



Ecological Mitigation, Compensation and Enhancement Strategy

Land West of Hulbert Road,
Havant

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Report	Ecological Mitigation, Compensation, and Enhancement Strategy (Condition 10)
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EXECUTIVE SUMMARY

Ecosupport Ltd were commissioned by BRICS Development to produce an Ecological Mitigation, Compensation, and Enhancement Strategy for the development at Hulbert Road, Havant as required by Condition 10 of the outline planning permission for the development (Application APP/20/00441).

Previously, an Ecological Appraisal followed by several Phase II surveys were undertaken between 2018 – 2020, with the following surveys undertaken:

- Ecological Appraisal (WYG, 2019)
- Bat Trapping Surveys (undertaken in 2018 & 2019 - WYG, 2021)
- Bat Activity Surveys (undertaken 2019 & 2020 - WYG, 2021)
- Reptile Surveys (undertaken in 2019 – WYG, 2019)
- Hazel Dormouse Surveys (undertaken in 2019 & 2020 – WYG 2021)

As part of the updated assessment for the Ecological Impact Assessment, the following surveys were undertaken (Ecosupport, 2025):

- Updated data request from Hampshire Biodiversity Information Centre (Dec 2024)
- Updated walkover survey with UK Habs habitat assessment (Dec 2024 & May 2025)
- Ground Level Tree Assessment (GLTA) of trees on site (Dec 2024)
- Updated Habitat Suitability Index survey (May 2025)
- Updated Hazel Dormouse surveys (2025)

These reports address, and update, the necessary mitigation and compensation for protected species present on site and also include a series of management prescriptions to enhance the site for biodiversity.

This report incorporates and expands on the measures detailed within the above-named reports and, in particular, covers the prescription management of the habitats within the site post-development for a period of at least 30 years. Extensive biodiversity enhancement measures are also described.

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1.0 INTRODUCTION

1.1 Aim

The aim of this report is to bring together and expand on all relevant sections of the previous ecological reports associated with the site called 'Land West of Hulbert Road, Havant' and use them to inform a site-wide Ecological Mitigation, Compensation, and Enhancement Strategy. This will ensure all features of ecological value and all legally protected species are protected, that their presence on site is retained in perpetuity, and to provide details on ecological enhancements.

This report will meet the requirements of Condition 10 of the granted outline planning permission for the development (Application APP/20/00441):

'Condition 10: Prior to the commencement of development activities, a detailed Ecological Mitigation, Compensation and Enhancement Strategy shall be submitted to and approved in writing by the Local Planning Authority. Ecological mitigation, compensation and enhancement measures shall be in accordance with those detailed within the Ecological Appraisal (WYG, December 2019, the Dormouse Survey report (WYG, March 2021) and the Bat Survey report (WYG, March 2021) unless otherwise agreed in writing by the Local Planning Authority. The Strategy shall include (but not necessarily be restricted to): details of all habitat and species mitigation measures; details of the location, composition and ongoing management of all compensatory or enhancement habitat and; location, type and number of all bat/bird boxes; details of any lighting used during construction. All ecological compensation/enhancement measures shall be installed in accordance with ecologist's instructions and retained in a location and condition suited to their intended function.

Reason: To protect and enhance biodiversity in accordance with the Conservation Regulations 2017, The Wildlife & Countryside Act 1981 (as amended), the NERC Act 2006, National Planning Policy Framework and Policy CS11 of the Havant Borough Local Plan (Core Strategy) 2011.

The measures outlined within this report includes the following:

- Implementation of sensitive lighting across the site, during both construction and occupation phases
- Erection of integrated and tree-mounted bat and bird bricks / boxes
- Precautionary Working Method Statement for reptiles and GCN
- EPS Licence for Hazel Dormice
- Installation of 20 No. Dormice Boxes
- Precautionary clearance methodology for nesting birds
- SINC management with enhancements specific for protected species on site
- SPA compensation for Chichester and Langstone Harbours SPA / The Solent SPAs
- Creation of 1 No. Log / Brash Pile
- Installation of 1 No. Hedgehog Home
- Provision of Hedgehog fence gaps

The baseline assessments relevant to this report were undertaken by WYG 2018 – 2020, as well as an updated Ecological Impact Assessment (Ecosupport, 2025), including updated survey work conducted by Ecosupport Ltd. Together, these reports address the necessary mitigation and compensation for

protected species present on site and also include a series of management prescriptions to enhance the site for biodiversity.

1.2 Site Description & Location

The site comprises a parcel of a parcel of land located to the west of Hulbert Road, Havant (centred on OS grid reference SU 69445 08150). The site adjoined the A3(M) Motorway to the west and the B2150 Hulbert Road to the east, with Neville's Park West Wood SINC at the north of the site and Hulbert Road Meadow SINC at the south. Within the wider environment, the site is encompassed by woodland, however the surrounding habitats are predominantly urban with the town of Havant to the south-east and Waterlooville to the north-west.

Figure 1. Approximate redline boundary of the site (Google Satellite, 2025).



1.3 Proposals

Reserved matters application for 100 dwellings and improved site access, landscaping, footpaths, SuDS and other associated works. Matters relating to appearance, landscaping, layout and scale to be considered.

2.0 BASELINE DATA

Previous ecological surveys were conducted at the site by WYG and Ecosupport Ltd., with a series of ecological reports produced as a result. The below sections will summarise the results from these reports.

2.1 Habitats

A habitat assessment was undertaken by WYG (2019) Senior Ecologist John Simper MCIEEM on the 26th August 2019, during dry sunny weather conditions. The field survey work which forms the basis of the findings of this report was carried out by Project Ecologist with Ecosupport Ltd Darla Brown BSc (Hons) and Assistant Project Ecologist with Ecosupport Ltd Grace Roberts MSci on the 11th December 2024 and 1st May 2025 (Ecosupport, 2025).

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). Where appropriate primary habitat codes were used, although for some habitat types, the use of secondary habitat codes was necessary as well.

The following habitats were identified on-site:

- Other neutral grassland (g3c) – scattered scrub (10), ruderal (81)
- Modified grassland (g4) – scattered bracken (12)
- Mixed scrub (h3h)
- Bramble scrub (h3d)
- Gorse scrub (h3e)
- Lowland mixed deciduous woodland (w1f) – line of trees (33), semi natural woodland (30), & 50 (ditch)
- Other broadleaved woodland (w1g) – semi natural woodland (30)
- Sparsely vegetated urban land (u1f) – bare ground (510)
- Other standing water (r1g)
- Developed land; sealed surface (u1b)

2.2 Bats

2.2.1 Pre-existing Data

2.2.1.1 Data Request

The data request from HBIC returned numerous bat records within 4km of the site, including the Annex II species: Barbastelle, Bechstein's, and Greater Horseshoe, full details and locations are shown within the accompanying EcIA (Ecosupport, 2025).

2.2.1.2 Previous Survey Work

Several Phase II bat surveys have been undertaken on between 2018 and 2020, comprising PRF inspections, activity surveys, and bat trapping surveys (WYG, 2019).

In 2018, Davidson Watts Ecology undertook 5 harp trapping surveys, using a total of 6 traps, between June – October 2018. A low number of bats were recorded comprising Whiskered/Brandt's, Common Pipistrelle, and Brown Long-eared.

Following this, WYG undertook an Ecological Appraisal (2019), which identified the habitats on site with moderate potential to support commuting and foraging bats. Not all trees were assessed for PRFs; however, the majority were considered likely to hold suitable roosting features.

Subsequently, WYG (2021) undertook a total of 8 walked transect surveys (August 2019 – October 2019, April – May 2020), static detector surveys utilising two detectors (August – October 2019) and three bat trapping surveys (August – September 2019) using a single harp trap and two mist nets.

The results of the walked transects concluded the presence of at least 6 species of bat, with low numbers of Common Pipistrelle, Soprano Pipistrelle, Serotine, Noctule, and *Myotis* sp. The static detector surveys further identified (a single) Barbastelle, Natterer's, and *Plecotus* sp. During the bat trapping surveys a total of one bat captured; a female Brown Long-eared. Throughout the surveys, bats were observed foraging and commuting predominantly around the site boundaries, and the site was classified as being of **Regional Level** of importance.

2.2.2 Updated Surveys (2025)

2.2.2.1 Ground Level Tree Assessment

The majority of trees within the red-line boundary were subject to a ground level tree assessment (GLTA) at the time of the walkover. The majority of the trees, both young and old particularly within the woodland, were noted to contain PRFs ranging from woodpecker holes, knot holes, tear outs, and wounds, with PRFs accessible from ground level holding potential to support roosting bats (**Fig 2**). Upon provision of a tree removal plan, **further assessment will be required (FAR)**, with an updated GLTA in order to establish the presence / likely absence of roosting bats.

Figure 2. Example of potential roosting features on site. Left image – Hazel in the lowland mixed deciduous woodland and Silver Birch in the broadleaved woodland (right) (taken December, 2024).



2.2.2.2 Foraging and Commuting Habitat

The habitats on site comprise a mosaic of grassland and scrub variety, with linear features forming the eastern and western boundaries, and woodland edges / woodland to the north and south. These

habitats would support a rich supply of invertebrates for local foraging bats. Similarly, the site offers connectivity to further suitable habitat, of particular note ancient and semi-natural woodland, within the wider environment. As such, in line with pre-existing survey work, the site is considered to offer **moderate – high potential** for commuting and foraging bats, with the site considered to be of **Regional Level** of importance in 2021 (WYG).

It is also worth noting Policy 15, from the withdrawn Havant Local Plan 2036, in which defines a 'Bechstein's Bat Area' (Havant Local Plan 2016). The site falls within this area and lies within close proximity to a known Bechstein's maternity roost, with suitable habitat on site to support commuting and foraging Bechstein's.

2.3 Badgers

2.3.1 Pre-existing Information

2.3.1.1 Data Request

HBIC returned 2 records of Badger (*Meles meles*) within 2km of the site, in addition to 63 records of Hedgehog (*Erinaceus europaeus*) within 2km of the site.

2.3.1.2 Previous Survey Work

WYG (2019) identified suitable habitat on site to support commuting and foraging Badger, and classified the site as holding **Moderate potential**. No evidence of Badger was found during the survey.

2.3.2 Site Assessment (2025)

During the walkover no Badger setts or evidence of Badgers was noted on site, however, several mammal trails were identified throughout the grassland and woodland on site. Deer droppings and prints were identified along one mammal trail throughout the centre of the site. The site comprises suitable habitat to support both commuting and foraging Badger. Due to the connectivity of the site to suitable habitat in the surrounding landscape, the site is considered to provide **potential** for foraging and commuting Badgers, as well as other small mammals such as Hedgehogs.

2.4 Reptiles

2.4.1 Pre-existing Information

2.4.1.1 Data Request

HBIC returned 65 records of Slow-worm (*Anguis fragilis*), 13 records of Grass Snake (*Natrix Helvetica*), 10 records of Adder (*Vipera berus*), and 24 records of Common Lizard (*Zootoca vivipara*) within 2km of the site.

2.4.1.2 Previous Survey Work

WYG (2019) undertook a series of Phase II Reptile surveys on site throughout September 2019, after identifying the site as offering potential to support widespread and common species of reptiles.

A total of 50 reptile refugia were placed on site, with seven visits between 2nd and 23rd September 2019 during suitable weather conditions with no reptiles were recorded.

2.4.2 Site Assessment (2025)

The majority of the site comprises of unmanaged grassland with areas of Bramble and mixed scrub, offering the structure and heterogeneity favoured by reptiles (Edgar et al., 2010). Furthermore, the

woodland has the potential to provide suitable hibernation habitat, with several areas of deadwood. Notwithstanding this, the site and immediate environment are considered to be somewhat isolated from the wider environment due to the A3 to the west, Hulbert Road to the east, and Purbrook way to the south. Reptile surveys were undertaken in 2019 in which concluded the **likely absence** of common reptiles on-site. However, since the site has been left unmanaged since the previous survey effort, there is a risk reptiles have established on site and as such a **low potential** for reptiles to be present.

2.5 Great Crested Newts

2.5.1 Pre-existing Information

2.5.1.1 Data Request

HBIC returned 1 record of Great Crested Newts (*Triturus cristatus*) within 2km of the site, approximately 1.99km north-west.

2.5.1.2 Previous Survey Work

WYG (2019) undertook a Habitat Suitability Index on the waterbody (ditch) on site on the 26th August 2019. The HSI returned a score of 0.58 (below average), and all other waterbodies were considered to be separated from the site by major barriers. As such, no further surveys were undertaken regarding Great Crested Newts. The results are summarised in **Table 5**, below.

