



PRELIMINARY ECOLOGICAL APPRAISAL (PEA)

TUDOR COTTAGE

MEOPHAM, KENT

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1. SUMMARY

- S.1 This report details a Preliminary Ecological Appraisal (PEA) undertaken in respect of proposed development at Tudor Cottage, Nash Street, Meopham, Kent, DA13 9AA.
- S.2 Proposals include the conversion of the stable building into residential accommodation
- S.3 A PEA site visit was undertaken by Native Ecology on 26th January 2025.
- S.4 The Site comprises a single-storey timber stable building and a small area of sparsely vegetated urban land.
- S.5 Further survey work (detailed in Section 10) is recommended to determine the presence / likely absence of roosting bats. The results of this further survey work will inform suitable mitigation and compensation measures (if required).
- S.6 Mitigation, without the requirement for further survey work, is recommended for foraging and commuting bats, hedgehog, and nesting birds (detailed within Section 11).
- S.7 In accordance with the Biodiversity Gain Requirements (Exemptions) Regulations 2024, the Site is exempt from mandatory biodiversity net gain requirements under the de minimis exemption. This is because the Site is currently entirely developed, and less than 25sqm of habitat with biodiversity value greater than zero will be impacted.
- S.8 Section 12 includes initial recommended appropriate biodiversity enhancement measures which could be included within development proposals. These measures will also be informed through a biodiversity net gain assessment.

2. INTRODUCTION

- 2.1 This report details a Preliminary Ecological Appraisal undertaken in respect of proposed development at Tudor Cottage, Nash Street, Meopham, Kent, DA13 9AA.

Table 1. Site Location

Site address	Tudor Cottage, Nash Street, Meopham, Kent
Grid reference (at centre)	TQ 64127 69039
Local Planning Authority	Gravesham Borough Council
County	Kent
National Character Area	North Downs
Biodiversity Opportunity Area	None

- 2.2 Figure 1, Section 3 provides a site location plan.

COMMISSION

- 2.3 Native Ecology was commissioned by Nurstead Court Ltd in February 2025 to undertake a Preliminary Ecological Appraisal within the application site.

