



PRELIMINARY ECOLOGICAL APPRAISAL (PEA)

LAND TO THE SOUTH OF BOWESDEN LANE

BOWESDEN LANE, SHORNE, KENT

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1. INTRODUCTION

1.1 This report provides a summary of findings and recommendations for a Preliminary Ecological Appraisal.

PURPOSE OF REPORT

1.2 The primary objective of this Preliminary Ecological Appraisal (PEA) is to identify ecological constraints and opportunities to inform project design

1.3 The objectives of the report are to:

- Describe the current ecological conditions present within the Site.
- Identify any key ecological constraints to the proposed development both with regards protected species and sites.
- Identify where mitigation will allow significant ecological effects to be avoided or minimised wherever possible.
- Identify any further ecological surveys required in order to assess the possible impact on protected and important / notable species.
- Recommend ecological enhancements to be incorporated into the development proposals.

1.4 **This report provides pre-application advice only and is not intended for formal submission to the Local Planning Authority.**

1.5 To support a planning application, this information must be incorporated into a full Ecological Impact Assessment (EclA). The EclA can be finalised once all recommended protected species surveys are complete and final mitigation or compensation measures are confirmed. If no further surveys are required, the EclA may be produced once development plans are finalised and mitigation strategies are agreed.

Table 1. Site Location

Site address	Land to the South of Bowesden Lane, Shorne, Gravesend, Kent, DA12 3LA
Grid reference (at centre)	TQ 69741 70021
Local Planning Authority	Gravesham LPA
County	Kent
National Character Area	North Kent Plain

REPORT SCOPE AND EXCLUSIONS

1.6 This report aims to provide general advice on ecological constraints associated with the development of the Site, it does not include detailed information on particular species or species groups but instead makes recommendations for further, species-specific surveys required.

1.7 Although any invasive plant species recorded during the PEA survey were noted, this survey does not comprise a Schedule 9 plant survey.

THE MITIGATION HIERARCHY

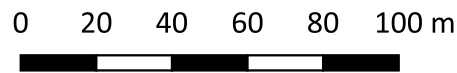
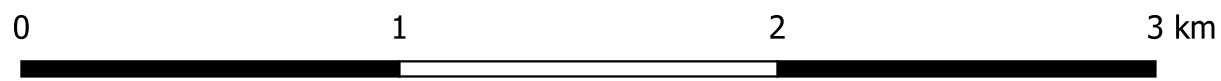
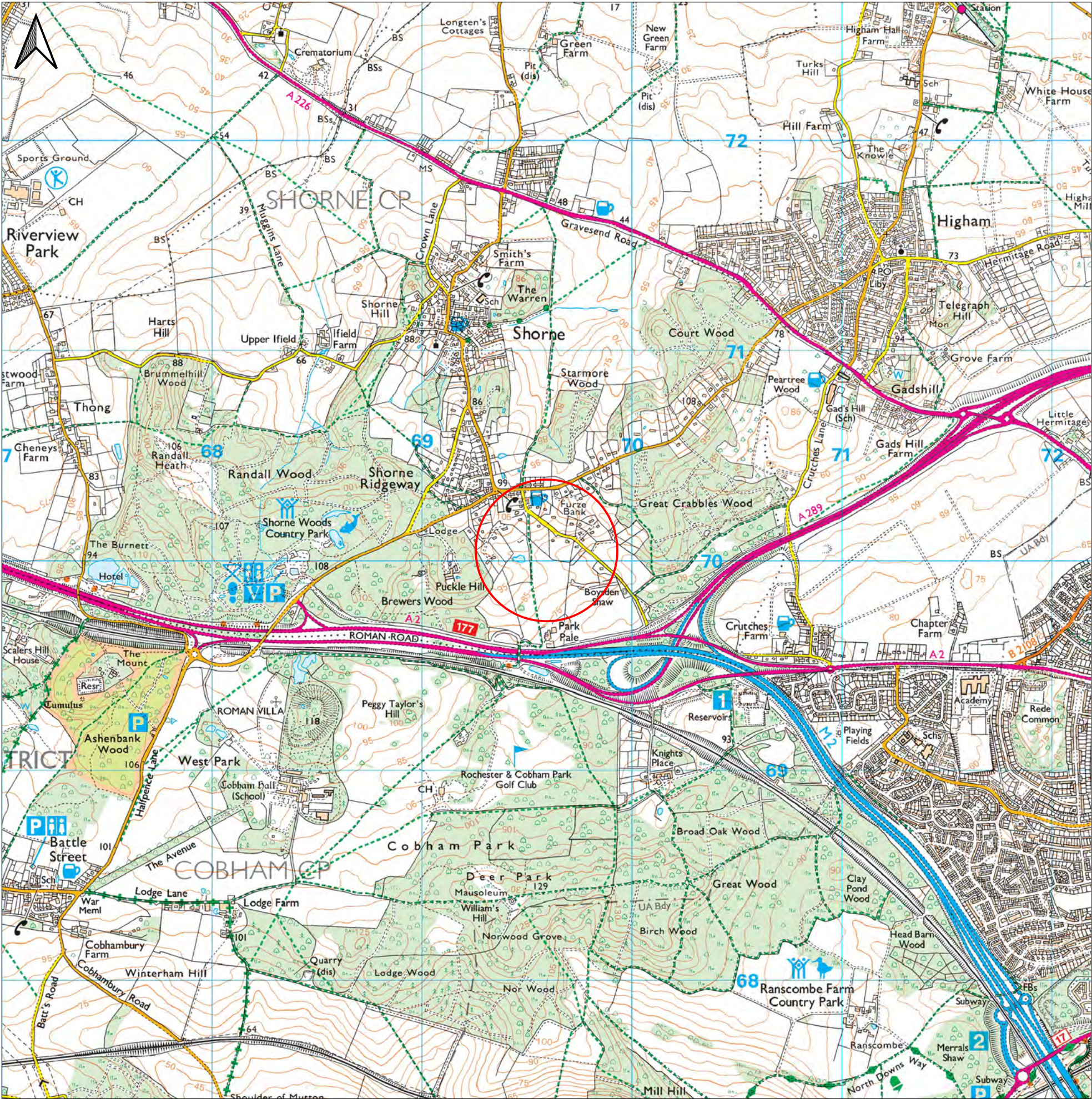
- 1.8 A process should be adopted within the design stage of the project to avoid, mitigate and compensate for potential negative ecological impacts, this process is known as the 'mitigation hierarchy'.
- 1.9 Negative ecological impacts should be avoided wherever possible, for example by making amendments to the proposed layout. Where avoidance is not possible, mitigation to reduce the impact should be considered, for example through the avoidance of sensitive seasons, such as the bird nesting season.
- 1.10 Avoidance and mitigation is most effective when considered as early as possible within a scheme, allowing for measures to be integrated into the design, an appropriate timeline to be developed and for alternatives to be considered.
- 1.11 If all measures have been considered for avoidance and mitigation, as last resort compensation measures should be proposed to address unavoidable and residual impacts.