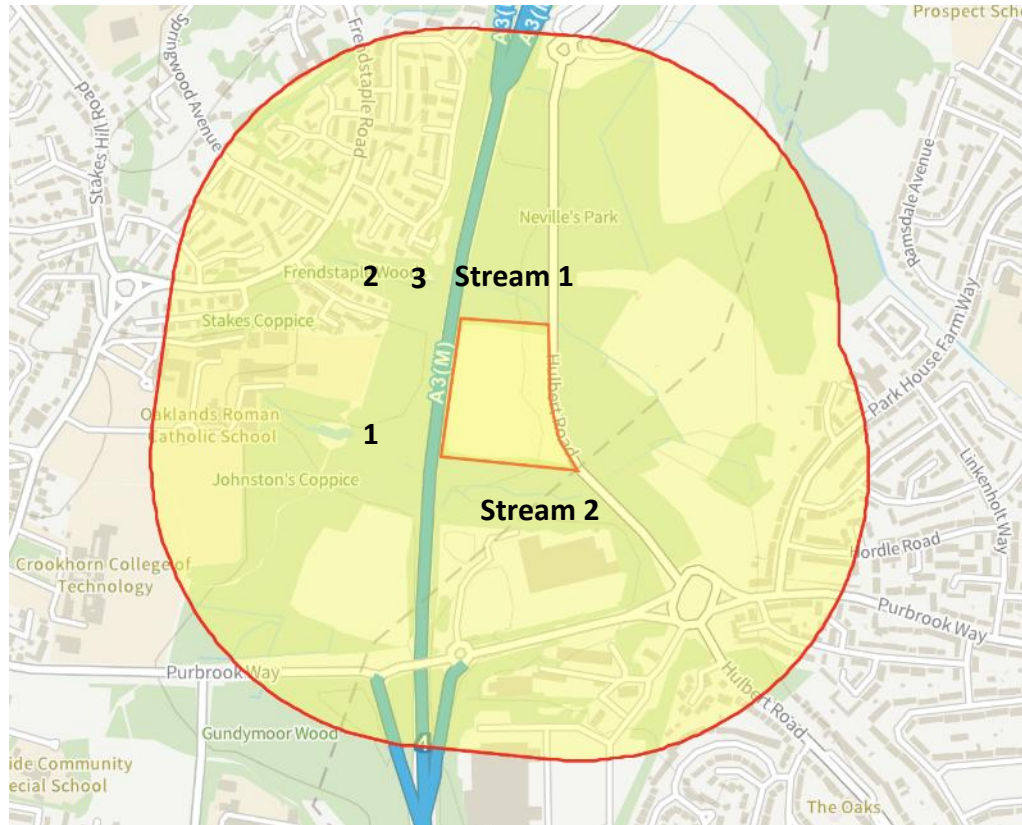
Table 5. Results of the HSI assessment undertaken on the ditch on site (WYG, 2019) (as per ARG 2010).

Suitability Indices	Score Awarded
Location	1
Pond area	0.5
Pond drying	0.5
Water quality	0.67
Shade	1
Water fowl	1
Fish	1
Ponds within 1 km	0
Terrestrial habitat quality	1
Macrophytes	0.31
HSI score – 0.58 (Below Average)	

2.5.2 Updated Surveys (2025)

2.5.2.1 Waterbodies

Using freely available online resources, three waterbodies were located within 500m of the site, all three waterbodies are located to the west separated by a significant barrier of dispersal (A3 (M)). Additionally, two streams run west to east 50m north, and 48m south of the site (**Fig 3**). On site, one ditch is present bordering the hardstanding to the south-west corner, shown in the appended map.

Figure 3. Waterbodies within 500 m of the site (Magic Maps, 2024).

2.5.2.2 Updated HSI of Ditch

Although subject to a HSI assessment in 2019, due to the age of the survey data, the ditch was subject to an updated HSI assessment in December 2024 and updated during the GCN breeding season in May 2025. As detailed in **Table 6**, below, the survey resulted in a score of 0.56 (below average), due to the suitability of the ditch, in-ditch vegetation, and terrestrial vegetation increasing from lack of management over the years. The ditch has been assessed as drying annually, due to being completely dry during the GCN survey season between April – June 2025.

Table 6. Results of the updated HSI assessment undertaken on the ditch on site (as per ARG 2010).

Suitability Indices	Criteria Selected	Score Awarded	Notes
Location	A	1	-
Pond area	500-700m ²	1	Measured 491m ² and rounded to nearest option
Pond drying	Dries annually*	0.1	*Updated to reflect evidence that the ditch is dry between April – June.
Water quality	Poor	0.33	No aquatic invertebrates noted
Shade	0 - 60%	1	Southern aspect shaded by woodland during early morning / late afternoon
Water fowl	Absent	1	No water fowl or evidence of water fowl seen
Fish	Absent	1	Absent

Ponds within 1 km	0	0.1	-
Terrestrial habitat quality	Good	1	-
Macrophytes	55-60%	0.9	-
HSI score – 0.5588 (Below Average)			

2.5.2.3 Environmental DNA Analysis

Throughout April – June 2025, the ditch on site has been consistently dry. As such, water samples were not able to be collected in order to undertake the eDNA survey.

2.5.2.4 Site Assessment

Similar to reptiles, the unmanaged grassland and woodland on site provides suitable commuting, foraging, and hibernation habitat, offering a varying range of habitat structure preferred by Great Crested Newts. Notwithstanding this, the ditch on site was assessed as being '**Below Average**', there is an absence of ponds within the local area that are not separated by a major barrier, such as the A3, preventing dispersal of GCN onto the site, and only one record was identified within 2km of the site. As such, the site was considered to offer **low potential** to support GCN.

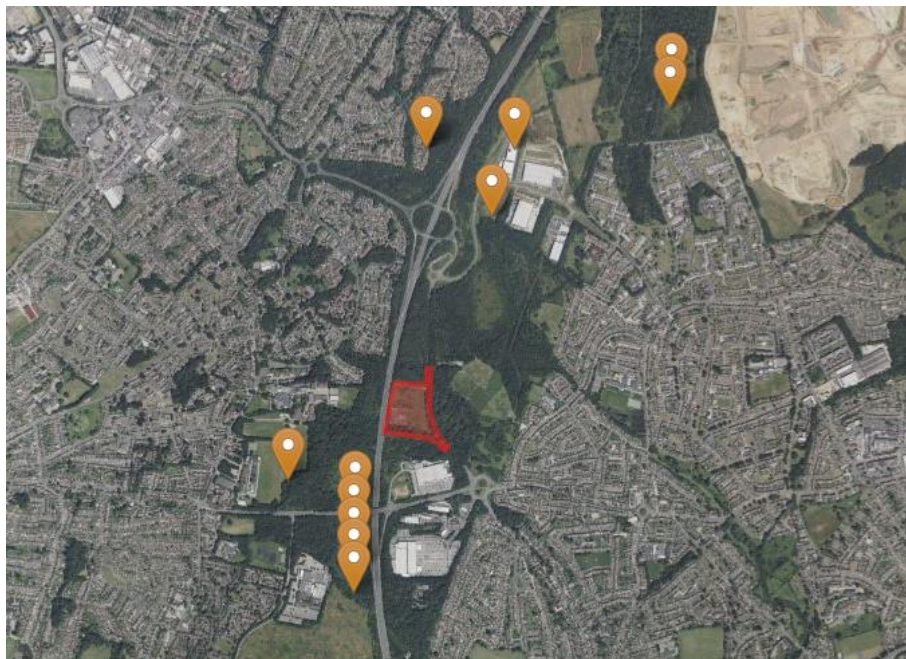
2.6 Hazel Dormice

2.6.1 Pre-existing Information

2.6.1.1 Data Request

HBIC returned 16 records of Hazel Dormouse (*Muscardinus avellanarius*) within 2km of the site (**Fig 4**).

Figure 4. The locations of the Hazel Dormouse records from within 2km of the site provided by HBIC (grid reference finder, 2025).



2.6.1.2 Previous Survey Work

In 2019, WYG identified suitable habitat on site to support Hazel Dormice, including dense scrub, scattered scrub, bracken, semi-natural mixed woodland and semi-natural broadleaved woodland. Subsequently, WYG (2021) undertook a series of phase II Hazel Dormouse surveys to identify the presence / absence of this species between August 2019 – April 2020.

The surveys identified Dormice nests within a total of 6 tubes, along with individual Dormice identified in tube 7, tube 14 and tube 21. Furthermore, a single dead juvenile Dormouse was identified within tube 23. The results are shown below in **Fig 5**.

Figure 5. Results of the phase II Hazel Dormouse surveys (WYG, 2021).



2.6.2 Updated Hazel Dormice Survey Results (2025)

Table 7, below, indicates the dates in which the tubes were checked and any findings within the tubes.

Table 7. Results of the Phase II Dormouse surveys to date between April – September 2025.

Survey No	Date	Time	Temp (°C)	Wind (Beaufort)	Cloud Cover (%)	Other Occupancy	Dormice				Dormice Evidence
							GEC	GEO	Juvenile	Adult	
1	09/04/2025	09:00	11°C	0	0	N/A	-	-	-	-	Tube 5 – Dormouse nest
2	01/05/2025	08:00	14°C	0	0	N/A				5	Tube 1 – 1 male and 1 female in 1 nest Tube 5 – 2 x Dormice Tube 11 – Dormouse nest Tube 31 – Dormouse nest Tube 44 – Male Dormouse in nest
3	04/06/2025	09:00	15°C	2	30	N/A	-	-	-	3	Tube 1 – Dormouse nest Tube 2 – Dormouse nest Tube 3 – Torpid Dormouse in nest Tube 5 – Dormouse nest Tube 11 – Dormouse nest Tube 31 – Dormouse in nest Tube 44 – Male Dormouse in nest
4	02/07/2025	09:00	21°C	1	80	N/A	-	-	-	1	Tube 1 – Dormouse in nest (escaped) Tube 2 – Dormouse nest Tube 3 – Dormouse nest Tube 5 – Dormouse nest Tube 11 – Dormouse nest Tube 31 – Dormouse nest Tube 44 – Dormouse nest
5	06/08/2025	13:00	21°C	0	40		-	-	3	2	Tube 1 – 4 Dormouse in nest (1 escaped) Tube 2 – Dormouse nest Tube 3 – Dormouse nest Tube 5 – Dormouse nest Tube 8 – Dormouse nest Tube 10 – Dormouse nest

											Tube 11 – Dormouse nest Tube 20 – Dormouse nest Tube 31 – Dormouse nest Tube 44 – Dormouse nest Tube 45 – Dormouse in nest (escaped) Tube 48 – Dormouse nest
6	09/09/2025	11:00	20°C	0	50	Tube 32 – Woodmouse nest Tube 35 – Woodmouse nest Tube 36 – Woodmouse nest		-	-	6	Tube 1 – Dormouse nest Tube 2 – Dormouse in nest (escaped) Tube 3 – Dormouse nest Tube 5 – Dormouse nest Tube 8 – Dormouse nest Tube 9 – Dormouse nest Tube 10 – Dormouse nest Tube 11 – Male Dormouse in nest (14 grams) Tube 20 – Dormouse nest Tube 31 – Dormouse nest Tube 33 – Dormouse nest Tube 44 – Dormouse nest Tube 45 – Dormouse in nest (escaped) Tube 46 – Dormouse nest (4 escaped – age unknown) Tube 47 – Dormouse nest Tube 48 – Dormouse nest Tube 49 – Dormouse nest

Dormouse nest identified in April 2025.



Female Hazel Dormouse identified in Tube 1 during the May 2025 check.



2.6.2.1 Evaluation of Results

The site comprises of several habitats considered to offer excellent foraging resources all year round, as well as suitable habitat for hibernation, with further mixed and broadleaved woodland within the immediate wider environment.

The results of the survey findings between April to September 2025 can be found in **Figure 6** below. A total of 17 Dormouse nests were identified, with a total of 8 Dormouse nests noted to contain Dormice during the surveys. A maximum count of 6 Dormice were found on any one survey. Due to the presence of Hazel Dormouse pairs within multiple survey tubes and juvenile Dormice, it is anticipated that Hazel Dormice are breeding on site.

Figure 6. Results of the Phase II Dormouse Surveys between April – September 2025.



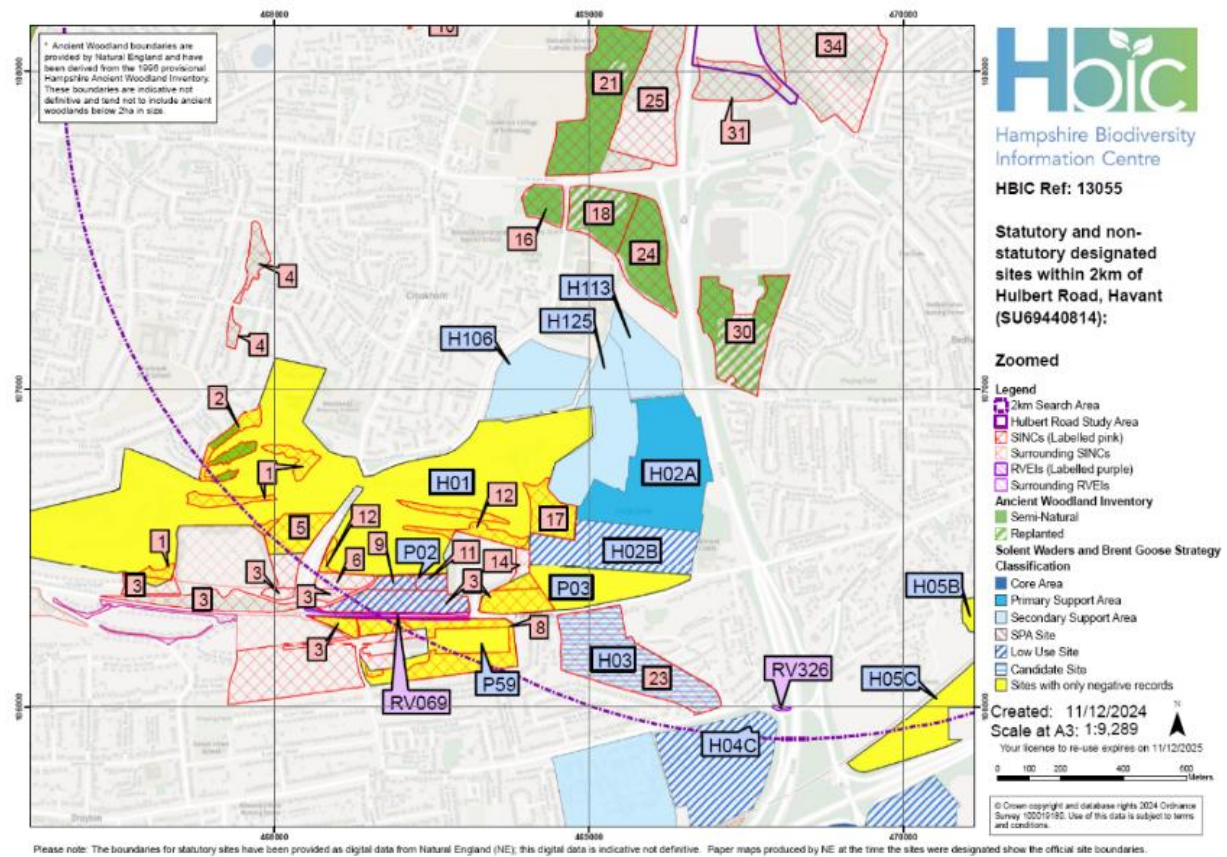
2.7 Notable and Birds of Conservation Concern (BoCC)

2.7.1 Pre-existing Information

2.7.1.1 Data Request

HBIC returned a variety of records of birds of conservation concern within 2km of the site (the list has not been reproduced here due to high quantity of records). Furthermore, HBIC returned a total of 19 Solent Wader & Brent Goose sites from within 2km of the site (**Fig 7**).