APPLICATION SITE

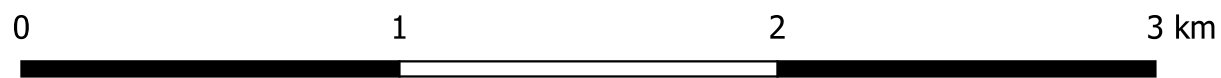
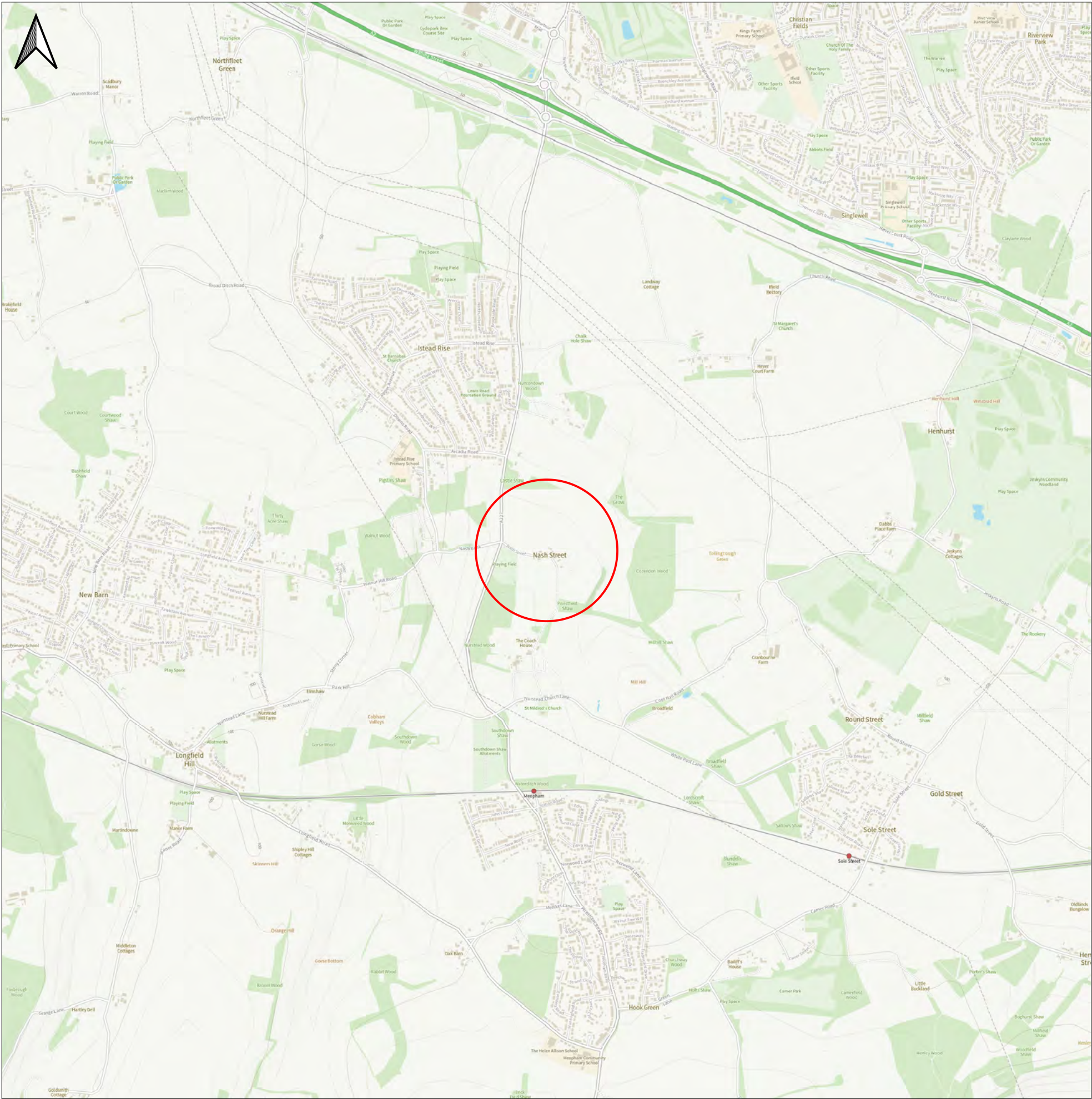
- 2.4 The application site, hereafter referred to as 'the Site', comprises a single-storey timber stable building and a small area of sparsely vegetated urban land. The Site extends to 0.02ha
- 2.5 Figure 2, Section 4 provides an existing site plan.

PROPOSED WORKS

- 2.6 Proposals include the conversion of the stable building into residential accommodation.
- 2.7 Figure 3, Section 5 provides a proposed site layout plan.

PURPOSE OF REPORT

- 2.8 This report aims to provide general advice on ecological constraints associated with proposed development within the Site and includes recommendations for mitigation and further survey work, where required.
- 2.9 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.



 PROMOTING BIODIVERSITY INTEGRATION	
Site location plan	
Tudor Cottage Meopham, Kent	
Figure ref:	1805_Figure 1
Revision:	-
Date:	22/07/2025
Scale:	1:20,000 (Main canvas)
Paper size:	A3



Legend

 Site boundary



Existing Site Plan

Tudor Cottage
Meopham, Kent

Drawing ref:	1805_Figure 2
Revision:	-
Date:	22/07/2025
Scale:	1:300
Paper size:	A3