DATA VALIDITY AND RE-SURVEY REQUIREMENTS

- 1.12 In accordance with CIEEM guidance, the ecological data in this report is considered valid for 12 months from the survey date. Due to the transient nature of protected species and potential habitat succession, a site walkover may be required after this period to confirm that conditions within the Site remain unchanged.
- 1.13 If significant changes occur or the 12-month threshold is exceeded, an updated Ecological Appraisal may be necessary to ensure the final EclA remains robust for planning submission.**

LIMITATIONS

- 1.14 There were no limitations associated with the preliminary ecological appraisal survey.



 PROMOTING BIODIVERSITY INTEGRATION	
Site location plan	
Land the South of Bowesden Lane, Shorne, Gravesend, Kent, DA12 3LA	
Drawing ref:	2341_Figure 1
Revision:	-
Date:	15/07/2026
Scale:	1:20,000 (Main canvass)
Paper size:	A3

3. CURRENT ECOLOGICAL CONDITIONS

SITE OVERVIEW

- 3.1
- The Site comprises an area of well maintained, short sward modified grassland bound along the east and west by treelines. There are two buildings within the Site, and an area of scrub to the far south west of the Site.
- 3.2
- A Habitat Plan is included within Appendix 3.

DESIGNATED SITES

- 3.3
- The below table details the location of designated sites within the Zone of Influence (ZoI) and an assessment as to the requirement for mitigation and / or further survey work and assessment.

Table 2. Summary of the designated sites assessment.

Designation	ZoI	Site name	Distance/ direction	Qualifying features	Assessment	Further survey work / Assessment required?	Mitigation required?
Ramsar	7.2km	Thames Estuary and Marshes	3.3km north	Qualifies under Criterion 2 for supporting one endangered plant species and at least 14 nationally scarce plants of wetland habitats. The site also supports more than 20 British Red Data Book invertebrates. Qualifies under Criterion 5 for supporting large assemblages of waterfowl of international importance in winter. Qualifies under Criterion 6 for supporting species/populations of wetland birds that occur at levels of international importance.	The qualifying features of this Ramsar site are unlikely to be impacted directly by the proposed residential development of the site due to the small scale and nature of proposals and the distance between sites. However, due to the creation of a residential dwelling, increased recreational pressure may impact the designated Site.	Yes	Yes

Designation	Zol	Site name	Distance/ direction	Qualifying features	Assessment	Further survey work / Assessment required?	Mitigation required?
SPA	7.2km	Thames Estuary and Marshes	4.4km north	Article 4.1 of the Habitats Directive for supporting populations of European importance of over wintering hen harrier (<i>Circus cyaneus</i>) and breeding avocet (<i>Recurvirostra avosetta</i>). Article 4.2 of the Habitats Directive for supporting dunlin (<i>Calidris alpina alpina</i>), red knot (<i>Calidris canutus</i>), black-tailed godwit (<i>Limosa limosa islandica</i>), grey plover (<i>Pluvialis squatarola</i>) and redshank (<i>Tringa totanus</i>). The site regularly support on passage common ringed plover (<i>Charadrius hiaticula</i>). Article 4.2 of the Habitats Directive for supporting an internationally important assemblage of birds.	The qualifying features of this SPA are unlikely to be impacted by the proposed residential development of the site due to the small scale and nature of proposals and the distance between sites. However, due to the creation of a residential dwelling, increased recreational pressure may impact the designated Site.	Yes	Yes
SAC	7.2km	North Downs Woodlands	4.7km south	Qualifies under the Habitats Directive for supporting beech forests (<i>Asperulo-fagetum</i>) and English yew (<i>Taxus baccata</i>) woods, an Annex I habitat in the British Isles. Qualifies under the Habitats Directive for supporting Annex I habitat present as a qualifying feature, but not a primary reason for selection of this site semi-natural dry grasslands and scrub-land facies on calcareous substrates (<i>Festuco-Brometalia</i>), and is an important site for a range of orchids.	The qualifying features of this SAC are unlikely to be impacted by the proposed residential development of the site due to the small scale and nature of proposals and the distance between sites.	No	No

Designation	ZoI	Site name	Distance/ direction	Qualifying features	Assessment	Further survey work / Assessment required?	Mitigation required?
SAC	7.2km	Peters Pit	7.2km south	Qualifies under the Habitats Directive for supporting Annex II species great crested newt (<i>Triturus cristatus</i>).	The qualifying features of this SAC are unlikely to be impacted by the proposed residential development of the site due to the small scale and nature of proposals and the distance between sites.	No	No
SSSI	2km	Great Crabbles Wood	0.2km north east	Serves as an excellent representative example of ancient semi-natural woodland developing over North West Kent Tertiary sediments. The site features a complex geological succession of strata overlying Upper Chalk which gives rise to highly diverse soil profiles. This variation directly influences the unique composition of the tree canopy, shrub layer, and ground flora across the site. The diverse habitats support a variety of nationally scarce botanical species; notably, the calcareous southern boundary and chalk outcrops provide a sanctuary for rare orchids and flora, including the lady orchid (<i>Orchis purpurea</i>), man orchid (<i>Aceras anthropophorum</i>), bird's nest orchid (<i>Neottia nidus-avis</i>), white helleborine (<i>Cephalanthera damasonium</i>), wild liquorice (<i>Astragalus glycyphyllos</i>), and bird's foot (<i>Ornithopus perpusillus</i>).	The qualifying features of this SSSI are unlikely to be impacted by the proposed residential development of the site due to the small scale and nature of proposals and the distance between sites.	No	No