Figure 7. Close-up of Solent Wader & Brent Goose sites from within 2km of the site as provided by HBIC (***NB the bottom part of the site is located at the very top of this image***).



2.7.1.2 Previous Survey Work

WYG undertook an Ecological Appraisal in 2019 which identified records of both red and amber listed birds of conservation concern (BoCC), however, the habitats present to be impacted (grassland and hardstanding) were considered unlikely to support notable species and as such, further surveys were not recommended.

2.7.2 Updated Site Assessment (2025)

2.7.2.1 Breeding and Nesting Birds

Several habitats are present on site ranging from unmanaged grassland, scrub, woodland, and a ditch, providing ideal habitat for a variety of bird species. The site is situated within a surrounding environment that provides an ideal mosaic of habitats, including semi-natural and ancient woodland and grassland providing ideal foraging habitat for any nesting or breeding birds using the site. Disused birds' nests were noted within mature trees within the SINC woodlands during the walkover survey, however these areas will not be directly impacted upon by the works. Notwithstanding this, given the habitats present and the surrounding environment, the site has a **moderate potential** for breeding and nesting birds.

2.7.2.2 Wintering Birds

The site lies approximately 2.6km north from the Chichester and Langstone Harbours SPA, and approximately 850m north-west of the nearest designated area for Solent Waders and Brent Geese (SW&BG) (H113 – Secondary Support Area). The habitats on site comprise predominantly of unmanaged dense grassland, which is considered to offer limited suitability for wintering birds.

The Chichester and Langstone Harbours SPA, in which the nearest SW&BG site lies, is designated for several overwintering and breeding bird species. Due to the low number of records and distance from the SPA and SW&BG sites, the site is considered to offer **negligible potential** for wintering birds.

2.8 Otter & Water Vole

2.8.1 Pre-existing Information

2.8.1.1 Data Request

HBIC did not return any records of either of these species within 2km of the site.

2.8.1.2 Previous Survey Work

WYG (2019) identified no suitable habitat present for either species on site.

2.8.2 Updated Site Assessment (2025)

Two small streams were identified within close proximity of the site, with one within the SINC woodland to the north, and one within the SINC woodland to the south (**Fig 3** in **Section 2.5.2.1**), both of which are culverted beneath Hulbert Road. No evidence of either species was identified, and the surrounding habitat was not considered to provide suitable habitat with a lack of ground flora that could be used for foraging along the stream banks. In addition, no records of Water Vole (*Arvicola amphibius*) or Otter (*Lutra lutra*) were identified within 2km of the site. As such, the site is considered to be of **negligible potential** for these species.

3.0 MITIGATION, COMPENSATION AND ENHANCEMENTS

This chapter deals with mitigation, compensation and enhancement. 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.

3.1 Protection of Retained Habitats

All existing trees, woodland, scrub, and other habitats that will be retained will be protected from damage during the works. All the site boundaries outside the area of impact will be fenced using Heras fencing or similar, with a tarpaulin screen to prevent the spread of dust and prevent access by machinery, including the eastern boundary line of trees. Where large mature trees are present, they will be protected using standard arboricultural tree protection measures which include protection of the canopy and prevents root compaction. Access will not be permitted behind this fencing by construction personnel. This will protect the SINC's and Dormouse habitat from direct damage/disturbance and dust.

Protection of the SINC's and woodland priority habitat post-development are described in **Section 3.7**.

3.2 Bats

Pre-existing ecological survey data and records have identified the site as holding high value to bats, including Annex II species Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), and Greater Horseshoe (*Rhinolophus ferrumequinum*) bats. However, the previous bat surveys undertaken on site are now considered out of date following the Bat Survey Guidelines.

Notwithstanding this, using the existing ecological data and records, a bat mitigation strategy has been outlined within the following sections including retention and enhancement of high value habitats and a robust lighting strategy, to ensure there are no adverse impacts to bats, particularly Annex II species, within the local area. It is expected that undertaking additional survey work would not materially change the mitigation required or value of the site for foraging and commuting bats (which is already at the highest value with mitigation outlined to enhance the site for Annex II species), as well as minimise the risk of disturbance through trapping techniques.

3.2.1 Updated Ground Level Tree Assessment & PRF Inspections

3.2.1.1 GLTA & Initial PRF Inspections

A number of trees were identified as supporting several potential roost features on site within the woodland. Should any further trees require removal or remedial works, an updated Ground Level Tree Assessment will be undertaken on the subjected trees.

Following this, a single PRF inspection survey will be required for each tree (Collins (ed), 2023) to record characteristics of the PRFs and categorise them according to **Table 8** below. This can be conducted at any time of year by a suitably qualified ecologist and entails a more detailed assessment of the likely suitability of a PRF for roosting bats as well as searching for evidence of bats (e.g. droppings) within the PRF via an endoscope. Access equipment (such as ladders, MEWPS or scaffold towers) may be required to gain access to PRFs.

Table 8. Categorisation of PRFs (from Table 6.2, Collins (ed), 2023).

Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

3.2.1.2 Follow Up Survey Work

For those trees noted to only possess PRF-I, the Roost Resource Approach will be followed in which no further surveys are required and a precautionary working method statement will be adhered to (Reason & Wray, 2025).

For those trees noted to possess PRF-Ms, the Further Surveys Approach will be followed in which a total of three PRF inspection surveys will be required between May – September (with at least two between May – August), with these visits spaced at least 3 weeks apart (Collins (ed), 2023).

3.2.2 Sensitive Lighting for Nocturnal Species

Surveys undertaken by WYG between 2019 & 2020 concluded the boundary habitats and woodland SINC act as an important commuting corridor for bats. As such, a sensitive lighting scheme is being prepared (with liaison with Ecosupport Ltd), particularly focusing on no / minimal lighting along the site boundaries and woodland SINC. SLR The guidance set out in **Section 3.2.2.2** will be incorporated into the lighting design.

3.2.2.1 During Construction

In order to avoid any disturbance to bats (and other potential nocturnal wildlife) construction works should be limited to daylight hours and should not be undertaken 30 minutes prior to dusk through to dawn. All lighting should be sensitive to the use of the site by nocturnal wildlife, for example by including low-level downward-facing / hooded lights that are sensor-operated where possible.

No lighting will be facing the boundaries of the site (particularly the northern and southern woodland SINC).

3.2.2.2 During Operation

It is recommended that any lighting complies with the following the 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.

Furthermore, it is recommended that no lighting shall be incorporated onto the back of residential dwellings or within the residential gardens. This can be secured under a Conservation Covenant. As detailed below, low level lighting **MUST** be used at the entrance of the site and along the woodland SINC boundaries, should lighting be necessary here.

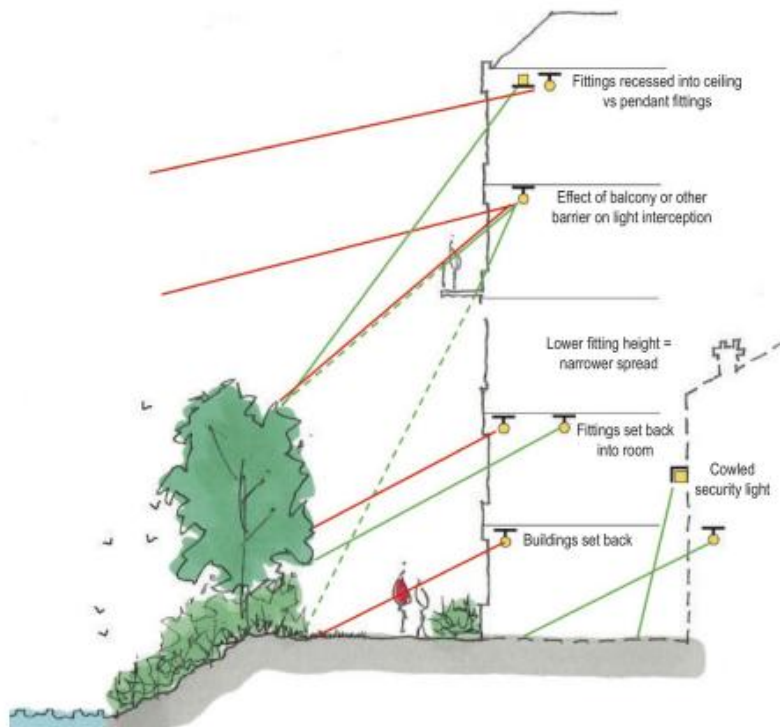
Any lighting required around the cycle / footpath adjacent to the dark corridor will comprise of either low level bollard solar lights or wildlife friendly in-ground lighting (such as the SolarEye – Wildlife and environmentally friendly Residential In-ground light), designed to minimise impacts on foraging and

commuting bats and other protected species such as Hazel Dormice and nocturnal birds that may be using the site boundaries.

The key recommendations within the *Guidance Note 08/23 Bats and Artificial Lighting at night* (ILP / BCT, 2023) 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 8**) 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 8. Internal lighting mitigation options (ILP 2023).

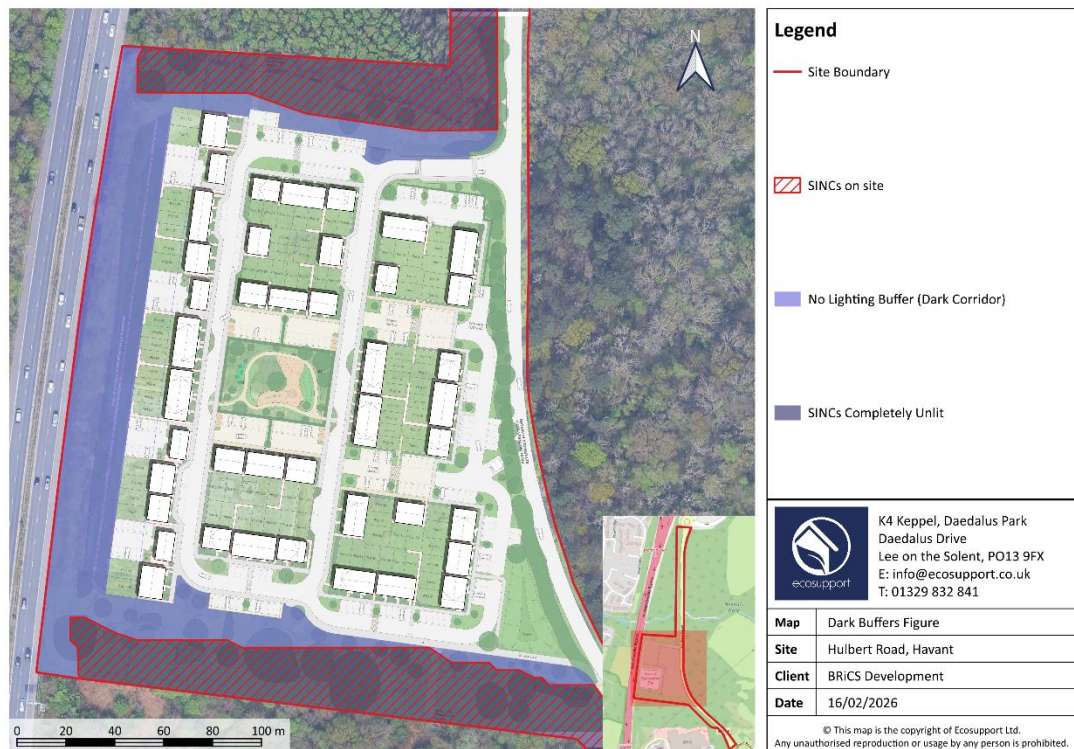
3.2.3 Site Design

The site has sought to incorporate a number of features that will be beneficial to bats including the retention of the majority of the trees and scrub on site, habitat enhancement and improving connectivity, and dark corridors. Additional mitigation methods are outlined below in the following sections. This will ensure retention and enhancement of flight corridors utilised by local bat species.

3.2.3.1 Dark Corridors

Dark corridors will be incorporated along the northern, western, and southern site boundaries, forming the buffers adjacent to the SINC and western boundary acoustic buffer (**Fig 9**). It is recommended that no lighting is incorporated within these areas. Should any lighting be necessary, it will follow the recommendations as set out in **Section 3.2.2**, above. The buffers will be planted with native tree, scrub, and species-rich wildflowers, with an approximate 7m dark corridor buffer along the northern SINC boundary, and ranging from 0-15m along the southern SINC boundary. The SINC will not be subject to any lighting.

Figure 9. Location of the dark corridors around the site (Google Satellite, 2026; HGP Architects Ltd, 2026. Drawing no. 23.121.010 Revision P9).



3.2.3.2 Habitat Retention, Compensation & Enhancements

Retention

As part of the proposals, the majority of the boundary habitats will be retained, of which were noted to be of high importance to local bat species, including Barbastelle and Bechstein's. No vegetation is proposed to be removed to facilitate access. The northern and southern SINC woodland will be retained, with minimal vegetation clearance of small trees and scrub adjacent to facilitate small aspects of development and to allow for access for SINC maintenance and enhancements.

Barbastelles can forage 10-15km from their roosts, meanwhile Bechstein's have been found to forage in and locally around the woodland in which they roost with a 'limited outward travel' (SDNPA and Natural England 2018). As such, it is important that the suitable habitat on site for these species, such as the woodlands, are retained.

Furthermore, the retention of flight-paths in combination with a sensitive lighting strategy and dark corridors will ensure that bats are still able to commute freely to and from the nearby semi-natural and ancient woodland.