5. PROPOSED SITE LAYOUT

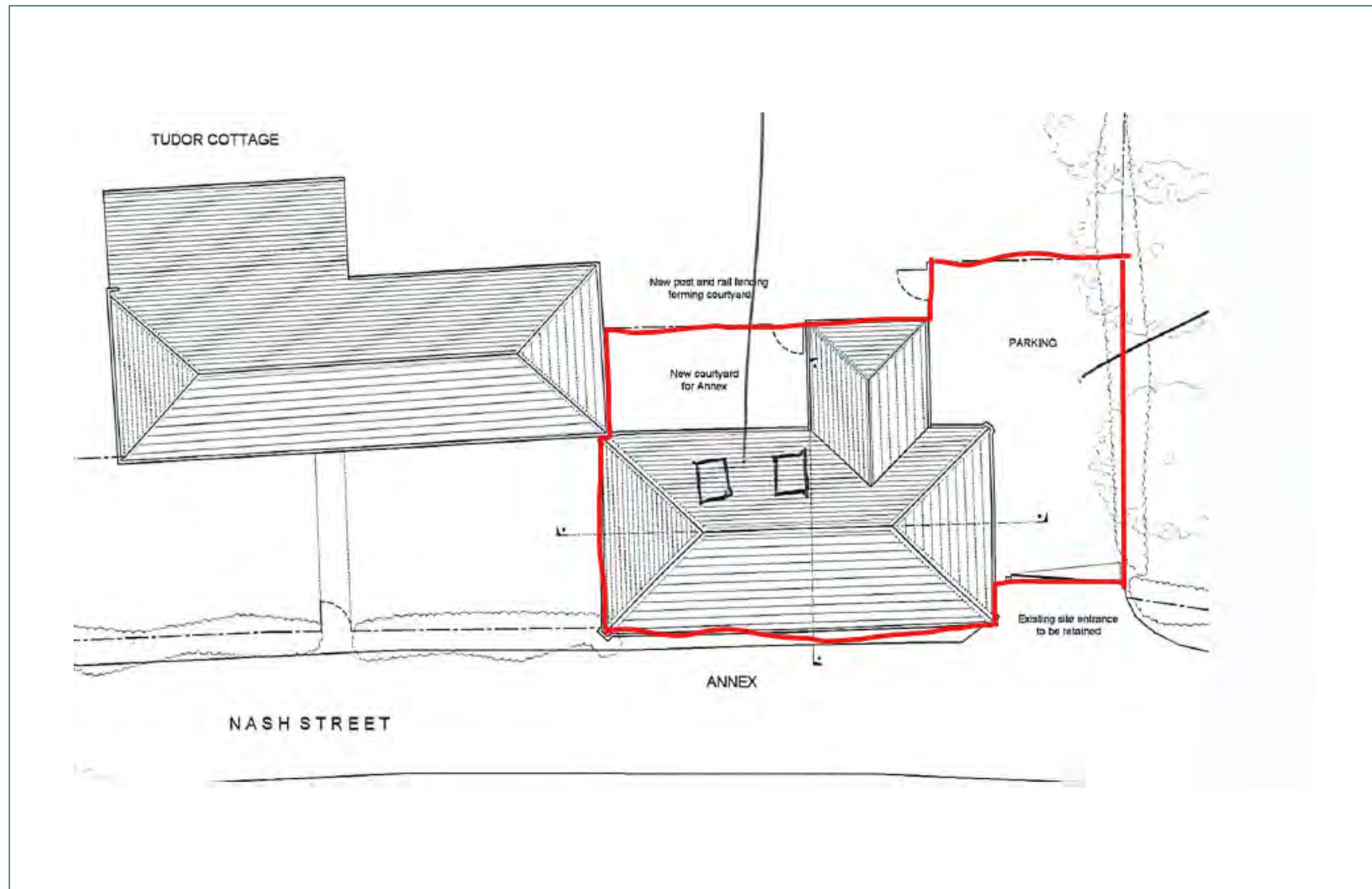


Figure 3. Proposed site layout plan provided by the client via email on 30th June 2025.