Designation	ZoI	Site name	Distance/ direction	Qualifying features	Assessment	Further survey work / Assessment required?	Mitigation required?
SSSI	2km	Shorne and Ashenbank Woods	0.5km south west	The site comprises a complex of ancient and plantation woodland, and include a variety of stand-types associated with Tertiary gravels, clays and sands. The site supports an important and diverse invertebrate fauna. Rare species include the beetles (<i>Mordella holomelaena</i> and (<i>Peltodytes caesus</i>). The woodland breeding bird community includes hawfinch (<i>Coccothraustes coccothraustes</i>), marsh tit (<i>Poecile palustris</i>) and all three British woodpeckers.	The qualifying features of this SSSI are unlikely to be impacted by the proposed residential development of the site due to the small scale and nature of proposals and the distance between sites.	No	No
LWS	1km	Court Wood etc Shorne	0.3km south	Court Wood and Shorne Woods are designated as a Local Wildlife Site (LWS) due to their immense value to county-level biodiversity as a significant fragment of ancient semi-natural woodland. This non-statutory designation protects the site within local planning policies, ensuring its distinctive local plant communities, fungi, and wildlife populations are preserved and connected to the wider Kent ecosystem.	The qualifying features of this LWS are unlikely to be impacted by the proposed residential development of the site due to the small scale and nature of proposals and the distance between sites.	No	No

HABITATS

Habitats of Principal Importance

- 3.4 There are no Habitats of Principal Importance within or adjacent to the Site.
- 3.5 No further survey work or mitigation measures are required for HPI.

PROTECTED SPECIES

3.6 The table below provides a summary of the assessment and recommendations for species within the Zone of Influence based on current / likely proposals.

Table 3. Protected Species Assessment

Ecological Feature		Summary of Findings / Assessment	Further survey work / Assessment required?	Mitigation required?
Bats	<i>Buildings</i>	Within the Site there are two buildings; B1, a single storey partially collapsed stables and B2, a metal container. At the time of the survey, building B1 had been partially demolished and therefore accurate assessment of potential roost features could not be undertaken. The remaining building is assessed as “NONE” for roosting bats due to large open spaces and lots of light spill within the interior. The container was assessed as “NONE” for roosting bats, due to the material of the container and the lack of external PRFs. Bats do not favour metal buildings for roosting due to the poor thermal regulation of the material, and therefore extreme temperature fluctuations.	No	No
	<i>Trees</i>	Due to the number of trees present within the Site, a ground level roost assessment (GLTA) of trees was not included within the scope of the PEA site visit.	Yes	Informed by further survey work
	<i>Foraging and commuting habitat</i>	Habitats within the Site including open grassland, two treelines, and scrub provide suitable foraging and commuting habitat for bats. Adjacent to the Site, there is a woodland adjoining the south western corner and extending into Furze Bank woods, providing habitat connectivity to Great Crabbles Wood and Dunbar’s Wood. Due to the size and scale of proposals, bat populations within the locality are unlikely to be negatively affected. However, in the absence of suitable mitigation measures, individual foraging and commuting bats may be impacted.	No	Yes

Ecological Feature	Summary of Findings / Assessment	Further survey work / Assessment required?	Mitigation required?
Hazel dormice	Within the Site, there are two treelines situated along the eastern and western boundaries. Species present within the treelines comprise; oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>), elder (<i>Sambucus nigra</i>), hawthorn (<i>Crataegus monogyna</i>), plum (<i>Prunus domestica</i>), Cretan bryony (<i>Bryonia cretica</i>), cherry laurel (<i>Prunus laurocerasus</i>), bramble (<i>Rubus fruticosus</i>), Lawson's cypress (<i>Chamaecyparis lawsoniana</i>), holly (<i>Ilex aquifolium</i>), and common laburnum (<i>Laburnum anagyroides</i>). The treeline along the west boundary (H2) is set to be retained within proposals, however, the treeline along the eastern boundary (H2) is to be partially removed (approx 60m). Due to the direct connectivity to highly suitable habitats for hazel dormouse, including Great Crabbles Wood SSSI, designated for its composition of broadleaved coppicing, the presence of hazel dormouse within the Site cannot be ruled out.	Yes	Informed by further survey work

Ecological Feature		Summary of Findings / Assessment	Further survey work / Assessment required?	Mitigation required?
Great crested newt		<i>Aquatic habitat:</i> Within the Site there is no suitable aquatic habitat for Great Crested Newt (GCN). Within the surrounding habitat, there are two waterbodies within 250m of the Site; WB1 which is a pond located approximately 175m north and WB2 which is a pond located approximately 200m south west. There are barriers to dispersal between the site and WB1, including a road and residential property, however, WB2 is directly connected to the Site by woodland. <i>Terrestrial habitat:</i> Within the Site there is terrestrial habitat of low suitability for GCN including short, well managed grassland, boundary scrub and base of treelines. Due to the limited connectivity to waterbodies and level of suitability within the Site, GCN may enter the Site on occasion whilst foraging.	No	Yes
Riparian Mammals	Otter	There is no habitat suitable for otter, beaver or water vole within, or in close proximity the site. No further survey work or mitigation is required for riparian mammal	No	No
	Beaver		No	No
	Water vole		No	No
Badger		Within the southern corner of the Site, there is a mammal hole, likely to be badger due to size and characteristic, situated upon a mound of earth.	Yes	Informed by further survey work