Compensation

Works will require the loss of other neutral grassland with scattered scrub, bramble scrub, mixed scrub, and gorse scrub located centrally across the site. These habitats presently attract a variety of invertebrates providing an important food source for bats. Similarly, the scrub bordering the woodland SINC and grassland on site will be removed.

The scrub boundary, particularly along the southern SINC edge (no physical clearance of SINC), comprises of dense Bramble, encompassing young native shrubs and saplings and any ground flora that may be present. Works to the SINC edges will entail removal of such scrub to allow for enhancements and regeneration of the SINC boundaries. A species-rich grassland will be created comprising of a species-rich seed mixture, as well as the incorporation of native evening scented plants such as Bladder Campion (*Silene vulgaris*), Evening Primrose (*Oenothera biennis*), Fleabane, Soapwort (*Saponaria officinalis*), Honeysuckle (*Lonicera periclymenum*), and White Campion (*Silene latifolia*). This will increase the quantity and encourage a diverse variety of invertebrates, including moths (favourable for Barbastelle), in turn increasing foraging resources on site for local bats.

SINC boundaries will be infill planted with native scrub species such as Hawthorn, Blackthorn, Holly, and Dog-rose to provide a dense buffer between the SINC and the development, further increasing foraging resources as well as increasing vegetation along the existing commuting routes. As such, the poor-quality scrub lost will be compensated for through species-rich scrub planting.

Tree planting will be incorporated throughout the site providing a landscape link to the woodland comprising of Ash, Beech, Birch, and Oak as these are preferred species for tree roosting bats such as Bechstein's and Barbastelle. This will provide long-term potential tree roosting resources and a food source all year round for other species present on site. The newly planted tree and hedge network in combination with the retained trees throughout the centre of the site and around the newly built dwellings will act as 'stepping stone' habitats, to enhance connectivity throughout the site (Gunnell et al., 2012). These stepping stones will maintain the existing flight paths, as structural landscape connectivity is vital for the movement of bats.

To act as a buffer along the western boundary, and compensate for the loss of scattered scrub on site and adjacent to the SINC boundaries, several native trees and native scrub will be planted in a dense buffer comprising of Blackthorn, Bramble, Gorse, and Hawthorn, further increase the foraging resources on site and providing a wider dark commuting corridor along the western boundary.

Enhancement

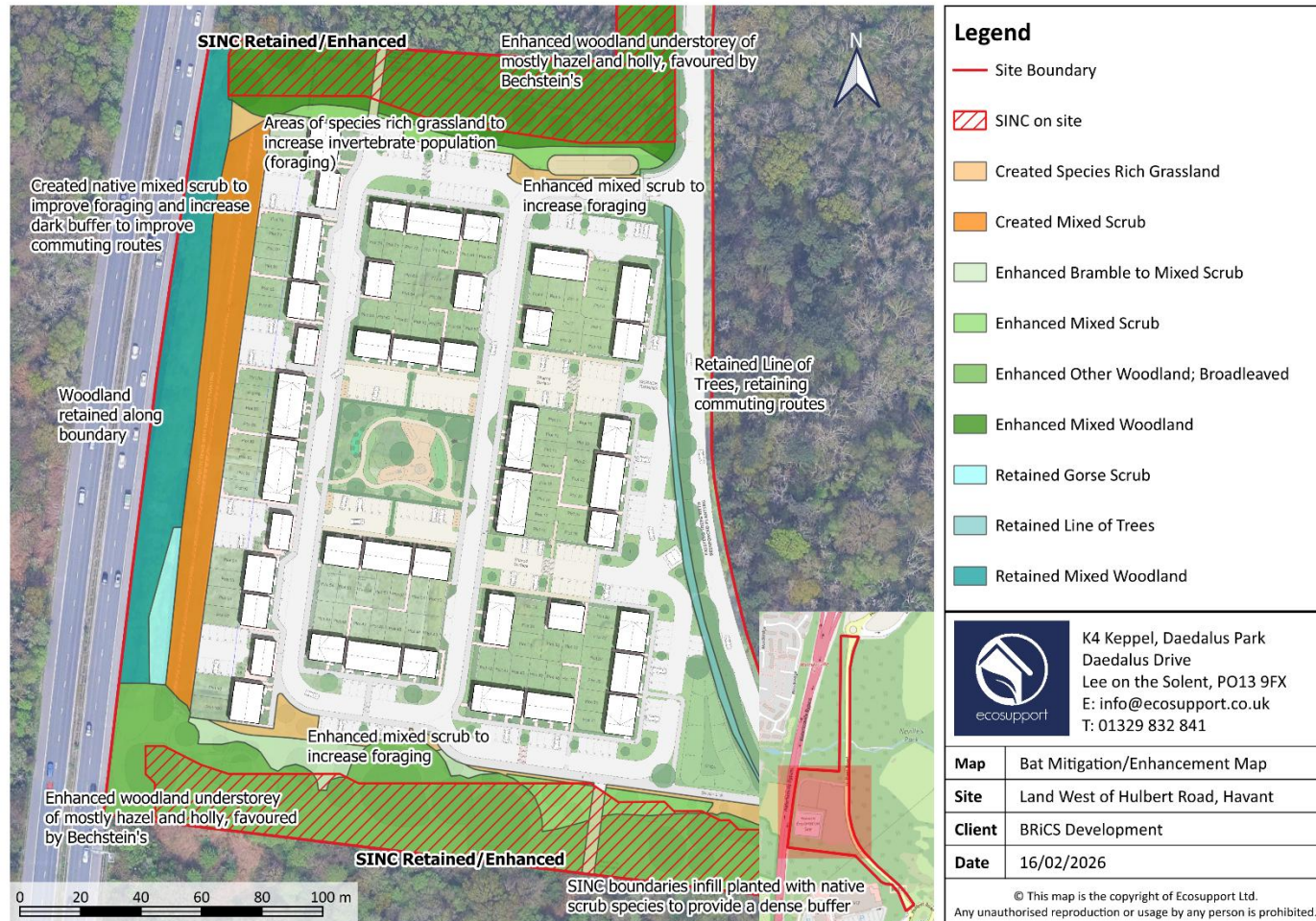
Habitat enhancements will be used to further enhance the site for bats. This comprises of general SINC management and enhancements, described further in **Section 3.7**, along with further mitigation to minimise against potential adverse impacts.

Enhancements comprise:

- Monitoring of tree age class and planting of trees to provide future long-term natural roosts;
- Planting of fruit trees around and along the site boundaries to provide further diverse (invertebrates) foraging resources;
- Native understorey planting, including Holly and Hazel (favourable for Bechstein's (Bat Conservation Trust, 2013)); and
- Retention of all standing and falling deadwood present on site for roosting potential and to encourage woodland invertebrates.

Locations of approximate habitat retention, compensation, and enhancement measures are shown below in **Fig 10**.

Figure 10. Retained, created, and enhanced habitats to benefit bats, particularly Bechstein's and Barbastelle on site (Google Satellite, 2026; HGP Architects Ltd, 2026. Drawing no. 23.121.010 Revision P9).



3.2.3.3 Compensatory Bat Boxes

To compensate for the potential loss of the potential roosting features due to necessary scrub and small tree removal, a total of 8 No bat boxes will be erected on site onto suitable retained trees within the woodland SINCS. The following boxes are recommended to provide roosting resources for both crevice and void dwelling species, all year round:

- 2 No Schwegler 1FW Hibernation Bat Box
- 2 No Schwegler 2FN (used by Bechstein's (English Nature, 2004))
- 2 No General-Purpose Wood Concrete Bat Box
- 2 No Large Multi Chamber WoodStone Bat Box

The bat boxes will be erected by or under the supervision of an ecologist to ensure they are placed in the most appropriate / effective locations.

3.3 Badgers

A walkover of the site will be undertaken by a suitably qualified ecologist in search of any recent or new Badger activity within 4 weeks of works commencing. In the case evidence of potential Badger setts are identified, further survey works may be required to assess the status of any potential Badger setts on site.

During the construction phase, any open excavations left overnight will either be covered to prevent commuting Badgers and other terrestrial mammals falling in or escape ladders will be used to prevent them from becoming trapped. Any open pipework will be checked and then capped nightly.

3.4 Reptiles

3.4.1 Passive Dispersal

WYG concluded the likely absence of reptiles in 2019. Notwithstanding this, the site has been left unmanaged since, and it is considered that the most appropriate form of mitigation would be to adopt a precautionary approach. The following methods will be undertaken to ensure that no reptiles are harmed during the works in the unlikely case that individuals are present on site.

- The days prior to ground works commencing:
 - **Stage 1:** During the first stage, the vegetation will be cut down to a height no lower than 20cm. Cutting will occur directionally, working towards suitable habitat to be retained along the northern and southern scrub SINC boundaries to encourage reptiles to these areas. This will be done under the supervision of a suitably qualified ecologist holding a Natural England Licence for GCN (see **Section 3.5**).
 - **Stage 2:** A second cut (the following day) will take it down to ground level. At this time, the supervising ecologist will do a fingertip search of any tussocky areas. Any potential refugia (i.e., deadwood, rubble, earthbanks) will also be searched and removed. Any potential reptiles encountered will be captured and relocated to areas of retained habitat on the margins of the site. This will be done under the supervision of a suitably qualified ecologist.
- The ecologist on site will then hand search any denser areas of cover such as leaf litter where these areas are to be directly impacted upon.

- All vegetation on site must be kept managed during the development to ensure that reptiles don't establish whilst works take place.
- Materials must not be stored along the boundary vegetation on site and must be kept raised off of the ground (i.e., stored on pallets).
- ***Depending on the habitat type present, a destructive search may also be required, as detailed below, under supervision of an ECoW***

3.4.2 Destructive Search (if required)

Following the two-stage clearance, a destructive search may be carried out under the supervision of the suitably qualified ecologist depending on the habitat type present. Topsoil will be gently stripped to 100mm depth using a digger with a toothed bucket. The supervising ecologist will capture any reptiles found and relocate them to the retained boundary habitat. Please note, any suitable habitat within the root protection zone will not have the topsoil stripped and will only be maintained cut at ground level.

These works will be undertaken during the active reptile period (April – October) when temperatures are above 10°C with sunshine. This area of habitat will be regularly managed and maintained unsuitable for reptiles for the duration of the works and will be cordoned off from the site to prevent vehicles entering the area. The arisings will be removed and any materials will be stored off the ground using pallets or skips if stored in the grassland to prevent sheltering reptiles.

3.5 Great Crested Newts

As the ditch on site is dry between April – June, it is considered that GCN are likely absent from the site, in combination with lack of records and absence of nearby suitable waterbodies. Notwithstanding this, to ensure no adverse impacts to GCN, the precautionary measures outlined within **Section 3.4.1** are considered to be feasible.

In the unlikely instance that a GCN is found during any works, all works must immediately stop and the project ecologist must be informed. Natural England will then need to be contacted in order to obtain a European Protected Species development licence before any further works proceed. If any GCN are found on site updated GCN surveys will be required for all water bodies within 500m of the site to establish the population size present. It is essential that these processes are immediately followed to ensure that no offence is committed under the Wildlife and Countryside Act 1981 or the Conservation.

3.6 Hazel Dormouse

3.6.1 European Protected Species Licence

The proposed plans will require removal of some areas of some mixed and Bramble scrub at the north, centre, and south of the site, with connectivity to the boundary and surrounding habitats. Throughout the 2019 – 2020 Dormouse surveys (WYG, 2021), Dormouse were predominantly found along the northern and western scrub. However, during the updated 2025 surveys to date, Dormice have been found along the northern, western and southern scrub, and as such, other habitat may contain Hazel Dormice (**Fig 11**). Therefore, Dormice should be assumed to be present within all areas of the site and a European Protected Species Licence (EPSL) will be required for any works impacting the Bramble scrub (and the hedgerow if this becomes necessary).

3.6.2 Vegetation Clearance

It is expected that a total of 0.375 ha of suitable Hazel Dormouse habitat in the form of mixed and Bramble scrub will be cleared under a single / two stage methodology (see **Fig 11** for location of sensitive vegetation removal). Furthermore, works will take place adjacent to retained suitable habitat (total 1.553 ha suitable habitat retained (including 1.232 ha enhanced)). Any Dormice discovered during the works will either be left undisturbed in place (if deemed safe by the ecologist) or will be relocated to a retained habitat in a similar location to where they were found (e.g. if the animal is found within leaf litter, then the animal will be placed in leaf litter). 20 No. Dormouse nest boxes will be placed into the retained scrub / woodland to act as receptors in the unlikely event of any Dormice being found (**Fig 12**).

Figure 11. Location of retained, enhanced, created, and lost dormouse habitat with directions of proposed single / two stage clearance indicated (Google Satellite, 2026; HGP Architects Ltd, 2026. Drawing no. 23.121.010 Revision P9).



Figure 12. Proposed location of 20 No. Dormouse boxes (orange dots) to be erected within the retained scrub and woodland on site (Google Satellite, 2026; HGP Architects Ltd, 2026. Drawing no. 23.121.010 Revision P9).



3.6.2.1 Clearance Methodology

The following methodologies outline both a single stage option and two stage option for the clearance work to be carried out once a NE EPSL has been granted. The EPSL will specify which methodology can be used.

Single stage methodology:

- Fingertip search of all vegetation to be cleared, by the licensed ecologist, immediately prior to clearance commencing (on the same day and every day clearance occurs).
- Prior to works commencing, the named ecologist or accredited agent will provide all site operatives with a toolbox talk to inform them of the potential presence of dormice, their legal status, means of identification, habitat requirements, the methodologies required to avoid impacts on the species and what they should do if a dormouse is found. A written record that this has been undertaken, signed by attendees, will be kept and made available to Natural England should it be required.
- Hand tools will be utilised to sensitively cut vegetation down to ground level in **a single stage**. This will be undertaken in a directional fashion to passively encourage Dormice to move away from the works area towards retained, suitable hedgerow / treeline habitat. Where areas of scrub are being cut, this will be done directionally towards the retained habitats. All arisings will be chipped on site immediately.
- Cut material will be removed from the areas and chipped and removed from site or area of working operations.
- 20 Dormouse nest boxes will be placed into the areas of retained scrub / woodland around the site to act as receptors in the event of any Dormice being found (**Fig 12**).

