrance via a CJ Wildlife 'Cambridge swift full face brick' (**Fig 11**) is recommended as it provides ideal nesting opportunities for swifts and the full face brick is available in different colours and can also be painted if necessary to blend in with the surrounding brickwork. If this model is not suitable for the building specifications, an alternative swift box with internal floor space exceeding 400cm squared must be used. A list of swift boxes can be found on the RSPB website via the following link (<https://www.rspb.org.uk/globalassets/downloads/about-swifts/swift-bricks.pdf>) however it is worth noting that some of these do not have an internal floor space exceeding 400cm squared and are therefore not considered appropriate. Swift bricks are best positioned under eaves, out of direct sunlight with clear adjacent airspace.

Figure 11. CJ Wildlife swift maxi nesting box (left) and Cambridge Swift full-face brick (right) to be integrated into the newly built dwelling.



4.3 Habitats

4.3.1 Species-rich Grassland

Recommended grass species for this habitat type 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*).

Grassland Management

The areas of species rich grassland on site are to be established through the sowing of a wildflower mixture such as Emorsgate EM4 – Meadow Mixture for Clay Soils or Emorsgate EM6 – Meadow Mixture for Chalk and Limestone Soils.

The below management methods will be followed:

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: During the second year it is recommended that the wildflower areas are left to flower and will be cut in mid-summer. However, this 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.

4.3.2 Individual Tree planting

Several individual small trees will be planted within the site, not inclusive of any ornamental or non-native species.

Recommended species planting of tree/shrub species may include:

- Hazel (*Corylus avellana*)
- Hawthorn (*Crataegus monogyna*)
- Blackthorn (*Prunus spinosa*)
- Field Maple (*Acer campestre*)
- Oak (*Quercus robur*)
- Rowan (*Sorbus aucuparia*)
- Silver Birch (*Betula pendula*)
- Wild Cherry (*Prunus avium*)

4.3.2.1 Management

Mycorrhizal Treatment

To ensure a successful establishment of the newly planted trees, it is recommended that mycorrhizal treatment to the tree roots is conducted **during the planting**, this would reduce the risk of tree mortality and increase the long-term tolerance of these trees to periods of drought or adverse soil conditions thus ensuring a higher chance of successful long-term establishment.

Weed Management

All newly planted trees must have a 1-metre exclusion zone whereby weeds are routinely and pro-actively removed for the **first 2 – 3 years**. Outlined within the section below, bark mulch is recommended around each tree and will act as an effective management method to also suppress weed colonisation.

Tree Protection (Tree Guards & Rabbit Mesh Guards)

All trees must have a form of tree guards installed to act as a form of protection from extreme weather or excessive foraging from wildlife. It is recommended that the mesh is approximately 12.5mm x 12.5mm aperture of 0.61m in height; however, due to the suitability on site and the surrounding habitats, this site may be at risk of Roe Deer. Therefore, it is recommended that the form of tree guards suitable to mitigate excessive foraging from this species is installed at a height above 1.2m and comprised of a guard such as weld mesh tree shelter or a suitable alternative.

During aforementioned weed removal, all aspects of the 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 and consequently replaced where required.

The trees and newly planted shrubs on site will also be protected through the implementation of mesh rabbit guards, along with bark mulch at the base to suppress any grass and weed colonisation. Monthly inspections on the newly planted trees will be undertaken, with weed removal / tree guard replacement as required. The bark mulch will also be maintained at a minimum level of 50mm for the **first 2 years** of establishment.

Selective Thinning

Once the newly planted trees / shrubs are established, selective thinning of retained or established trees will be conducted to promote regeneration and a vigorous, dense regrowth. Such work must be undertaken during the period October – February to avoid the breeding bird season. It is considered likely a botanical survey will identify areas of highest botanical value and this will influence the location of thinning, conducted by a suitably qualified botanist.

Where practical to do so, as determined by the arborist, some potential selected trees may be cut at 3-5m height and the standing stumps will be left in situ to rot as habitat for saprophytic invertebrates and a resource for woodland birds such as Woodpeckers and Nuthatch.

Rotational Coppicing

Occasional rotational coppicing may be required of the newly planted or retained trees on site to prevent overcrowding and promote natural new growth. All Hazel present on site will be managed on a rotational coppicing scheme. This involves cutting young trees down to a low 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. Include some larger horizontal trunks and limbs as well as log piles and discarded brash. Leave wood piles in shady areas.

Invasive Species

Any invasive species, such as Japanese Knotweed (*Fallopia japonica*) Himalayan Balsam (*Impatiens glandulifera*), Rhododendron (*Rhododendron ponticum*), Giant Hogweed (*Heracleum mantegazzianum*) or Bamboo (*Bambusa* sp.) will be removed from the site, as these could have deleterious effects on native species. The removal of such species would open-up ground for restoration for natural re-generation. Invasive species will generally be removed by a combination of cutting back and removal of cut material from the site, followed by treatment of stumps, roots or regrowth using an approved systemic herbicide (such as glyphosate). This process may need to be repeated over the course of several years.

Contractors will need to be shown the locations of the species and mark these where needed to help avoid native species being removed accidentally. Areas of bare ground created by this work will be left for natural regeneration (described below).

Replacement of Trees, Shrubs and Natural Regeneration

Recommendations may also include that any plants (newly planted or retained) that are removed, die or become seriously damaged or defective during the 30-year monitoring period shall be replaced like for like in the next planting season. If any of the plants fail, they will be replaced like-for-like.

Similarly, scope for tree and shrub species to establish by natural regeneration should be permitted where possible e.g. by creating space for new regeneration around existing specimens of the desired trees and shrub species. Ash regeneration could be an important part of the mix, it should not be cut out or destroyed unless suffering from Ash Dieback, and would benefit from being protected.

4.4 Hedgehogs

4.4.1 Enhancements

In order to enhance the site for hedgehogs, any garden fences of the properties backing onto buffer vegetation will also ensure at least 2 gaps are present within the gravel boards / bases of each fence line to allow for movement of Hedgehogs between gardens and into the wider area. The gaps should be at least 15 cm high by 15 cm wide with permeability for small mammals.

Small signage could be installed at these points to ensure they remain open upon completion of the development. The People's Trust for Endangered Species provide such signage, the purchase of which also supports conservation efforts (**Fig 12**).

Figure 12. Example of Hedgehog Highway signage to be placed above fence gaps provided to allow movements between gardens.



5.0 CONCLUSION

This document has been prepared to provide a site-wide Biodiversity Enhancement & Mitigation Plan to provide opportunities for enhancement consistent with the aims of national and local planning policy for the proposed development at Queens View, Netley. Recommendations made within this document are to provide enhancements for bats, nesting birds, invertebrates and hedgehogs. With the measures provided within this report the development is expected to result in an overall net gain for biodiversity.

6.0 REFERENCES

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Legend

— Site Boundary

■ Bat Brick

■ Swift Brick

● Bat Box

△ Hedgehog Fence Gap



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Map	Enhancements Plan
Site	30-32 Queens View, Netley
Client	Eastleigh Borough Council
Date	20/12/2023

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