Ecological Feature	Summary of Findings / Assessment	Further survey work / Assessment required?	Mitigation required?
Birds	Due to the habitats present, no Schedule 1 birds are expected to nest within the Site. Features within the Site, such as buildings, trees and scrub, could provide suitable habitats for Red and Amber listed bird species, as well as common and widespread bird species. The wider landscape provides a high habitat value for nesting birds due to the presence of woodland parcels, which are connected to the Site by treelines and hedgerows. Due to the size and scale of development, proposals are not likely to impact bird populations in the locality.	No	Yes
Reptiles	Data obtained from Krag include recent records of slow worm, grass snake, and common lizard. The short sward length, regularly cut modified grassland provides low suitability for reptiles, which are unlikely to be present within this habitat. The base of the treelines, which support a moderate under-storey, and scrub in the southern corner, may provide some foraging and commuting habitat for reptiles. In the absence of suitable mitigation measures, individual reptiles may be harmed during works.	No	Yes
Invertebrates	Habitats within the Site, such as the treelines, grassland, and boundary scrub provide suitable habitat to support a range of common and widespread invertebrates. Protected or rare invertebrates are unlikely to be present due to the habitat types present.	No	No
Flora	Due to the past and present management of the Site, the areas of habitat are unlikely to support protected plant species. No evidence of Schedule 9 plants was found during the Site survey.	No	No
Other	The habitats on Site, such as open grassland, boundary scrub and base of treelines provide suitable shelter and foraging opportunities for hedgehogs which have connectivity to the wider landscape. Hedgehogs may therefore be present within the Site.	No	Yes

4. RECOMMENDED FURTHER SURVEY WORK / ASSESSMENT

DESIGNATED SITES

4.1 The below table provides an overview of further assessment required to inform suitable mitigation and compensation measures for designated sites.

Table 4. Recommended further assessment

Designated Site	Survey / Assessment
Thames Estuary and Marshes Ramsar & SPA	Due to the increased risk of recreational pressure and disturbance to overwintering bird populations generated by new housing, the Local Planning Authority (LPA) will need to undertake an Appropriate Assessment to confirm whether the scheme is required to join the North Kent Strategic Access Management and Monitoring Strategy. All residential schemes within the designated 6km Zone of Influence to provide a financial contribution toward the North Kent Strategic Access Management and Monitoring Strategy (SAMMS). This tariff, currently set at £350.16 per dwelling (subject to annual indexation updates), directly funds the strategic visitor management, wardening, and educational initiatives delivered by Bird Wise North Kent. Securing this mitigation contribution via a Section 106 agreement or Unilateral Undertaking ensures the development complies with the Conservation of Habitats and Species Regulations and reduces potential indirect recreational impacts to a negligible level.

PROTECTED SPECIES

4.3 The below table provides an overview of recommended species specific survey work required to inform suitable mitigation and compensation measures.

Table 5.

Ecological Feature		Survey / Assessment	Survey timing	Notes
Bats	Trees	A ground level tree assessment (GLTA) of all trees to be impacted by proposals on Site should be carried.	1no. survey carried out at any time of year.	N/a

Ecological Feature	Survey / Assessment	Survey timing	Notes
Hazel dormice	A presence / likely absence survey should be undertaken using nest tubes and/or footprint tunnels in accordance to the methods detailed in the Dormouse Mitigation Handbook, 2025	Surveys will continue (between April to November) until either dormouse presence is confirmed, or until the minimum survey effort required is met to reach a probability of detection of >95% (when using 50 tubes in “good” quality habitat).	N/a
Badger	Camera trap surveillance to ascertain whether badgers currently use setts identified and if present, the level of activity. A thorough search of the Site to assess whether further badger setts are present.	For a period of at least 21 days.. The optimum survey period is February to April and October. If required, surveys can be undertaken outside these favourable periods but field signs will be both less abundant and less obvious.	N/a

5. RECOMMENDED MITIGATION MEASURES

- 5.1 The table below provides a summary of the likely mitigation measures that will be required for species and habitats within the Zone of Impact. These mitigation measures are for information and to guide the design of the proposals.
- 5.2 Additional mitigation measures may be required, depending on the results of recommended further survey work (see Section 4 above).
- 5.3 Mitigation measures may need to be amended depending on the final layout of the proposed development and associated impacts to ecological features.
- 5.4 Full mitigation measures should be included within the EcIA report, following confirmation of the project design.

Table 6. Recommended mitigation measures

Ecological Feature		Summary of Mitigation measures	
		Prior to the start of construction works	During and post construction works
Bats	Foraging and commuting habitat	N/a	To reduce the low potential, indirect impact on foraging and commuting bats to negligible, a bat-sensitive lighting strategy should be implemented in accordance with BCT/ILP (2023) guidance. This includes preventing light spill onto boundaries by utilizing horizontally mounted, zero-upward-tilt LED luminaires with a warm white light source (2700Kelvin or lower) and no UV elements. Internal lighting near windows should be recessed, waymarking paths should use low-output cowled inground markers, and security lights should be set on short motion-sensor timers (2 minutes) or a Central Management System, while avoiding bollard or low-level directional lighting. Where necessary, accessories like baffles, hoods, or louvres should be deployed to direct light strictly where needed and eliminate glare.

Ecological Feature	Summary of Mitigation measures	
	<i>Prior to the start of construction works</i>	<i>During and post construction works</i>
Great crested newt	To reduce the probability of killing or injuring great crested newts from very low to negligible, a precautionary mitigation strategy will be implemented during the construction phase. Grass within the construction zone should continue to be regularly mown to maintain a short sward height before and during works, and groundworks will be completed efficiently to prevent spoil heaps from remaining on-site for extended periods.	All building materials will be stored on raised pallets; these combined measures will ensure no temporary sheltering or resting places are created for newts within the development footprint.
Birds	To avoid impacts on nesting birds, works to vegetation and buildings should be undertaken outside the nesting season (March to September) wherever possible. If works are unavoidable between March to September, a nesting bird survey must be conducted by a suitably experienced ecologist within 48 hours prior to impacts, alongside an ecological watching brief during clearance.	If active nests are identified, all works likely to damage or disturb them must cease until the young have fully fledged, which may cause significant development delays due to multiple-brooding species (e.g., blackbirds and robins) nesting continuously over several months.
Reptiles	To avoid impacts on individual reptiles, grassland margins and areas within the site will continue to be maintained at a sward height of no more than 150mm.	Remaining vegetation should be reduced to ground level sensitively using hand tools during warm weather (at least 12°C) to allow reptiles to naturally disperse into retained habitats. All vegetation arisings will be immediately removed from the site to prevent reptiles from utilising them as temporary refuge.