- Works will take place outside of the core breeding periods (June - September inclusive) and avoid the hibernation period (late November – March) and as such, the most appropriate timings would be April - May and late September - October
- **No more than 50m² of habitat will be cleared in a single day**

Two Stage methodology:

Clearance of the vegetation within the site will be carried out sympathetically and under the supervision of a Licensed Ecologist (LE) who will search for nests by hand and capture Dormice (if necessary) before and during clearance works. If any active animals are discovered during the works, then these animals will be captured and placed, with their original nest where present, within previously erected nest boxes (outlined above). If any hibernation nests/potential hibernation nests are identified during the first stage of the clearance over winter, these will be left undisturbed, with vegetation retained in a buffer around the nest, due to the vulnerable nature of hibernating or torpid Dormice. All arisings / cuttings will also be removed from site each day following a hand search by the licensed ecologist to prevent re-occupation.

- The licensed ecologist will deliver a toolbox talk to the vegetation clearance contractors, detailing the sensitive measures required. The ecologist will then supervise all vegetation clearance. No clearance will be undertaken without the supervision of the ecologist.
- To avoid any impacts to Dormice the removal of all vegetation will adopt a two staged approach with the upper sections removed over winter (when Dormice may be hibernating in the lower parts) and the trunk and roots removed during spring.

Winter clearance

This should remove sufficient vegetation to persuade Dormice emerging from hibernation in April or May to move to more appropriate habitat nearby. Once emergence is complete, by the end of May, full clearance of the area can continue. Winter clearance should thus be planned as a two- stage process.

Trees and shrubs within the area in question should be cut down between November and March inclusive, to avoid both the bird nesting season and the majority of the period when Dormice might be found in nests above ground. Clearance should be done by hand and in a sensitive manner, to minimise the likelihood of disturbing or killing hibernating Dormice. Similarly, the process of removing the cut material should, as far as possible, be designed to protect Dormice hibernating on the ground. This can involve such techniques as:

- Sacrificing a single 'haul- route', which has first been cleared by hand if necessary;
- Using a long-reach mechanical grab and/or limiting the number of 'drag-lines' along which stems are removed; and/or
- Directional felling to minimise the ground impact.

In addition to the above, all vegetation being removed, and the ground beneath, will first be hand searched as far as possible to identify the presence of any hibernation nests. Similarly, any proposed drag/haul routes will first be searched by hand before such usage commences. If any hibernation nests are identified, these will be retained and protected and, if present within a haul/drag routes these will be re-routed to avoid the retained nest.

Spring clearance

Once the above works have been completed, the roots will be removed using hand tools where possible or with a digger using a toothed bucket under the supervision of the licensed ecologist from mid-April onwards (provided the temperatures have been warm enough for Dormice to emerge from hibernation at the discretion of the ecologist).

3.6.3 Minimising Disturbance

Prior to construction works commencing the retained scrub / treelines and the adjacent woodland will be protected from damage during the works. They will be fenced using Heras fencing or similar with a tarpaulin screen to prevent the spread of dust and access by machinery. Where large mature trees are present, they will be protected using standard arboricultural tree protection measures which include protection of the canopy and prevention of root compaction. Access will not be permitted behind this fencing by construction personnel. This will protect Dormouse habitat from direct damage/disturbance and dust. Signage will also be added (on top of the usual warnings for tree protective fencing) stating things such as:

Protected Dormouse Habitat

It is an Offence to Damage / Disturb this Habitat

This will also provide protection for wildlife species, including Badgers, that may be using the margins of the site as well as bats, invertebrates and other mammals. No vehicles will enter the protective ring fencing and no materials will be stored within their circumference. All protective fencing must be in place prior to any construction machinery arriving on site, before any works on site get underway, and will remain in place until all work is completed. This will minimise the level of disturbance within the boundary habitat / buffer areas during the works and ensure the habitats and any wildlife species that may be using them are protected.

3.6.4 Habitat Compensation / Connectivity

The permanent loss of approximately 0.387 ha of mixed and Bramble scrub will be compensated for through the creation of 0.224 ha of mixed scrub with trees and enhancement of the retained mixed scrub through infill planting and enhancement of the woodland SINC's (1.062 ha total). Specifically, mixed scrub comprising a variety of species of known benefit to Hazel Dormice (e.g. Hazel, Hawthorn, Blackthorn) will be created along the western boundary of the site to reinforce and enhance the area where the Dormice and nests were found and provide long-term food sources (**Fig 11**). The retained mixed scrub bordering the SINC's on site will be enhanced planting of native species (Hawthorn, Blackthorn, Holly, Dog-rose), to provide a dense between the SINC and the development, with appropriate management to ensure a mixture of species is maintained without a single species dominant, resulting in an increase in foraging resources for Hazel Dormice and other protected species (**Fig 11**).

Furthermore, there is presently limited native understorey within the woodland suitable for Hazel Dormouse (as seen in **Fig 12**). Native understorey planting will be undertaken within the woodland SINC's comprising of Holly and Hazel, to provide an increase in commuting opportunities and foraging resources. Given the extensive woodland areas around the SINC's, woodland enhancements, and

habitat creation, it is expected that the loss (in ha) of suitable habitat is considered acceptable at a landscape scale.

The areas of mixed and bramble scrub being removed are on the periphery of the existing suitable Dormouse habitat on site with little connectivity into further suitable habitat within the wider environment. All of the Dormouse habitat which is connected to the wider landscape (i.e. the retained scrub, site boundaries, and woodland) is to be retained with the proposed compensatory Dormouse habitat being planted to increase commuting opportunities along the western site boundary. No vegetation is proposed to be removed for access. Furthermore, the existing arboreal connection in the south-eastern corner of the site will be maintained providing connectivity over the new cycle path (**Fig 9**). If this is not viable, then connectivity will be maintained over the cycle path through the treeline by using trellis planted with climbers to create a continuous canopy. Therefore, it is considered that there will be no residual loss of connectivity for Hazel Dormice using the site.

3.6.5 Mitigating Operational Impacts

3.6.5.1 Lighting

A sensitive lighting scheme for the site will be implemented as described in **Section 3.2.2** which includes specific recommendations for lighting types to mitigate against the impact of artificial lighting on nocturnal species, including further information on dark corridors in **Section 3.2.3.1**. Furthermore, where there is any light spill into the newly created and retained Dormouse habitats, this will also be kept to a minimum level of no higher than 0.5 Lux as per **Fig 9**.

3.6.5.2 Cat Predation

To minimise the risk of cat predation once the houses have been completed and the new occupants moved in, thorny species (such as *Prunus spinosa*, as listed within **Section 3.2.3.2**) will be planted up within the retained scrub along the SINC edges / newly planted mixed scrub on site and along the new western scrub dark corridor (with known Hazel Dormouse presence) at a minimum density of 1 per linear metre. As these species mature, they will provide a natural deterrent to cats moving into the dormouse habitat on site.

3.6.5.3 Monitoring

As iterated in the above sections, prior to the commencement of vegetation removal, at least 20 No Dormouse boxes will be installed by a suitably qualified ecologist in suitable habitat to be retained to enhance the site for Dormice (as per **Fig 12**). The boxes will be checked at years 1 – 10 post clearance works by a licensed ecologist.

3.6.6 Responsibility

The retained and newly created habitats will be managed for a minimum period of 12 months by the developer post completion of development, covering the first part of the establishment period. Ownership / management responsibilities will then be transferred to a management company which is as yet unappointed, when required.

3.6.7 Precautionary Approach – Scrub Management

It will be necessary to limit scrub encroachment within areas of bordering species-rich grassland that will be managed to benefit common reptiles and encourage a range of invertebrates. Furthermore, it is likely scrub management will be required within the SINC woodlands to ensure they remain at optimal condition for development and to benefit any protected species that may be residing within. Therefore, any ongoing scrub management on site will take place during late September – October

and will follow the precautionary measures outlined in **Table 9** below in order to avoid harm coming to any Hazel Dormice that may be present within the vegetation.

Table 9. Precautionary approach to managing scrub with Dormouse presence (reproduced from Forestry Commission, 2019).

Scrub Vegetation Management	May to mid-Sept	Avoid cutting taller vegetation and areas of shrubs. Any areas with a short sward may be mowed.
	Mid-Sept to end of Oct	Any areas with a short sward may be mowed. For areas of tall sward or woody vegetation, treat 25% or less of favourable or marginal habitat. For areas of shrubs, cut a maximum of 50 m by 10 m segments, working less than 10% of the area of favourable or marginal habitat and leaving the worked area uncut for a minimum of 8 years. Maintain branch connectivity at intervals over rides and tracks.
	Nov to end of March	Any areas with a short sward may be mowed. For areas of tall sward or woody vegetation, treat 25% or less of favourable or marginal habitat. For areas of shrubs, cut a maximum of 50 m by 10 m segments, working less than 10% of the area of favourable or marginal habitat and leaving the worked area uncut for a minimum of 8 years. Maintain branch connectivity at intervals over rides and tracks.
	April	Avoid cutting taller vegetation and areas of shrubs. Any areas with a short sward may be mowed.

3.7 Notable and Birds of Conservation Concern (BoCC)

3.7.1 Avoidance of Impacts to Breeding and Nesting Birds

In order to avoid disturbance of breeding and nesting birds or damage to their nests, works to the buildings and any works to the trees on site should avoid bird nesting season (typically March – August, dependent on weather). If this is not possible, the buildings / trees should be thoroughly checked by an ecologist immediately prior to works. If any active nests are found, they should be left undisturbed with a suitable buffer within which works cannot take place (ca. 5m) until nestlings have fledged.

3.7.2 Compensatory Bird Boxes

Habitat management on site (see **Section 3.8**) will compensate and increase opportunities for birds within the site. Additionally, to compensate for the potential loss of nesting bird habitat due to necessary scrub and small tree removal, a total of 6 No bird boxes will be erected on site onto suitable retained trees within the woodland SINC. The following boxes are recommended to provide roosting resources for both crevice and void dwelling species, all year round:

- 2 No Schwegler 1B
- 2 No Schwegler 2H
- 2 No Schwegler 2M

The 1B is the most popular box for garden birds and appeals to a wide range of species. The 2H is attractive to Robins, Pied Wagtails, Spotted Flycatcher, Wrens and Black Redstarts whilst the 2M is an example of a general-purpose design (***NB is there are issues obtaining these boxes, alternatives can be used if first agreed with the ecologist***). The bird boxes will be erected by or under the supervision of an ecologists to ensure they are placed in the most appropriate / effective locations.

3.8 Neville's Park West Wood & Hulbert Road Meadow SINC's (Priority Habitat)

3.8.1 Site Preparation and Construction

During site preparation and construction, both SINC's will be fenced off from works using the methodology outlined within **Section 3.1**. Both SINC's (and other suitable Dormouse habitat) will be fenced off using Heras fencing or similar with a tarpaulin screen to prevent the spread of dust and access by machinery, following standard arboricultural tree protection measures. Access will not be permitted beyond this fencing by construction personnel. Access however will be permitted for appropriate management of the scrub / woodland and enhancements measures, upon agreement with the Local Planning Authority.

Access into the SINC's will be created and maintained as a single access track, cut into the vegetation, to allow for SINC management and maintenance for the landowner, as well to provide enhancement and mitigation measures. The access track will be maintained as a dirt path / track, and will be minimally intrusive in terms of infrastructure.

A Construction Environmental Management Plan (CEMP) has been imposed through Condition 11 of Outline Planning Permission APP/20/0041.

Furthermore, it is recommended that a SINC / Woodland Management Plan is conditioned to ensure details of appropriate habitat management and monitoring are incorporated throughout the works, including enhancement measures.

3.8.2 Site Operation

3.8.2.1 Access & Signage

A single interpretation board will be installed informing visitors of the SINC's conservation value. This will include images and text relevant to the areas wildlife and inclusive of a plan of the pathway and cautionary note in relation to disturbance of wildlife using the area. The interpretation board will be positioned near the cycle route at the south-east of the site.

3.8.2.2 Leaflets (Littering)

In order to prevent littering from neighbouring properties into the SINC's or dark corridor buffers, leaflets will be provided to the residents upon taking up residence informing the new residents of the SINC's conservation value, with images and text relevant to the wildlife present on site.

3.8.2.3 Litter Bins

To further ensure littering does not occur from the public, it is recommended that litter bins will be installed, with at least one adjacent to each SINC. These will be emptied regularly by a management company.

Prior to works commencing upon the pathway and litterbins being installed, clearance of all foreign objects, rubbish, unnatural debris, and litter etc will be cleared from the site including the SINCs.

3.8.2.4 Predation

To minimise the risk of cat predation once the houses have been completed and the new occupants moved in, thorny species (such as *Prunus spinosa*, and other species listed within **Section 3.2.3.2**) will be planted up within the retained scrub along the SINC edges / newly planted mixed scrub on site and along the new western scrub dark corridor at a minimum density of 1 per linear metre. As these species mature, they will provide a natural deterrent to cats moving into the SINCs and Dormouse areas on site.

3.8.2.5 Lighting

It is understood that no lighting will be incorporated within or onto the SINCs, with dark corridor buffers along the northern, western, and southern site boundaries. Further information on sensitive lighting and dark corridors are detailed in **Section 3.2.2 & Section 3.2.3.1**.

Any lighting required around the cycle / footpath will comprise of either low level bollard solar lights or wildlife friendly in-ground lighting, designed to minimise impacts on foraging and commuting bats and other protected species such as Hazel Dormice and nocturnal birds that may be using the site boundaries.

3.8.3 SINC enhancements

Both SINCs (area of SINCs within the redline boundary) will undergo appropriate management and enhancement measures. The objectives of the management of these SINCs are to protect and enhance the existing woodland habitat to provide the greatest benefit to wildlife.