6. METHODOLOGY

DESK STUDY

Zone of Influence

- 6.1 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

- 6.2 Potential impacts to designated sites, including National Site Network (NSN) sites and SSSIs, have been considered.
- 6.3 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.
- 6.4 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.
- 6.5 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

- 6.6 Records were obtained from the Kent Reptile and Amphibian Group (KRAG) within 1km of the Site in February 2025.
- 6.7 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

- 6.8 A Preliminary Ecological Appraisal Site visit was undertaken by Miriam Anderson BSc (Hons) and Sophie Edmonds BSc (Hons) of Native Ecology on 26th February 2025.

Table 2. Survey details

Survey date	26th February 2025
Surveyor	Miriam Anderson BSc (Hons) Sophie Edmonds BSc (Hons)
Time on site	11:00 - 12:10
Weather	7°C, 25% cloud cover, B1 breeze, moderate rain, ground wet

- 6.9 An updated walkover of the Site was undertaken by Megan Knapp BSc (Hons) on 12th June 2025.

UK Habitat Classification 2.0

- 6.10 Habitats within the Site were mapped and classified in accordance with the The Professional Edition of the UK Habitat Classification 2.0.
- 6.11 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.
- 6.12 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

- 6.13 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.
- 6.14 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.
- 6.15 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

- 6.16 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) (see Appendix 2 for suitability assessment and survey effort required for structures and trees).

Preliminary Roost Assessment (buildings and structures)

- 6.17 A systematic search of the exterior and interior of the building 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

- 6.18 A ground level tree assessment (GLTA) was undertaken to determine whether trees within the Site possessed Potential Roost Features (PRFs) for bats. Where possible, trees were categorised as NONE (no PRFs visible or likely to be present), FAR (further assessment required to determine presence of PRFs), PRF-I (potential roost features are present which may support small numbers of bats) or PRF-M (potential roost features are present which may support a maternity roost of bats).

Badger

- 6.19 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

- 6.20 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

- 6.21 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

- 6.22 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.
- 6.23 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.

- 6.24 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

- 6.25 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

- 6.26 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.

LIMITATIONS

- 6.27 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.
- 6.28 Although any invasive plant species recorded during the PEA survey were noted, this survey does not comprise a Schedule 9 plant survey.
- 6.29 In accordance with CIEEM guidance, consideration should be given to the validity of survey data after a period of 12 month from the date of the survey. This may require a Site visit to assess whether ecological conditions within the Site have changed and may require further ecological survey work due to the transient nature of some protected species.

7. CURRENT ECOLOGICAL CONDITIONS

DESIGNATED SITES

Statutory Sites of International Importance

- 7.1 There is 1no. Special Area of Conservation (SAC), 1no. Special Protection Area (SPA) and 1no. Ramsar located within 7.2km of the Site.

Table 3. Details of Statutory Sites of International Importance within 7.2km of the Site boundary.

DESIGNATION	SITE NAME	DISTANCE & DIRECTION FROM SITE	QUALIFYING FEATURES
SAC	North Downs Woodland	4.8km south east	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.. Qualifies under the Habitats Directive for supporting semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>), and is an important site for a range of orchids (JNCC, 2015a).
Ramsar	Thames Estuary and Marshes	5.3km north east	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 (JNCC, 2000).
SPA	Thames Estuary and Marshes	6.7km north east	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 (JNCC, 2015b).

- 7.2 The qualifying features associated with the nearby Statutory Sites of International Importance are unlikely to be found within the Site. In addition, given the small scale and nature of proposals, comprising the construction of a small stable building, it is unlikely that the proposed development will impact the Sites either directly or indirectly.

7.3 According to the Impact Risk Zones for Ramsar Sites, SPAs, SACs and Sites of Special Scientific Interest (SSSI) shown on Natural England's MAGIC map application, the planning application type means there is no requirement for the Local Planning Authority to consult with Natural England during the planning process regarding statutory designated sites.

7.4 No further survey work or assessment is recommended for statutory sites of international importance.

Statutory Sites of National Importance

7.5 There are no Statutory Sites of National Importance, such as SSSIs or National Nature Reserves (NNR), located within 2km of the Site. No further assessment or mitigation is recommended.