Ecological Feature	Summary of Mitigation measures	
	<i>Prior to the start of construction works</i>	<i>During and post construction works</i>
Other	To avoid harm to hedgehogs, contractors should receive a pre-works toolbox talk, and vegetation, or debris will be cleared carefully by hand.	If an independent hedgehog is found between April and October, it should be relocated to a safe area outside the development site; however, if a nesting hedgehog with young (May–October) or a hibernating individual (November–March) is encountered, works must stop and an ecologist contacted immediately. During construction, excavations should be covered nightly or fitted with escape ramps/planks, and any individuals found will be relocated safely. Post-development, close-board fencing should include small hedgehog openings in the gravel boards, with at least one entrance hole integrated into each boundary to maintain habitat connectivity.

6. SUGGESTED ENHANCEMENT MEASURES

- 6.1 It is recommended that ecological enhancement measures are included as part of development proposals. Possible habitat enhancement measures are outlined below.

TREE PLANTING

- 6.2 Tree planting in the garden space of the proposed new dwelling would benefit a variety of wildlife species, including nesting birds, foraging bats, and pollinating invertebrates. Trees that produce fruits, such as *Prunus* and *Crataegus* species, would provide nectaring opportunities for invertebrates in the spring, as well as foraging opportunities for frugivorous birds throughout the summer, autumn and winter.

BAT BOXES

- 6.3 Development provides an opportunity to enhance the Site for bats via provision of roosting opportunities.
- 6.4 Bat boxes, such as 2F Schwegler Bat Box (General Purpose) or similar, could be installed on mature trees within the Site. Boxes will be located at least 3m above ground level and preferably over 4m and in a variety of aspects.

BIRD BOXES

- 6.5 Bird boxes, including for house sparrow and starlings, could be integrated into the new building. Boxes should be located 2-4m in height and arranged so that loose colonies of house sparrows are encouraged. Bird boxes should be located close to eaves and on the north or east elevations to avoid direct sunlight.
- 6.6 1no. integrated swift box, such as the Ibstock Swift Eco Habitat, or similar, could be incorporated into the fabric of the eastern elevation of the proposed dwelling to be erected in the centre of the Site, at least 4.5m above the ground. Alternatively, 1no. integrated swift box could be installed upon the south eastern elevation of the pool house.

BEE BRICKS

- 6.7 To increase the nesting opportunities for pollinating solitary bees, bee bricks (Green&Blue, or similar) could be incorporated into the fabric of new dwelling. This could encourage crevice-dwelling bees, such as red mason bees (*Osmia bicornis*) and patchwork leaf-cutter bees (*Megachile centuncularis*), to nest within the Site.
- 6.8 The bricks should be positioned on a southern elevation at a minimum height of 1m from ground level. Cavities with failed nests should be cleared out annually (if required) in October, after the egg laying season has finished.

WILDLIFE-FRIENDLY FENCING

- 6.9 Wildlife-friendly fencing could be installed around the boundaries of the garden space for the new dwelling, to allow terrestrial animals, such as hedgehog and common toad, to move throughout the Site and retain habitat connectivity to the surrounding landscape.

7. APPENDIX 1: METHODOLOGY

DESK STUDY

Zone of Influence

- 7.1 The 'zone of influence' for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities (CIEEM, 2017a). This report provides an assessment of the effects of a proposed development on protected or ecologically valuable sites, habitats or species where these effects extend beyond the development boundary of the Site.

Designated sites

- 7.2 Potential impacts to designated sites, including National Site Network (NSN) sites and SSSIs, have been considered.
- 7.3 The Multi Agency Geographic Information for the Countryside (MAGIC) website was used to obtain information about statutory designated sites of international importance such as Special Protection Areas (SPA) within 7.2km of the Site.
- 7.4 Information was obtained about statutory designated sites of national importance such as Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) within 2km of the Site and ancient woodland within 500m of the Site.
- 7.5 Kent Landscape Information System (KLIS) was used to identify Local Sites, such as Local Wildlife Sites (LWS), located within 1km of the Site.

Data search

- 7.6 Records were obtained from the Kent Reptile and Amphibian Group (KRAG) within 1km of the Site in June 2026.
- 7.7 Ordnance survey maps, the Multi Agency Geographic Information for the Countryside (MAGIC) website and aerial images were used to identify waterbodies within 250m of the Site boundary. MAGIC Map was also used to obtain information on locations where European Protected Species Mitigation (EPSM) Licences for great crested newt, roosting bats and dormice have been issued by Natural England within 1km of the Site.

FIELD STUDY

- 7.8 The table below shows the survey details for the Preliminary Ecological Appraisal Site visit.

Table 7. Survey details

Survey date	24th June 2026
Surveyor	Jane Whittington BSc (Hons)
Time on site	10:15am - 12:40pm
Weather	29°C, 0% cloud cover, BF1 calm breeze, no rain, ground dry

UK Habitat Classification 2.0

- 7.9 Habitats within the Site were mapped and classified in accordance with the The Professional Edition of the UK Habitat Classification 2.0.
- 7.10 There are 5 levels of hierarchy, which provide an increasing level of detail. For the purpose of this assessment, habitats have been mapped for Primary Habitats up to Level 4.
- 7.11 Secondary codes have been assigned, where appropriate. These Secondary Codes allow recording of additional information, linked to the Primary Habitats. In some cases, habitat types are defined by a Secondary Code only, where Primary Habitats do not sufficiently represent the habitat present.

Protected species and habitats

- 7.12 During the survey the species and habitats identified within the Site were recorded. An assessment was also made as to the presence or potential presence of protected, important or Nationally Rare species.
- 7.13 Protected species and habitats considered include those listed under the Schedules of the Conservation of Habitats and Species Regulations 2017 and of the Wildlife and Countryside Act 1981.
- 7.14 In addition, an assessment has been made as to the possible impacts of the proposed development on nature conservation interests, in accordance with information relevant to the National Planning Policy Framework and Local Planning Policy.