It is recommended that a SINC / Woodland Management Plan is conditioned to details appropriate habitat management and monitoring.

3.8.3.1 Selective Thinning for Understory Planting

Selective thinning of poor-quality trees will re-invigorate the development of understory vegetation and woodland ground flora through increasing light levels and reduce competition from removing aggressive colonizing species.

3.8.3.2 Native Understory Species Planting

The development of the understory and the overall woodland structure following the thinning operations will be encouraged through the planting of native species including Hazel (*Corylus avellana*) and Holly (*Ilex aquifolium*) (both species existing within the woodlands), creating favourable habitat for Bechstein's bats (Bat Conservation Trust, 2013) and foraging resources for Hazel Dormice. Planting of other native species is also recommended.

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, to 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.

In addition to the implementation of biodegradable rabbit/ deer guards to protect planted trees to ensure establishment, 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**. Bark mulch is also recommended around each tree and will act as an effective management method to also suppress weed colonisation.

3.8.3.3 Retention of Deadwood

Suitable arisings and deadwood generated from the thinning operations and vegetation clearance on site will be retained and used to create deadwood habitat piles within suitable locations throughout the woodland. Standing deadwood (with suitable trees reduced to a safe height) will also be created where possible to create additional features and opportunities for wildlife. The creation/ retention of deadwood features will provide a range of microhabitats that can be utilised by invertebrates, birds and small mammals.

3.8.3.4 Native Species Buffer Planting

SINC boundaries will be infill planted with native scrub species such as Hawthorn, Blackthorn, Holly, and Dog-rose to provide a dense buffer between the SINC and the development, further increasing foraging resources as well as increasing vegetation along the existing commuting routes. As such, the poor-quality scrub lost will be compensated for through species-rich scrub planting.

3.8.3.5 Management

The following measures will be undertaken with regard to long term management of the woodland:

- Newly planted trees and shrubs will be monitored to ensure establishment, with replacement planting/ seeding works undertaken as required.
- Should any non-native invasive species establish, these will be removed / treated continuously until permanent eradication has been achieved.
- The woodland will be divided into coupes with the understory coppiced on a 5-7 year rotation. Arisings will be utilised to create dead hedges to protect new growth from browsing pressure.
- Annual walkovers of the site will be undertaken to identify potential risks to public health and safety, with appropriate remedial measures implemented.
- A risk assessment of the trees within the site will be undertaken every three years with appropriate tree surgery operations implemented as required.
- Selective thinning of mature trees/ shrubs will be conducted as required to promote a vigorous and dense understory, with the optimal canopy cover targeted at 75% to allow the greatest development of the understory to create a more diverse woodland.

A suitability qualified ecologist will be consulted with regard to prospective tree remediation works, with appropriate ecological surveys undertaken as required.

3.9 Enhancements

3.9.1 Bats

At least 10 of the newly built dwellings will have 1 No Istock bat brick each (**Fig 13**) integrated within the external brick work. These features are entirely self-contained and available in a variety of different colours to match different construction materials. They should ideally be placed on an

elevation which will benefit from some degree of sunlight exposure and be located away from windows.

Figure 13. Ibstock bat brick 'B' which will be integrated into the gable walls of the newly built dwellings.



If this is not feasible, the following woodcrete models will also be erected on suitable retained trees around the site's boundary:

- 2 No Vivara Pro Miramare Large WoodStone bat box
- 2 No Vivara Pro Large Multi Chamber WoodStone bat box

The woodstone bat boxes will be erected by or under the supervision of an ecologists to ensure they are placed in the most appropriate / effective locations.

3.9.2 Hedgehogs

3.9.2.1 Hedgehog Home

The SINC buffers on site will incorporate 1 No Hedgehog homes (**Fig 14**) (such as the Igloo Hedgehog home or Hogitat Hedgehog house). This will be provided within or adjacent to areas of retained trees / shrubs and will provide a rapidly declining species with a place to shelter / hibernate.

It is recommended that the hedgehog homes are maintained to ensure they remain suitable for use by Hedgehogs. The hibernation period for Hedgehogs typically spans from October – April, therefore it is recommended that the hedgehog homes are inspected every year in mid to late-April, after hibernation but prior to the nesting period. During these inspections the hedgehog homes should be checked for any damage and replaced/repared where necessary.

Additionally, the hedgehog homes should be cleared of any old nesting material and would be beneficial to be replaced with fresh, dry hay. The hedgehog homes should be placed back in their original location, unless the hedgehog homes have been interfered with by the public or not utilised by any Hedgehogs, an alternative discrete location should be considered.

Figure 14. Example of the Igloo Hedgehog Home.



3.9.2.2 Gaps in Garden Fencing

The garden fences within the site will also ensure at least 1 gap is present within the gravel boards 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. Guidance for these gaps will be included in the Home Users Guide.

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 15**).

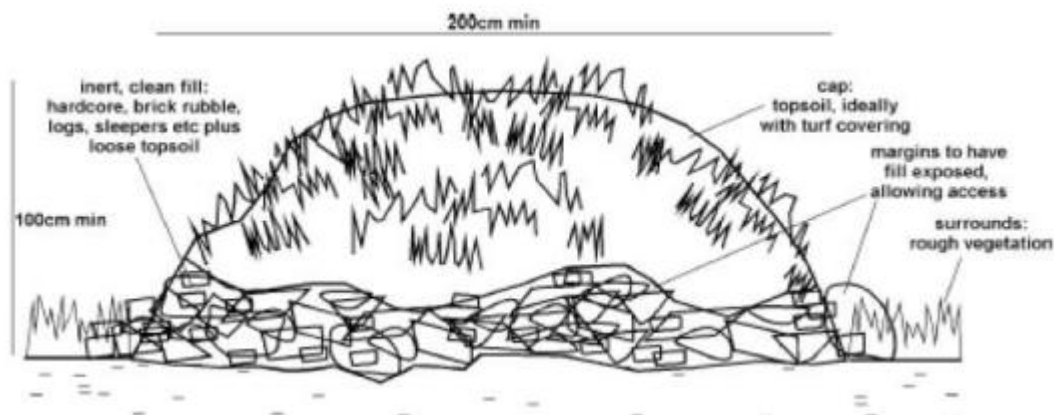
Figure 15. Example of Hedgehog Highway signage to be placed above fence gaps provided to allow movements between gardens (PTES, 2019).



3.9.3 Reptiles

1 No log / brash pile is recommended to be provided within the southern SINC buffer to further enhance the site for reptiles as well as mammals, invertebrates and amphibians. The log / brash piles will be created from vegetation removal and/or habitat management on site. This may use a combination of logs, branches, brash and grass cuttings from the sensitive clearance above and any tree surgery. An example of a log pile hibernaculum is shown in **Fig 16** below. These should be located within areas receiving partial sun / partial shade.

Figure 16. Example of a hibernaculum design.



3.9.4 Hazel Dormouse

In order to enhance the site further for the population of dormice on site, the following are recommended;

- Planting new areas of native trees, hedgerows and shrub across the development to provide cover and additional foraging opportunities concentrating mainly around the site boundaries;
- Planting a range a native food plants across the site beneficial to dormice including; Ivy (*Hedera helix*), Honeysuckle (*Lonicera periclymenum*) and Wild Clematis (*Clematis virginiana*) can provide good links between the shrub and canopy layer as well as providing additional habitat and autumn food; and
- Planting Bramble (*Rubus fruticosus*) within the woodland's areas in low densities as it produces flowers and supports a high number of insects that dormice feed on.

3.9.5 Notable and Birds of Conservation Concern (BoCC)

To act as biodiversity enhancement, at least 10 of the newly built dwellings will incorporate one Swift brick. The Ibstock 'Eco Home for Swifts' bricks will be installed (**Fig 17**) as they are a discreet and attractive box ideal for new dwellings. The boxes should be installed under the eaves or in high walls in shaded areas out of direct sunlight and away from windows. The installation of such boxes has also been shown to be beneficial for House Sparrows (*Passer domesticus*) which are a nationally declining species.

Figure 17. Ibstock eco home for swifts that will be incorporated into the newly built dwellings.



Alternatively, if this is not feasible, the erection of 4 No nest boxes in trees within the retained woodland or treelines will be sufficient. Where possible these nest boxes could be tailored to provide opportunities for red listed/BAP species known from the local area. Vivara Pro Seville 32mm, Seville 28mm or Barcelona Bird Box should be used. These will provide suitable nesting opportunities for a variety of bird species and will increase the nesting opportunities for birds on site.

3.9.6 Planting

As a general enhancement, any new landscape planting will aim for a minimum 70:30 ratio in favour of native species over non-natives and ornamentals (in line with the CIEEM guidance outlined within Smith & Day (2012). Non-natives and ornamentals should only be given a bias in formal locations where aesthetics is a priority.

3.9.6.1 Species-rich Grassland

Proposed Planting

Species-rich grassland will be created on site, these grassland areas will be enhanced/established via sowing of a suitable wildflower mix such as Emorsgate – EW1Woodland Mix, to be seeded alongside the SINC boundaries, and Emorsgate EM8 Meadow Mixture for Wetlands around the SUDs features.

The sowing of these seeds will be completed either during the Spring (March-May) or the late Summer (August-October) when the temperatures are warm, and the ground is dry. The seed must be surface sown at an even distribution throughout the entire landscaped area.

Management

Wildflower areas do not require any additional watering or fertiliser. 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 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 (species indicative of sub-optimal condition) arising from the soil seed bank and by grass growth. This should be controlled by mowing in mid to late summer, this is because weeds offer shelter to more desirable seedlings. Cut and remove cuttings, ideally early August. This can then be regularly mowed till following March, with targeted weed removal to minimise competition and weed seed production.

Management Once Established: After the first year, the wildflower areas will be mown in early Spring to 100mm and will then be left to flower through to late July/August. This is beneficial for nesting birds, which do not fledge until late July, as well as insects and other wildlife. After flowering, the area will undergo a hay cut with growth reduced to 50mm.

To maintain maximum flowering interest and a varied sward height, sections of each grassland parcel should be managed at different times between August and September. Varying the mowing times from year to year is the best way to maintain a diverse, balanced sward and minimise the cover of sub-optimal species. Allowing for areas of long-swards is also of benefit to bat species using the site.

Targeted scrub and bracken removal will also need to be carried out as necessary to prevent encroachment into the grassland.

3.9.6.2 Mixed Scrub

Proposed Planting

Parcels of mixed scrub will be created on site, which will help enhance habitat connectivity across the site and provide fruiting vegetation that will, in turn, increase foraging resources. Species such as Hawthorn, Blackthorn, Holly, and Dog-rose are recommended to provide a dense buffer between the SINC and the development, further increasing foraging resources as well as increasing vegetation along the existing commuting routes. As such, the poor-quality scrub lost will be compensated for through species-rich scrub planting.

Shrubs will be planted in staggered rows to avoid creating dense clusters. The best time to plant is late autumn and it is recommended to avoid freezing temperatures or heat. The scrub will become denser and more connected as it grows up.

Management

Following establishment, scrub will require minimal ongoing management; however, the following measures can be employed as necessary:

- New scrub will be weeded whenever necessary, and watered every week through the first six months if the soil is dry.
- Scrub will be cut back annually as needed to ensure the area does not become overgrown and thinned every five years. Different areas of scrub will be cut back / thinned on rotation in order to ensure a diverse age range (seedlings, sapling, young shrubs and mature shrubs) persists.
- Any existing or later establishing Bramble will be reduced in density and will be maintained at approximately 15% density within the scrub patches.
- Ongoing management will be undertaken to prevent successional scrub developing within the adjacent grassland areas.
- Management must take into account the requirement for maintaining habitat connectivity across the site. Should any such vegetation die or its density become sparse, additional planting will be undertaken, replacing like-for-like.
- Should any invasive species establish, an invasive species specialist will be contacted and these will be removed accordingly.

All management of trees and scrub will be undertaken outside of the bird nesting season, which spans February – August inclusive (Natural England, 2015).

It will be necessary to limit scrub encroachment within areas of bordering species-rich grassland that will be managed to benefit common reptiles and encourage a range of invertebrates. Furthermore, it is likely scrub management will be required within the SINC woodlands to ensure they remain at optimal condition for development and to benefit any protected species that may be residing within. Therefore, any ongoing scrub management on site will take place during late September – October

and will follow the precautionary measures outlined in within **Section 3.6.7**, in order to avoid harm coming to any Hazel Dormice that may be present within the vegetation.

3.9.6.3 Individual (Urban) Trees

Proposed Planting

Trees will be planted throughout the site, species will be a mix of native and ornamental species. Weeding will be undertaken around the base of the trees in all years. Trees that are fruiting will not be cut to ensure the formation of fruiting bodies.

Planting will be carried out in the first year. The best time to plant is late autumn and it is recommended to avoid freezing temperatures or heat. Rootgrow or Bonemeal will be applied to the new plants to encourage healthy root growth.

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**. Bark mulch is recommended around each tree and will act as an effective management method to also suppress weed colonisation.

Pruning:

The trees will be subject to light pruning as required in October to ensure that they are developing healthy growth forms (but pruning will not be extensive enough to restrict expected canopy or height for their species).

Monitoring and Replacement:

Trees will be inspected every 3 years by a suitably experienced arborist **during late winter – early spring of each year when required**. These monitoring visits will assess the general health of the trees and determine if any remedial action is required, including noting any presence of disease. As part of these monitoring visits, the arborist will produce a monitoring report which will be sent to the LPA outlining the results and appropriate recommendations (i.e. remedial works, removal /replacement). Any plants that are removed, die or become seriously damaged or defective shall be replaced like for like in the next planting season.

4.0 IMPLEMENTATION PLAN

Schedule of ecological enhancement feature installation and monitoring in perpetuity (for 30 years).