Non-statutory sites

Local Sites

7.6 There are 3no. Local Wildlife Sites (LWS) located within 1km of the Site:

- Nurstead and Cozendon Woods, Nash Street LWS lies approximately 170m to the south and 270m east;
- Grassland and scrub, Istead Rise LWS lies approximately 270m to the west; and
- Pasture south of Istead Rise LWS lies approximately 830m west.

7.7 It is unlikely that the proposed development will impact the LWS either directly or indirectly due to the small scale, nature of proposals and the distance between sites. No further assessment or mitigation is recommended for Local Sites.

Ancient Woodland

7.8 There are 2no. parcels of ancient woodland located within 500m;

- Nurstead Wood is located approximately 180m south west; and
- Cozenden Wood is located approximately 360m east.

7.9 It is unlikely that the proposed development will impact the ancient woodland either directly or indirectly due to the small scale, nature of proposals and the distance between sites. No further assessment or mitigation is recommended in relation to ancient woodland.

HABITATS

Kent Landscape Information Services

7.10 The 2012 Kent Habitat Survey categorised the Site as improved grassland and built-up areas.

Habitats of Principal Importance

7.11 There are no habitats of principal importance within or adjacent to the Site, therefore no further assessment or mitigation is recommended.

Other habitats

Buildings

- 7.12 There is 1 no. building present within the Site. Table 4 below provides photographs and building descriptions.

Table 4. Description of buildings within the Site.

BUILDING NO. & NAME	DESCRIPTION	PHOTOGRAPH
B1	Detached single-storey timber-clad stable building, supporting a hipped roof lined with slate tiles. Internal wall space is not lined or clad. The internal roof is lined with timber.	

- 7.13 Table 5 below describes the habitats present within the Site in accordance with UK Habitat Classification 2.0.

Table 5. Habitat types present within the Site, including level (UKHab), size and description.

HABITAT TYPE				DESCRIPTION
Level 2 label	Level 3 label	Level 4 label	Level 5 label / Secondary codes	
Urban (u)	Built-up areas and gardens (u1)	Developed land; sealed surface (u1b)	Buildings (u1b5)	For full description of the building within the Site, see Table 4 above.
		Sparsely vegetated urban land (u1f)	Ruderal / ephemeral (81)	Small parcel of gravel adjacent to Building B1, supporting ruderal / ephemeral vegetation species such as greater plantain (<i>Plantago major</i>), scented mayweed (<i>Matricaria chamomilla</i>), nipplewort (<i>Lapsana communis</i>), cock's foot grass (<i>Dactylis glomerata</i>), and cleavers (<i>Galium aparine</i>). Elder (<i>Sambucus nigra</i>) and blackthorn (<i>Prunus spinosa</i>) shrubs are also present.

SURROUNDING HABITATS

- 7.14 The Site comprises a stable building with surrounding ruderal vegetation in the yard area of a rural residential dwelling, lying on the outskirts of the village of Istead Rise. The habitats immediately surrounding the Site comprise further areas of modified grassland within a vegetated garden, bounded by a native hedgerow. The wider landscape surrounding the Site comprises a mosaic of intensively managed arable and grassland fields, connected by a network of native hedgerows and tree lines. Small pockets of woodland are present to the east, west and south.

PROTECTED AND NOTABLE SPECIES

Bats

- 7.15 According to MAGIC map application there have been no recent EPSM licences obtained for bats within 1km of the Site.

Buildings

- 7.16 A preliminary roost assessment was undertaken for Building B1 within the Site. The results are detailed within Table 6 below.

Table 6. Results of Preliminary Roost Assessment

BUILDING	POTENTIAL ROOST FEATURES	SUITABILITY FOR ROOSTING BATS	PROPOSALS
B1	Numerous gaps beneath and between slate tiles as well as warped areas of the timber weatherboarding providing suitable roosting habitat for crevice dwelling species.	High	Convert

- 7.17 Roosting bats in buildings are considered further in Section 9.