Bats

- 7.15 The suitability of roosting habitat and foraging and commuting habitat within the Site was assessed following recommendations provided within Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th edition, Bat Conservation Trust (Collins, 2023).

Preliminary Roost Assessment (buildings and structures)

- 7.16 A systematic search of the exterior of buildings within the Site was undertaken to identify potential bat access points and roosting places and to locate any evidence of bats such as bat droppings, urine staining and fur-oil staining. The inspection included exterior features of the buildings, such as sills, window panes, walls and the ground beneath potential access points to look for signs of bats, such as droppings. Buildings were categorised as none, negligible, low, moderate or high suitability.

Ground Level Tree Assessment

- 7.17 Due to the number of trees present within the Site, a ground level roost assessment (GLTA) of trees was not included within the scope of the PEA site visit.

Badger

- 7.18 During the Site survey any badger field signs observed were recorded and mapped. These included; sett entrances, latrines, pathways, snuffle holes, footprints, and push-throughs.

Reptiles

- 7.19 The suitability of habitats within the Site to support reptiles was assessed during the Preliminary Ecological Appraisal Site visit. Any incidental sightings were recorded.

Hazel dormice

- 7.20 The suitability of habitats within the Site to support hazel dormice was assessed during the Preliminary Ecological Appraisal Site visit. Any incidental sightings or field signs, such as natural nests, were recorded.

Great crested newt

- 7.21 The level of survey effort and data collection required to support a Planning Application or European Protected Species Mitigation (EPSM) Licence for great crested newts is relative to the potential impact. For EPSM Licence applications, typically ponds within 250m of the construction zone are surveyed for the presence (and population assessment) of great crested newts.
- 7.22 Following the guidance of Natural England (2021) waterbodies located beyond 250m from the development are only surveyed if all of the following conditions are met:
- Ponds have potential to support a large great crested newt population;
 - The development footprint contains particularly favourable habitat, especially if it constitutes The majority available locally;
 - The development would have a substantial negative effect on that habitat; and
 - There is an absence of dispersal barriers.
- 7.23 Based on the listed criteria above, a proportionate survey area for the Site includes the assessment of any ponds within 250m of the construction zone.

Riparian mammals

- 7.24 The suitability of habitats within the Site to support riparian mammals (such as beaver, otter and water vole) was assessed during the Preliminary Ecological Appraisal site visit. Any incidental sightings or field signs were recorded.

Habitats and Species of Principal Importance

- 7.25 An assessment was made as to the likely presence of Habitats and Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Important hedgerows

- 7.26 Hedgerows and treelines within the Site were assessed as part of the habitat survey to determine whether they constitute as 'important' hedgerows under the Hedgerow Regulations Act 1997 (as amended). Qualifying features include number of woody species present, the presence of an adjacent bank, an adjacent public right of way and / or trees within the hedgerow.

8. APPENDIX 2: SUMMARY OF PLANNING POLICY AND LEGISLATION

BIODIVERSITY NET GAIN

- 8.1 Schedule 14 of the Environment Act 2021 makes provision for biodiversity gain to be a condition of planning permission in England. The Act amends the Town and Country Planning Act 1990 so that all planning permissions (except a small number of exemptions) will be subject to a pre-commencement planning condition requiring a Biodiversity Gain Plan to be approved by the Local Planning Authority (LPA). The biodiversity gain plan must demonstrate a net gain of at least 10% in the biodiversity value of the development site.
- 8.2 The Environment Act 2021 sets out the following key components of mandatory biodiversity gain:
- Minimum 10% gain required calculated using the Biodiversity Metric
 - Delivered on-site, off-site or via a new statutory biodiversity credits scheme
 - On-site and off-site habitat secured for at least 30 years via planning obligations or conservation covenants
 - National register for net gain delivery sites

CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017

- 8.3 Species afforded protection under the Conservation of Habitats and Species Regulations 2017 are also known as European Protected Species. European Protected Species include all species of bats, beaver, otter, hazel dormice, great crested newt.
- 8.4 European Protected Species relate to those listed within the Conservation of Habitats and Species Regulations 2017 and are afforded the highest level of protection. These species are also protected under the Wildlife and Countryside Act 1981. Taken together this level of protection makes it an offence to:
- Deliberately capture, injure or kill any wild animal of a European protected species,
 - Deliberately disturb wild animals of any such species
 - Deliberately take or destroy the eggs of such an animal
 - Damage or destroy a breeding site or resting place of such an animal
- 8.5 Disturbance of animals includes in particular any disturbance which is likely:
- To impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or
 - In the case of animals of a hibernating or migratory species, impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species to which they belong
- 8.6 The legislation requires that any derogation be dealt with by licencing through an appropriate licensing body (Natural England in England). In determining whether a licence can be granted the licensing body must apply the requirements of Regulation 53, and in particular, the three tests:
1. Regulation 55(2)(e) states: a licence can be granted for the purposes of “preserving public health

or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”.

2. Regulation 55(9) states: The relevant licensing body must not grant a licence under this regulation unless it is satisfied—

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

PLANTS

8.7 A number of plant species are protected under Schedule 8 of the Wildlife and Countryside Act 1981. This Schedule lists plant species that are protected under Section 13, which protects from picking and sale of plants or parts of plants listed in Schedule 8.

BIRDS

8.8 All nesting birds are protected under the Wildlife and Countryside Act 1981. With certain exceptions, it is an offence to:

- Kill, injure or take wild birds;
- Take, damage or destroy the nest of wild birds while in use or being built;
- Take or destroy the eggs of wild birds;
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Birds of Conservation Concern

8.9 After reviewing the status of all bird species in the UK, the leading non-governmental bird conservation organisations agreed priorities for bird conservation. This led to the publication of a list of Birds of Conservation Concern. Bird species are either listed as red, amber or green, depending on their status and conservation objectives. Birds listed as red require urgent, effective conservation action.

WATER VOLE

8.10 Water voles are fully protected under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to:

- Intentionally kill, take or injure a water vole;
- Possess or control any live or dead water vole or any part or derivative;
- Intentionally or recklessly damage or destroy a water vole's place of shelter or protection;
- Intentionally or recklessly disturb a water vole whilst it is occupying a structure or place which it uses for shelter;
- Intentionally or recklessly obstruct access to a water voles place of shelter or protection.