General Activity	Year	Specific Activity	Dates / Timings	Description
Species-specific Enhancements				
Protection of Retained Habitats (Section 3.1)	Year 1	Arbicultural Fencing (Section 3.1)	Set up pre-commencement to works and retained throughout the works	<ul style="list-style-type: none"> The adjacent habitats part of the wider site (under same landownership) will be retained and protected from damage during the works. They will be retained using the methods outlined within Section 3.1. Protection of SINCs are outlined in the SINC section below.
Bats (Section 3.2)	Prior to operation	Updated GLTA	Anytime	<ul style="list-style-type: none"> A number of trees were identified as supporting several potential roost features on site within the woodland. Should any further trees require removal or remedial works, an updated Ground Level Tree Assessment will be undertaken on the subjected trees. Following this, a single PRF inspection survey will be required for each tree (Collins (ed), 2023) to record characteristics of the PRFs and categorise them. This can be conducted at any time of year by a suitably qualified ecologist and entails a more detailed assessment of the likely suitability of a PRF for roosting bats as well as searching for evidence of bats (e.g. droppings) within the PRF via an endoscope. Access equipment (such as ladders, MEWPS or scaffold towers) may be required to gain access to PRFs. For those trees noted to only possess PRF-Is, the Roost Resource Approach will be followed in which no further surveys are required and a precautionary working method statement will be adhered to (Collins (ed), 2023). For those trees noted to possess PRF-Ms, the Further Surveys

				<p>Approach will be followed in which a total of three PRF inspection surveys will be required between May – September (with at least two between May – August), with these visits spaced at least 3 weeks apart (Collins (ed), 2023).</p>
	During Construction	Lighting During Construction	Construction period	<ul style="list-style-type: none"> • In order to avoid any disturbance to bats (and other potential nocturnal wildlife) construction works should be limited to daylight hours and should not be undertaken 30 minutes prior to dusk through to dawn. All lighting should be sensitive to the use of the site by nocturnal wildlife, for example by including low-level downward-facing / hooded lights that are sensor-operated where possible. • No lighting will be facing the boundaries of the site (particularly the northern and southern woodland SINCS).
	During Operation	Lighting During Operation	Operational Period	<ul style="list-style-type: none"> • It is recommended that any lighting complies with the following the published <i>Guidance Note 08/23 Bats and Artificial Lighting at night</i> (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. • Furthermore, it is recommended that no lighting shall be incorporated onto the back of residential dwellings or within the residential gardens. This can be secured under a Conservation Covenant. As detailed below, low level lighting MUST be used at the entrance of the site, along with along the woodland SINC boundaries, should lighting be necessary here. • Any lighting required around the cycle / footpath adjacent to the dark corridor will comprise of either low level bollard solar lights or wildlife friendly in-ground lighting (such as the SolarEye – Wildlife and environmentally friendly Residential

				<p>In-ground light), designed to minimise impacts on foraging and commuting bats and other protected species such as Hazel Dormice and nocturnal birds that may be using the site boundaries.</p> <ul style="list-style-type: none"> Dark corridors will be incorporated along the northern, western, and southern site boundaries, forming the buffers adjacent to the SINC's and western boundary acoustic buffer (Fig 9). It is recommended that no lighting is incorporated within these areas. Should any lighting be necessary, it will follow the recommendations as set out in Section 3.2.2, above. The buffers will be planted with native tree, scrub, and species-rich wildflowers, with an approximate 7m dark corridor buffer along the northern SINC boundary, and ranging from 0-15m along the southern SINC boundary. The SINC's will not be subject to any lighting.
	Year 1	Installation of bat bricks and boxes	Anytime, prior to site operation	<ul style="list-style-type: none"> 10 No. Ibstock bat brick will be incorporated into the residential dwellings. To compensate for potential loss of the potential roosting features due to necessary scrub and small tree removal trees the following bat boxes are to be erected: <ul style="list-style-type: none"> 2 No Schwegler 1FW Hibernation Bat Box 2 No Schwegler 2FN (used by Bechstein's (English Nature, 2004)) 2 No General-Purpose Wood Concrete Bat Box 2 No Large Multi Chamber WoodStone Bat Box As a general enhancement following bat boxes to be erected onto mature retained trees around the site boundaries: <ul style="list-style-type: none"> 2 No. Vivara Pro Miramare Large WoodStone bat box 2 No. Vivara Pro Large Multi Chamber WoodStone bat box

	Year 1	Habitat Enhancements	During Habitat Creation / Management	<ul style="list-style-type: none"> Monitoring of tree age class and planting of trees to provide future long-term natural roosts Planting of fruit trees around and along the site boundaries to provide further diverse (invertebrates) foraging resources Native understorey planting, including Holly and Hazel (favourable for Bechstein's (Bat Conservation Trust, 2013)) Retention of all standing and falling deadwood present on site for roosting potential and to encourage woodland invertebrates. <p><i>For management / creation of these habitats please see below.</i></p>
	Year 2, then once Annually	Bat Brick/Box Integrity Check	Winter (December - February)	<ul style="list-style-type: none"> All ecological enhancements will be checked to ensure they do not require replacement
Badgers (Section 3.3)	Year 1	Covering any open excavations (Section 3.3)	During the construction phase	<ul style="list-style-type: none"> During the construction phase, any open excavations left overnight should either be covered to prevent commuting Badgers falling in or escape ladders should be used to prevent them from becoming trapped. Any open pipework should be checked and then capped nightly.
Reptiles (Section 3.4)	Prior to commencement	Passive Dispersal	April – September	<ul style="list-style-type: none"> A suitably qualified ecologist must brief all site operatives, providing a Toolbox Talk include details of the legal protection of reptiles, all precautionary steps, an annotated key detailing the appearance, characteristics and optimal habitat for reptiles and what actions to take if reptiles are found. The days prior to ground works commencing: <ul style="list-style-type: none"> Stage 1: During the first stage, the vegetation will be cut down to a height no lower than 20cm. Cutting will occur directionally, working towards suitable habitat to be retained along the northern and southern scrub SINC boundaries to encourage reptiles to these areas. This will be done under the supervision of a suitably qualified

				<p>ecologist holding a Natural England Licence for GCN (see Section 3.5).</p> <ul style="list-style-type: none"> ○ Stage 2: A second cut (the following day) will take it down to ground level. At this time, the supervising ecologist will do a fingertip search of any tussocky areas. Any potential refugia (i.e., deadwood, rubble, earthbanks) will also be searched and removed. Any potential reptiles encountered will be captured and relocated to areas of retained habitat on the margins of the site. This will be done under the supervision of a suitably qualified ecologist. • The ecologist on site will then hand search any denser areas of cover such as leaf litter where these areas are to be directly impacted upon. • All vegetation on site must be kept managed during the development to ensure that reptiles don't establish whilst works take place. • Materials must not be stored along the boundary vegetation on site and must be kept raised off of the ground (i.e., stored on pallets). <p><i>Depending on the habitat type present, a destructive search may also be required, as detailed below, under supervision of an ECoW</i></p>
		Destructive Search (if needed)	April – September	<ul style="list-style-type: none"> • Following the two-stage clearance, a destructive search may be carried out under the supervision of the suitably qualified ecologist depending on the habitat type present. Topsoil will be gently stripped to 100mm depth using a digger with a toothed bucket. The supervising ecologist will capture any reptiles found and relocate them to the retained boundary habitat. Please note, any suitable habitat within the root

				<p>protection zone will not have the topsoil stripped and will only be maintained cut at ground level.</p> <ul style="list-style-type: none"> These works will be undertaken during the active reptile period (April – October) when temperatures are above 10°C with sunshine. This area of habitat will be regularly managed and maintained unsuitable for reptiles for the duration of the works and will be cordoned off from the site to prevent vehicles entering the area. The arisings will be removed and any materials will be stored off the ground using pallets or skips if stored in the grassland to prevent sheltering reptiles.
		Creation of reptile Hibernacula / log piles	During habitat Management	<ul style="list-style-type: none"> 1 No. log / brash pile to be created in southern SINC buffer. It will be created from vegetation removal and/or habitat management on site. This may use a combination of logs, branches, brash and grass cuttings from the sensitive clearance above and any tree surgery. It should be located within areas receiving partial sun / partial shade.
Great Crested Newts (Section 3.5)	Prior to commencement	Vegetation Removal	April – September	<ul style="list-style-type: none"> As the ditch on site is dry between April – June, it is considered that GCN are likely absent from the site, in combination with lack of records and absence of nearby suitable waterbodies. Notwithstanding this, to ensure no adverse impacts to GCN, the precautionary measures outlined within Section 3.4.1 are considered to be feasible (as described in the Reptile section above). In the unlikely instance that a GCN is found during any works, all works must immediately stop and the project ecologist must be informed. Natural England will then need to be contacted in order to obtain a European Protected Species development licence before any further works proceed.
Hazel Dormice (Section 3.6)	Years 1 – 2	Vegetation Clearance	During the construction phase	<ul style="list-style-type: none"> Works to be undertaken in accordance with EPS License Works impacting the hedgerows situated around the site to be done in accordance with EPS license.

			Single stage clearance (April / May OR Oct / Sept) Two-stage clearance (Stage 1 Winter, Stage 2 Summer)	<ul style="list-style-type: none"> Works to be supervised by a suitably qualified ECoW, with works undertaken slowly, with periodic checks. Works to be carried out during a single stage clearance (April / May or Sept / Oct) OR in two stages (stage 1 Winter, stage 2 Summer) <p><i>Full methodology stated in Section 3.6.2.</i></p>
	Years 1 – 30	Lighting	Prior to occupation	<ul style="list-style-type: none"> A sensitive lighting scheme for the site will be implemented as described in Section 3.2.2 which includes specific recommendations for lighting types to mitigate against the impact of artificial lighting on nocturnal species, including further information on dark corridors in Section 3.2.3.1. Furthermore, where there is any light spill into the newly created and retained Dormouse habitats, this will also be kept to a minimum level of no higher than 0.5 Lux as per Fig 9.
	Year 1	Cat Predation	Prior to occupation	<ul style="list-style-type: none"> To minimise the risk of cat predation once the houses have been completed and the new occupants moved in, thorny species (such as <i>Prunus spinosa</i>, as listed within Section 3.2.3.2) will be planted up within the retained scrub along the SINC edges / newly planted mixed scrub on site and along the new western scrub dark corridor (with known Hazel Dormouse presence) at a minimum density of 1 per linear metre. As these species mature, they will provide a natural deterrent to cats moving into the Dormouse areas on site.
	Year 1	Responsibility	As required	<ul style="list-style-type: none"> The retained and newly created habitats will be managed for a minimum period of 12 months by the developer post completion of development, covering the first part of the establishment period. Ownership / management responsibilities will then be transferred to a management company which is as yet unappointed, when required.

	Prior to commencement	Installation of Dormouse Boxes	Prior to clearance	<ul style="list-style-type: none"> 20 No. dormouse boxes to be erected before clearance.
	Year 1	Habitat Enhancements	During Habitat Creation / Management	<ul style="list-style-type: none"> Planting new areas of native trees, hedgerows and shrub across the development to provide cover and additional foraging opportunities concentrating mainly around the site boundaries (with species selected of particular benefit to Dormice, as described in Sections 3.6.4 and 3.9.4) <p><i>For management / creation of these habitats please see below.</i></p>
	Year 2, then once Annually for 10 years	Dormouse Box Integrity Checks	Winter (December - February)	<ul style="list-style-type: none"> All ecological enhancements will be checked to ensure they do not require replacement The boxes will be checked at years 1 – 10 post clearance works by a licensed ecologist and the data submitted to the National Dormouse Monitoring Programme (NDMP).
Notable Birds of Conservation Concern (BoCC) (Section 3.7)	Year 1	Vegetation Removal	<p>March – August (depending on weather) with supervision</p> <p>September – February (depending on weather) without supervision</p>	<ul style="list-style-type: none"> In order to avoid disturbance of nesting birds or damage to their nests, clearance of any vegetation and demolition of the building will be undertaken outside of the bird nesting season (typically March – August dependent on weather). If this is not possible, sections to be cleared should be thoroughly checked by a suitability qualified ecologist immediately prior to clearance. If any active nests are found they should be left undisturbed with a suitable buffer of vegetation (5m) until the nestlings have fledged.
	Year 1	Installation of bird boxes and bricks	Anytime, prior to site operation	<ul style="list-style-type: none"> 6 No. compensatory bird boxes to be erected on site onto suitable retained trees within the woodland SINCs, comprising of the following: <ul style="list-style-type: none"> 2 No Schwegler 1B 2 No Schwegler 2H 2 No Schwegler 2M 10 of the newly built dwellings will incorporate one of The Ibstock 'Eco Home for Swifts' bricks. Alternatively, 4 No nest

				boxes in trees within the retained woodland or treelines will be sufficient
	Year 2, then once Annually	Bird Box/Brick Integrity Checks	Winter (December - February)	<ul style="list-style-type: none"> All ecological enhancements will be checked to ensure they do not require replacement
Hedgehogs (Section 3.9)	Year 1	Installation of Hedgehog Homes	Anytime prior to occupation	<ul style="list-style-type: none"> 1 No Hedgehog homes (such as the Igloo Hedgehog home or Hogitat Hedgehog house). This will be provided within or adjacent to areas of retained trees / shrubs and will provide a rapidly declining species with a place to shelter / hibernate. It is recommended that the hedgehog homes are maintained in perpetuity to ensure they remain suitable for use by Hedgehogs. The hibernation period for Hedgehogs typically spans from October – April, therefore it is recommended that the hedgehog homes are inspected every year in mid to late-April, after hibernation but prior to the nesting period
	Year 1	Gaps in garden fencing	Anytime prior to occupation	<ul style="list-style-type: none"> Garden fences within the site will also ensure at least 1 gap is present within the gravel boards 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.
	Year 2, then once Annually	Hedgehog Homes and Highways Integrity Checks	Mid to late April	<ul style="list-style-type: none"> All ecological enhancements will be checked to ensure they do not require replacement.
Habitat Retention / Creation / Enhancement & Management				
SINCs (Section 3.8)	Year 1	Site Preparation and Construction	Set up pre-commencement to works and retained throughout the works	<ul style="list-style-type: none"> During site preparation and construction, both SINCs will be fenced off from works using the methodology outlined within Section 3.1. Both SINCs (and other suitable Dormouse habitat) will be fenced off using Heras fencing or similar with a tarpaulin screen to prevent the spread of dust and access by machinery, following standard arboricultural tree protection measures. Access will not be permitted beyond this fencing by construction personnel. Access however will

				<p>be permitted for appropriate management of the scrub / woodland and enhancements measures, upon agreement with the Local Planning Authority.</p> <ul style="list-style-type: none"> • Access into the SINC's will be created and maintained as a single access track, cut into the vegetation, to allow for SINC management and maintenance for the landowner, as well to provide enhancement and mitigation measures. The access track will be maintained as a dirt path / track and will be minimally intrusive in terms of infrastructure. • A Construction Environmental Management Plan (CEMP) has been imposed through Condition 11 of Outline Planning Permission APP/20/0041. • Furthermore, it is recommended that a SINC / Woodland Management Plan is conditioned to ensure details of appropriate habitat management and monitoring are incorporated throughout the works, including enhancement measures.
	Year 1	Access and Signage	Prior to occupation	<ul style="list-style-type: none"> • A single interpretation board will be installed informing visitors of the SINC's conservation value. This will include images and text relevant to the areas wildlife and inclusive of a plan of the pathway and cautionary note in relation to disturbance of wildlife using the area. The interpretation board will be positioned near the cycle route at the south-east of the site.
	Year 1	Leaflets (Littering)	Prior to occupation	<ul style="list-style-type: none"> • In order to prevent littering from neighbouring properties into the SINC's or dark corridor buffers, leaflets will be provided to the residents upon taking up residence informing the new residents of the SINC's conservation value, with images and text relevant to the wildlife present on site.