Trees

- 7.18 There are 6no. trees within the Site boundary. None of these trees have suitability to support roosting bats, nor will any be impacted by the proposed development.
- 7.19 No further survey work or mitigation is recommended for roosting bats in trees.

Foraging and commuting habitat

- 7.20 Habitats within the Site, including a building, a small area of ruderal/ephemeral vegetation and scattered trees, provide low foraging suitability for bats.
- 7.21 The Site may currently form part of a dark commuting corridor for bats to migrate between areas of higher suitability foraging habitat elsewhere in the locality.
- 7.22 Foraging and commuting bats are considered further in Section 9.

Hazel dormice

- 7.23 According to MAGIC map application there have been no recent EPSM licences obtained for hazel dormice within 1km of the Site.
- 7.24 There are no suitable habitats for hazel dormice within the Site. Therefore, hazel dormice are unlikely to be present within or adjacent to the Site and no further survey work or mitigation is recommended.

Great crested newt

- 7.25 According to MAGIC map application there have been no recent EPSM licences obtained for great crested newt within 1km of the Site.
- 7.26 Data obtained from KRAG include no records of great crested newt within 1km of the Site.
- 7.27 The sparse vegetation within the Site provides terrestrial habitat of very low suitability for great crested newt, lacking the sheltering and foraging opportunities required by the species.
- 7.28 There are no waterbodies present within the Site. According to OS maps, MAGIC map and aerial images, there are no waterbodies present within 250m of the Site boundary.
- 7.29 Due to the lack of waterbodies within the surrounding landscape, great crested newt are unlikely to be present within the site and no further survey work, assessment or mitigation is recommended.

Riparian mammals

- 7.30 There are no suitable habitats for otter, beaver or water vole on Site and the Site does not connect to suitable habitat within the wider landscape.
- 7.31 No further survey work or mitigation is recommended for riparian mammals.

Badger

- 7.32 During the survey, no signs of badger were present within the Site and no badger setts were recorded within the accessible 30m of the Site boundary. Given its location within a rural area, badger may enter the Site on occasion whilst foraging.
- 7.33 Badger are considered further in Section 9.

Hedgehog

- 7.34 There are no suitable habitats for hedgehogs within the Site. The habitats in close proximity to the Site, such as the base of hedgerows and garden spaces of the nearby residential dwellings, provide suitable shelter and foraging opportunities for hedgehogs which have some connectivity to the wider landscape. Hedgehogs may therefore enter the Site while commuting or foraging.
- 7.35 Hedgehog are considered further in Section 9.

Birds

- 7.36 Due to the habitats present, no Schedule 1 birds are expected to nest within the Site. Features within the Site, such as Building B1 and scattered trees, provide suitable habitats for Red and Amber listed bird species, as well as common and widespread bird species. During the PEA survey, swift nests were identified within Building B1.
- 7.37 Nesting birds are considered further in Section 9.

Reptiles

- 7.38 Data obtained from Krag include a single record of an individual grass snake located 0.85km north west of the Site in 2019.
- 7.39 Habitats within the Site, comprising hardstanding and a small area of sparse vegetation, offer no suitable habitat for reptiles.
- 7.40 No further survey work or recommended is required for reptiles.

Invertebrates

- 7.41 Habitats within the Site provide low suitability habitat for invertebrates, with potential to support a limited range of common and widespread invertebrates. Protected or rare invertebrates are unlikely to be present due to the habitat types present.
- 7.42 No further survey work or mitigation is recommended for invertebrates.

Flora

- 7.43 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.
- 7.44 No further survey work or mitigation is recommended for flora.

BIODIVERSITY NET GAIN

- 7.45 In accordance with the Biodiversity Gain Requirements (Exemptions) Regulations 2024, the Site is exempt from mandatory biodiversity net gain requirements under the de minimis exemption. This is because the Site is currently entirely developed, and less than 25sqm of habitat with biodiversity value greater than zero will be impacted.