BADGERS

8.11 Badgers are protected under the Protection of Badgers Act 1992. Under this legislation it is an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so).
- Cruelly ill-treat a badger.
- Dig for a badger.
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it.
- Cause a dog to enter a badger sett.
- Disturb a badger when it is occupying a sett.

COMMON REPTILES

8.12 All common and widespread reptiles, which include viviparous lizard, slow worm, grass snake and adder are protected under the Wildlife and Countryside Act 1981. This makes it an offence to:

- Intentionally or recklessly kill or injure reptiles
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell any reptile.

INVERTEBRATES

8.13 A small number of invertebrates are protected under the Conservation of Habitats and Species Regulations 2017, relating to the designation of SACs, including white-clawed crayfish and Desmoulin's whorl snail.

8.14 A number of invertebrate species also protected under the Wildlife and Countryside Act, such as the heath fritillary and fairy shrimp. Species listed under Schedule 5 are protected from one, some or all of the following:

- Intentional killing, injuring, taking
- Possession or control (live or dead animal, part or derivative)
- Damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection
- Disturbance of animal occupying such a structure or place
- Offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative)
- Advertising for buying or selling live or dead animal, part or derivative

STATUTORY PROTECTED SITES

8.15 Special Protection Areas and Special Areas of Conservation are protected under the Conservation of Habitats and Species Regulations 2017.

8.16 Sites of special scientific interest (SSSIs) are protected under the Wildlife and Countryside Act 1981. Natural England is responsible for notifying SSSIs, ensuring they are managed appropriately and assessing and monitoring their condition.

- 8.17 National Nature reserves are created to protect important wildlife habitats, while also providing a resource for scientific research and recreation. Declared under the National Parks and Access to the Countryside and the Wildlife and Countryside Act 1981.

NON-STATUTORY PROTECTED SITES

Ancient Woodland

- 8.18 Land with continuous woodland cover since at least 1600AD. Ancient woods are recognised in UK planning policy, but do not have statutory protection.

NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT 2006

- 8.19 Following consultation with Natural England, the Secretary of State identified species and habitats considered to be of principal importance for the conservation of biological diversity in England. These species and habitats are listed under Section 41 of the Act. The list is to be kept under review and revisions are made as necessary as part of the progress reports on the Biodiversity Strategy for England.
- 8.20 Following the Biological Diversity in Japan, 2012, a new initiative in England, 'Biodiversity 2020', replaced the former UK Biodiversity Action Plan Species aiming to reinforce the protection of Section 41 habitats and species.

THE NATIONAL PLANNING POLICY FRAMEWORK

- 8.21 The National Planning Policy Framework was revised in December 2023 and sets out the Government's planning policies for England and how these are expected to be applied. Within this document, Chapter 15 is titled Conserving and Enhancing the Natural Environment.
- 8.22 Of particular relevance within this chapter are the following statements:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- *Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*

To protect and enhance biodiversity and geodiversity, plans should:

- *Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*

When determining planning applications, local planning authorities should apply the following principles:

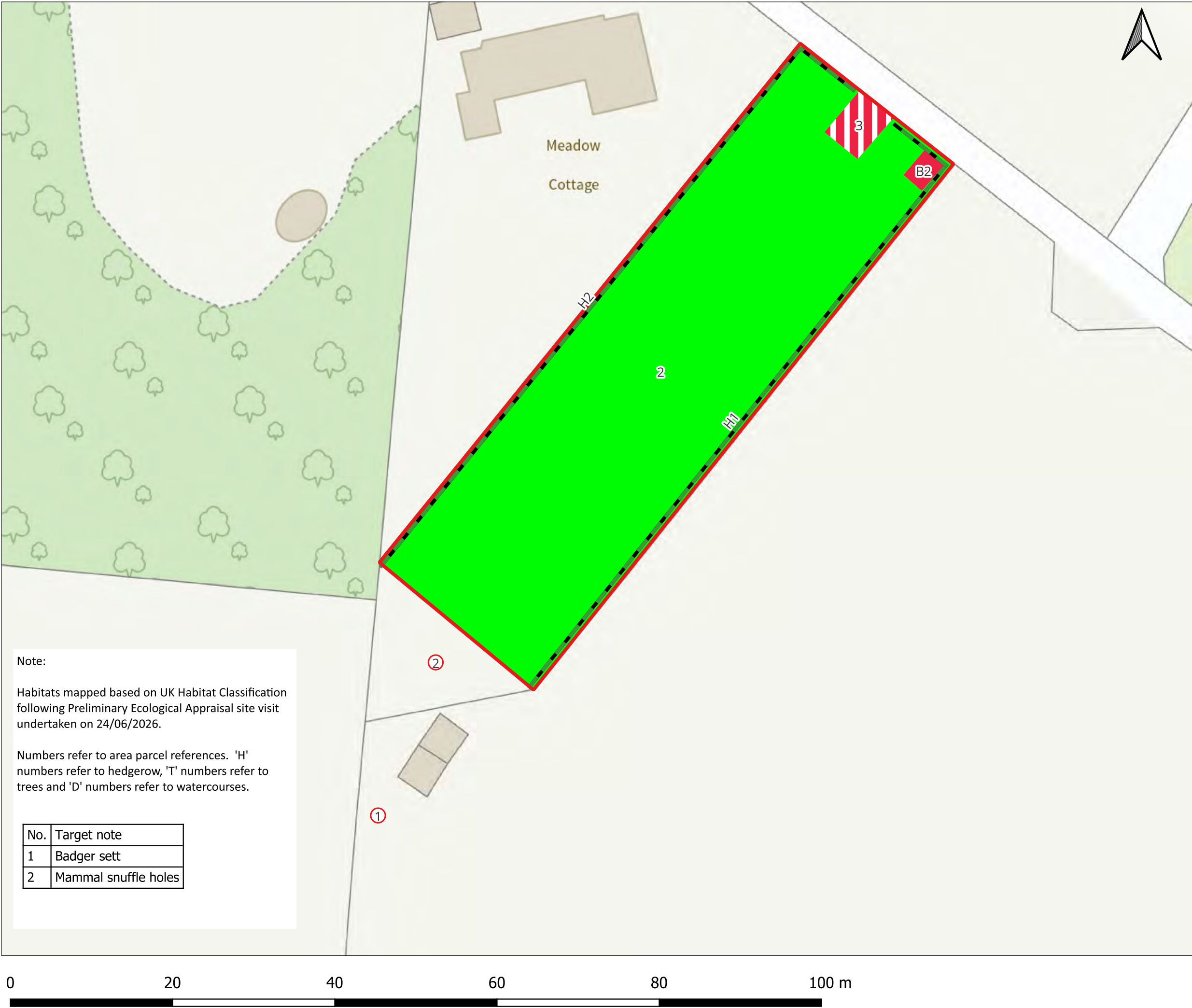
a) If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort,