	Year 1	Litter Bins	Prior to occupation	<ul style="list-style-type: none"> To further ensure littering does not occur from the public, it is recommended that litter bins will be installed, with at least one adjacent to each SINC. These will be emptied regularly by a management company.
	Year 1	Rubbish Clearance	Prior to occupation	<ul style="list-style-type: none"> Prior to works commencing upon the pathway and litterbins being installed clearance of all foreign objects, rubbish, unnatural debris, and litter etc will be cleared from the site including the SINC.
	Year 1	Predation	Prior to occupation	<ul style="list-style-type: none"> To minimise the risk of cat predation once the houses have been completed and the new occupants moved in, thorny species (such as <i>Prunus spinosa</i>, and other species listed within Section 3.2.3.2) will be planted up within the retained scrub along the SINC edges / newly planted mixed scrub on site and along the new western scrub dark corridor at a minimum density of 1 per linear metre. As these species mature, they will provide a natural deterrent to cats moving into the SINC and Dormouse areas on site.
	Years 2 – 30	Bat roost potential assessment prior to thinning	Anytime	<ul style="list-style-type: none"> The target trees to be removed are those showing signs of disease or poor growth; The specific target trees and areas of woodland will be determined by the supervising ecologist or arborist. Please note, all mature trees will need to be surveyed for PRFs that may be suitable for roosting bats. If any trees have PRFs, it is recommended they are retained if possible and alternative trees are selected for thinning. The newly planted woodland will not be subject to coppicing or thinning until at least years 10 – 15.
	Years 2 – 30	Selective Thinning for Understory Planting	Anytime, every 5 years	<ul style="list-style-type: none"> Selective thinning of poor-quality trees will re-invigorate the development of understory vegetation and woodland ground flora through increasing light levels and reduce competition from removing aggressive colonizing species.

				<ul style="list-style-type: none"> Selective thinning of mature trees/ shrubs will be conducted as required to promote a vigorous and dense understory, with the optimal canopy cover targeted at 75% to allow the greatest development of the understory to create a more diverse woodland.
	Year 1	Native Understory Species Planting	Late Autumn ideally, in suitable weather	<ul style="list-style-type: none"> The development of the understory and the overall woodland structure following the thinning operations will be encouraged through the planting of native species including Hazel (<i>Corylus avellana</i>) and Holly (<i>Ilex aquifolium</i>) (both species existing within the woodlands), creating favourable habitat for Bechstein's bats (Bat Conservation Trust, 2013) and foraging resources for Hazel Dormice. Planting of other native species is also recommended. To ensure the successful establishment of the newly planted trees, it is recommended that mycorrhizal treatment to the tree roots is conducted during the planting, to 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. In addition to the implementation of biodegradable rabbit/ deer guards to protect planted trees to ensure establishment, 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. Bark mulch is also recommended around each tree and will act as an effective management method to suppress weed colonisation.
	Year 1	Retention of Deadwood	During Management	<ul style="list-style-type: none"> Suitable arisings and deadwood generated from the thinning operations and vegetation clearance on site will be retained and used to create deadwood habitat piles within suitable locations throughout the woodland. Standing deadwood

				(with suitable trees reduced to a safe height) will also be created were possible to create additional features and opportunities for wildlife. The creation/ retention of deadwood features will provide a range of microhabitats that can be utilised by invertebrates, birds and small mammals.
	Year 1	Native Species Buffer Planting	Late Autumn ideally, in suitable weather	<ul style="list-style-type: none"> SINC boundaries will be infill planted with native scrub species such as Hawthorn, Blackthorn, Holly, and Dog-rose to provide a dense buffer between the SINC and the development, further increasing foraging resources as well as increasing vegetation along the existing commuting routes. As such, the poor-quality scrub lost will be compensated for through species-rich scrub planting.
	Years 2+	Monitoring	Anytime, every 5 years	<ul style="list-style-type: none"> Newly planted trees and shrubs will be monitoring to ensure establishment, with replacement planting/ seeding works undertaken as required.
	Years 2+	Invasive species	Routinely where required	<ul style="list-style-type: none"> Should any non-native invasive species establish, these will be removed / treated continuously until permanent eradication has been achieved.
	Years 2+	Coppicing	Rotationally every 5 - 7 years	<ul style="list-style-type: none"> The woodland will be divided into coupes with the understory coppiced on a 5-7 year rotation. Arisings will be utilised to create dead hedges to protect new growth from browsing pressure.
	Year 2, then annually	Walkovers	Annually	<ul style="list-style-type: none"> Annual walkovers of the site will be undertaken to identify potential risks to public health and safety, with appropriate remedial measures implemented.
	Years 2+	Risk Assessment	Every 3 years	<ul style="list-style-type: none"> A risk assessment of the trees within the site will be undertaken every three years with appropriate tree surgery operations implemented as required.
Species-rich Grassland	Year 1	Creation/ Enhancement of grassland	Ideally Autumn or Spring	<ul style="list-style-type: none"> Species-rich seed mixture to be sown, as well as the incorporation of native evening scented plants such as

(Section 3.9.6.1)				Bladder Campion (<i>Silene vulgaris</i>), Evening Primrose (<i>Oenothera biennis</i>), Fleabane, Soapwort (<i>Saponaria officinalis</i>), Honeysuckle (<i>Lonicera periclymenum</i>), and White Campion (<i>Silene latifolia</i>).
	Year 1	Year 1 Management	Routinely as required	<ul style="list-style-type: none"> Control annual weed growth by mowing to 50-75mm throughout the first year to minimise competition and weed seed production.
	Years 2+	Years 2 – 30 Management	Spring and mid to late Summer	<ul style="list-style-type: none"> Mow to 100mm in Spring. Leave to flower until late July / August. Conduct single hay cut after flowering with growth reduced to 50mm. Manage sections of each grassland parcel at different times from late June to the end of August.
	Years 2+	Removal of undesirable species	Winter i.e. October - February (outside of bird nesting season)	<ul style="list-style-type: none"> Targeted scrub, bracken and invasive species removal will be carried out as necessary.
Native Scrub (Section 3.9.6.2)	Year 1	Planting	Late Autumn ideally, in suitable weather	<ul style="list-style-type: none"> Native scrub species (seedlings, saplings, young shrubs) will be planted throughout the scrub area. The scrub planting will not be dense to avoid the area becoming overly vegetated, but it will be allowed to establish in sparse patches.
	Year 1	Year 1 Management	Winter Months	<ul style="list-style-type: none"> Scrub management will be undertaken annually (as needed) to maintain a suitable matrix between grassland, scrub and other habitats. This can be achieved by manual cutting as well as mechanical clearance.
	Years 2+	Invasive species removal	Winter i.e. October - February (outside of bird nesting season)	<ul style="list-style-type: none"> Removal of invasive species will be undertaken as necessary if they establish on site.
	Years 2+	Shrub replacement	Late Autumn	<ul style="list-style-type: none"> Any dead shrubs or areas that become sparse will be planted with new native shrubs, replacing like-for-like.

	Years 2+	Cutting back / thinning	May to mid-Sept	<ul style="list-style-type: none"> Avoid cutting taller vegetation and areas of shrubs. Any areas with a short sward may be mowed.
			Mid-Sept to end of Oct Nov to end of March	<ul style="list-style-type: none"> Any areas with a short sward may be mowed. For areas of tall sward or woody vegetation, treat 25% or less of favourable or marginal habitat. For areas of shrubs, cut a maximum of 50 m by 10 m segments, working less than 10% of the area of favourable or marginal habitat and leaving the worked area uncut for a minimum of 8 years. Maintain branch connectivity at intervals over rides and tracks.
			April	<ul style="list-style-type: none"> Avoid cutting taller vegetation and areas of shrubs. Any areas with a short sward may be mowed.
Tree planting (Section 3.9.6.3)	Year 1	Planting	Late Autumn	<ul style="list-style-type: none"> Plant native tree species. Apply Rootgrow or Bonemeal to encourage healthy root growth. Apply Mycorrhizal treatment to the tree roots.
	Year 1	Weed management	Routinely where required	<ul style="list-style-type: none"> Weeding will be undertaken around the base of the trees in all years. Wood chips or raked hay can be used to suppress weed growth, if desired, if deposited around the base of the scattered trees as mulch. 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.
	Years 2+	Weed management	Routinely as required	<ul style="list-style-type: none"> Remove weeds from a 1m area around the base of the trees for the first 2-3 years.
	Years 2+	Pruning	October	<ul style="list-style-type: none"> The trees will be subject to light pruning as required in October to ensure that they are developing healthy growth forms

	Years 2+	Monitoring	Every 3 years, late Winter – early Spring	<ul style="list-style-type: none">• Trees will be inspected by a suitably experienced arborist.• General health will be assessed with remedial action recommended as necessary.• Arborist will produce a monitoring report to be sent to the LPA.• Any plants that are removed, die, or become seriously damaged shall be replaced like-for-like in the next planting season.
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5.0 CONCLUSION

This document has been prepared discharge Condition 10 of the Outline Planning Application for the site, with the aim of bringing together all the existing ecological information for 'Land West of Hulbert Road, Havant', with the aim of providing a method statement for carrying out the works without causing harm to protected species and providing opportunities for mitigation and enhancement that are consistent with the aims of national and local planning policy.

Specifications are made within this document to detail the ecological enhancements for bats, badgers, reptiles, Great Crested Newts, hazel dormice, birds, non-statutory designated and statutory designated sites, and hedgehogs.

It is considered that, should all aspects of this document be implemented, adequate mitigation and enhancements can be achieved to minimise impacts on the existing population of protected and notable species on site.

6.0 REFERENCES

Bat Conservation Trust (2013). Bechstein's Bat. An introduction for woodland owners. 2nd edition 2013.

Collins, J. (ed) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)*. The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6.

Edgar, P., Foster, J., & Baker, J., (2010) *Reptile Management Handbook, Amphibian and Reptile Conservation (ARC)*

English Nature (2004). Woodland management advice for Bechstein's bat and barbastelle bat. English Nature Research Reports.

Gunnell, K., Grant, G., & Williams, C., (2012) *Landscape and Urban Design for Bats and Biodiversity*. Bat Conservation Trust.

Ecosupport Ltd (2025) *EclA – Land West of Hulbert Road, Havant* (January 2026)

Institute of Lighting Professionals / Bat Conservation Trust (2023) *Guidance Note 08/23 Bats and Artificial Lighting at Night*.

Natural England (2011) *Badgers and Development: A Guide to Best Practice and Licensing*

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

UKHab Ltd. (2023). UK Habitat Classification – Habitat Definitions Version 2.0 (July 2023)

WYG (2021), *Hulbert Road: Bat Activity Survey, Project number A096474*, Report on behalf of Trustees of the GHM Jackson 1972 Settlement.

WYG (2021), *Hulbert Road: Dormouse Report, Project number A096474*, Report on behalf of Trustees of the GHM Jackson 1972 Settlement.

WYG, (2019), *Hulbert Road: Ecological Appraisal, Project number A096474*, Report on behalf of Trustees of the GHM Jackson 1972 Settlement.

WYG (2020), *Hulbert Road: Environmental Impact Assessment, Project number A096474*, Report on behalf of Trustees of the GHM Jackson 1972 Settlement.

WYG (2019), *Hulbert Road: Reptile Report, Project number A096474*, Report on behalf of Trustees of the GHM Jackson 1972 Settlement.

7.0 APPENDIX

Appendix A – Ecological Enhancement Map



Legend

- Site Boundary
- Hedgehog Highways
- 2 No. Schwegler 1FW Hibernation Bat Box
- 2 No. Schwegler 2FN
- 2 No. General-Purpose Wood Concrete Bat Box
- 2 No. Large Multi Chamber WoodStone Bat Box
- 2 No. Vivara Pro Marimare Large WoodStone Bat Box
- 2 No. Vivara Pro Large Multi Chamber WoodStone Bat Box
- 1 No. Log / Brash Pile
- 20 No. Dormouse Boxes
- 2 No. Schwegler 1B
- 2 No. Schwegler 2H
- 2 No. Schwegler 2M
- 1 No. Hedgehog Home
- 10 No. Ibstock 'Eco Home for Swifts' Bricks
- 10 No. Bat Brick
- 1 No. Trellis



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Map	Enhancement Map
Site	Land West of Hulbert Road, Havant
Client	BRiCS Development
Date	16/02/2026

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