8. PHOTOGRAPHS



Photograph 1. Northern elevation of Building B1



Photograph 2. Sparsely vegetated parcel of land, immediately north of Building B1



Photograph 3. Land east of Site.



Photograph 4. Land east of Site and access onto Site.

9. ECOLOGICAL CONSTRAINTS

- 9.1 The potential impacts of the proposed development on those Ecological Features that have not been scoped out in Section 7 are considered below.

PROTECTED AND NOTABLE SPECIES

Roosting bats

- 9.2 Building B1 provides high suitability bat roosting habitat. Proposals include the conversion of the building which will impact the roof and timber weatherboarding.
- 9.3 Therefore, further survey work is recommended to determine the presence or likely absence of roosting bats within the building (detailed within Section 10).

Foraging and commuting bats

- 9.4 The Site provides low foraging suitability for bats due to the presence of scattered trees.
- 9.5 The trees will be retained and therefore, the development proposals are unlikely to impact on foraging and commuting bats.
- 9.6 No further survey work is recommended. However, bats are nocturnal and require dark corridors to forage and commute. Precautionary mitigation to avoid impacts through the careful design of lighting is recommended within Section 11. Enhancement measures, outlined within Section 12, have the potential to improve the value of habitats within the Site for foraging and commuting bats.

Badger

- 9.7 During the survey, no signs of badger were present within the Site or within the immediate adjacent land. Therefore, any impacts to a badger whilst it is occupying its sett is unlikely.
- 9.8 Proposed development does not include any vegetation impacts and will be restricted to just the building.
- 9.9 No further survey work or mitigation is recommended.

Hedgehog

- 9.10 There are no suitable habitats for hedgehogs within the Site. However, hedgehogs may enter the Site while commuting or foraging. Development proposals are unlikely to impact on local hedgehog populations and therefore no further survey work is recommended.
- 9.11 In the absence of suitable mitigation, individual hedgehogs may be harmed during works. Precautionary mitigation to reduce the risk of killing or injuring individual hedgehog and to maintain connectivity between existing and new foraging areas within the Site and in the locality is detailed within Section 11.

Nesting birds

- 9.12 Due to the location of the Site and habitats present, Schedule 1 birds are unlikely to nest within or close by to the Site.
- 9.13 Building B1 within the Site provides suitable nesting habitat for common and widespread bird species, as well as those listed as Red and Amber within the Birds of Conservation Concern such as house sparrow (Red). Swift nests were identified within Building B1 during the PEA survey.
- 9.14 Proposals include the conversion of Building B1 and therefore bird nest may be impacted.
- 9.15 No further survey work for nesting birds is recommended. However, mitigation measures to avoid impacts to nesting birds through the timing of works are outlined within Section 11. Enhancement measures, outlined within Section 12, have the potential to improve the value of habitats within the Site for birds.

10. FURTHER SURVEY WORK / ASSESSMENT

- 10.1 Further survey work is recommended to determine the presence or likely absence of roosting bats in buildings to inform suitable mitigation measures.

Roosting bats

Presence / likely absence surveys

- 10.2 Bat emergence / re-entry surveys are recommended to determine the presence or likely absence of roosting bats. Bat surveys should be undertaken in accordance with Bat Conservation Trust Good Practice Guidelines (Collins, 2023).

- 10.3 As Building B1 provides high suitability, the following survey effort is required:

Survey effort and timing

- Three dusk emergence surveys or dawn re-entry surveys between May and September, with at least two surveys between May and August.
- Surveys to be spaced at least three weeks apart.

11. AVOIDANCE AND MITIGATION MEASURES

THE MITIGATION HIERARCHY

- 11.1 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'.
- 11.2 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.
- 11.3 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.
- 11.4 If all measures have been considered for avoidance and mitigation, as last resort compensation measures should be proposed to address unavoidable and residual impacts.