compensated for, then planning permission should be refused;

b) Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the Site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.



Legend

Application site boundary

Developed land; sealed surface (buildings)

Developed land; sealed surface (other)

Modified grassland

Line of trees

Target notes

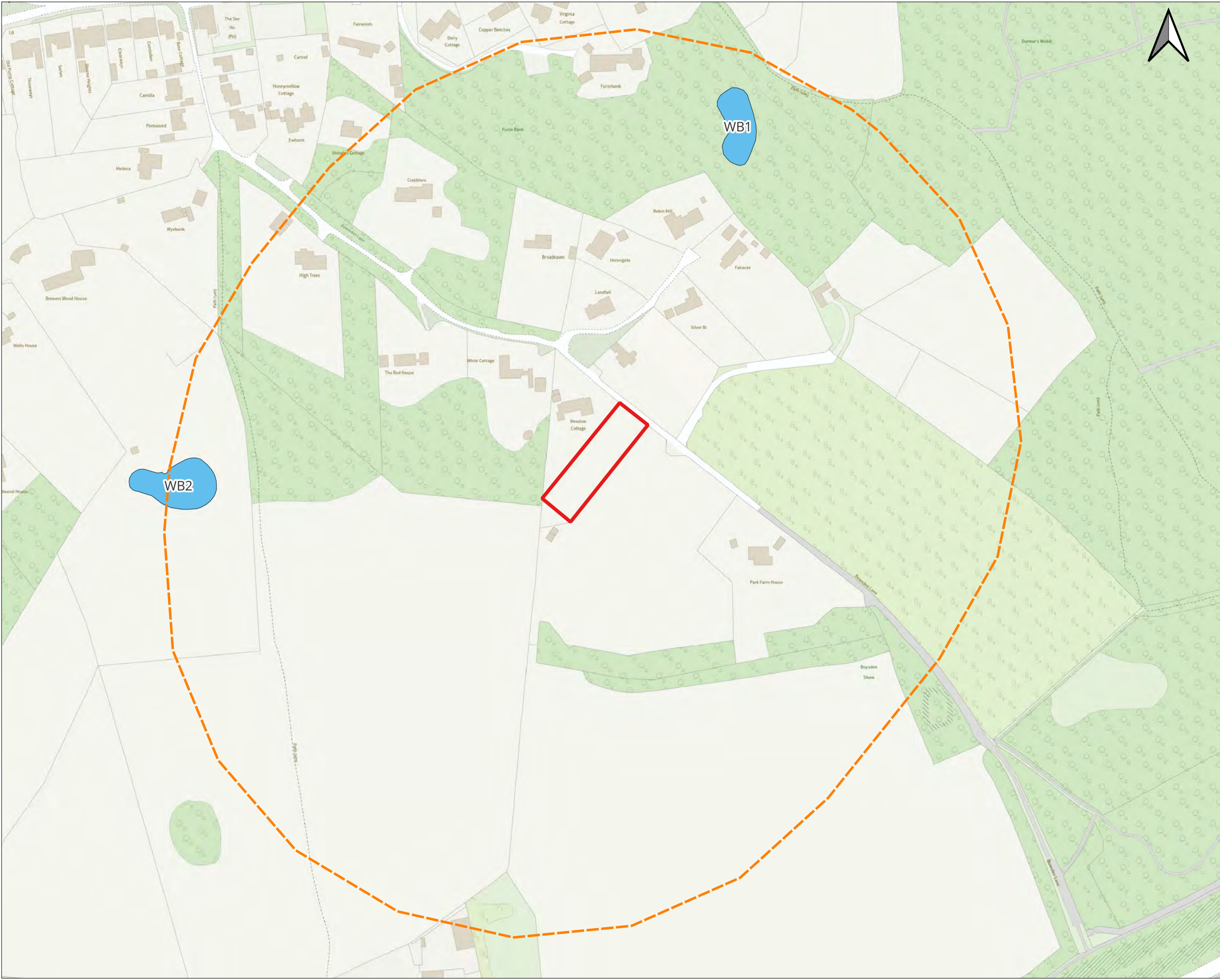
native ecology

PROMOTING BIODIVERSITY INTEGRATION

Habitat Plan

Land the South of Bowesden Lane, Shorne, Gravesend, Kent, DA12 3LA

Figure ref:	2341_Figure 3
Revision:	-
Date:	15/07/2026
Scale:	1:450
Paper size:	A3



Legend

Application site boundary

250m site boundary buffer

Waterbody

native ecology

PROMOTING BIODIVERSITY INTEGRATION

Waterbody Plan

Land the South of Bowesden Lane, Shorne,
Gravesend, Kent, DA12 3LA

Figure ref:	2341_Figure 4
Revision:	-
Date:	15/07/2026
Scale:	1:2500
Paper size:	A3

11. APPENDIX 5: PRELIMINARY ROOST ASSESSMENT RESULTS (BATS)

Table 8. Preliminary Roost Assessment - Buildings

Building no. & name	Assessment of potential roost features	Suitability for roosting bats
B1	No roost features present, building partially collapsed with caved in roof allowing in sunlight.	None.
B2	A metal container with no external PRFs present. Unfavourable building type for bats to use.	None.