PROTECTED AND NOTABLE SPECIES

- 11.5 Appropriate mitigation for roosting bats in buildings will be informed by further survey work.

Foraging and commuting bats

Careful lighting design

- 11.6 In order to reduce a low potential, indirect impact on foraging and commuting bats to negligible, mitigation to reduce any effects of artificial lighting should be implemented, as far as possible and where applicable, in accordance with guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals (ILP, 2023) the following measures should be included within a bat sensitive lighting strategy:
- Lighting spill onto the northern and eastern boundaries should be prevented, where possible.
 - All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
 - LED luminaires should 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) should be adopted to reduce blue light component.
 - Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
 - Internal luminaires should be recessed where installed in proximity to windows to reduce glare and light spill.
 - Column heights should be carefully considered to minimise light spill and glare visibility.

- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should 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.
- Where appropriate, use a Central Management System (CMS) with additional web-enabled devices to light on demand.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged.
- 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.

Hedgehog

11.7 The following mitigation should be implemented for hedgehog during the construction phase:

- Any removal of building materials or other debris, should be undertaken with care to prevent harm to hedgehog.
- Material and debris should be removed from the Site to avoid hedgehogs utilising them as areas of refuge.
- If any hedgehogs are found during the construction phase they should be carefully relocated to an area outside the development site that offers immediate shelter.

11.8 The following mitigation will be implemented for hedgehog post-development:

- If any close board fencing is to be used, this should be fitted with small openings within gravel boards to allow hedgehogs access throughout the site. At least one entrance hole will be fitted into each boundary.

Nesting Birds

Avoid impact to nesting birds

11.9 The following mitigation should be implemented to avoid impact to nesting birds:

- Works to any buildings should be undertaken outside of the bird nesting season where ever possible.

11.10 If impacts to buildings are unavoidable between March and September, then the following mitigation should be undertaken:

- A nesting bird survey will be undertaken by a suitably experienced ecologist a maximum of 48 hours prior to any impacts.
- A watching brief will be carried out by a suitably experienced ecologist during any works that impact suitable vegetation within the site.
- If nesting/nest-building birds are found, no works will commence/continue that are likely to damage or significantly disturb a nest until the young have fully fledged.

11.11 Works undertaken during the bird nesting season may result in significant delays to the development programme if activities need to cease due the presence of an active nest. It is important to note that many bird species, such as blackbirds and robins are multiple brooders and may therefore nest within the Site for a number of months

12. SUGGESTED ENHANCEMENT MEASURES

- 12.1 It is recommended that ecological enhancement measures are included as part of development proposals. Possible habitat enhancement measures are outlined below, these will be further informed by a biodiversity net gain assessment.

NATIVE AND NECTAR RICH PLANTING PLAN

- 12.2 It is recommended that any planting plans around Building B1 include native, flower rich species, including those that flower in the late and early seasons to enhance the biodiversity value of the Site.
- 12.3 The inclusion of climbing plants would add sheltering opportunities for invertebrates and birds. They can also produce nectar rich flowers for butterflies, bees and hoverflies and fruit for birds and small mammals.
- 12.4 The inclusion of herbs, such as lavender and sage, would provide nectar for an array of invertebrate species, including bees, butterflies and moths. Providing a range of herb plants would ensure flowering throughout the seasons. The inclusion of plants that produce scent at night would attract night flying invertebrates and as such would also provide foraging opportunities for bats.

BAT BOXES

- 12.5 Development provides an opportunity to enhance the Site for bats via provision of roosting opportunities.
- 12.6 Integrated bat boxes, such as a 1FR Schwegler Bat Tube, or similar, could be installed on the newly converted Building B1. Integrated bat boxes should be primarily located on the south and west facing aspects located at least 3m above the ground, but can also be installed on different elevations to provide a variety of different environmental roost conditions. Alternatively, bat access tiles can be incorporated into roof elevations of new buildings.
- 12.7 Bat boxes, such as 2F Schwegler Bat Box (General Purpose) or similar, could also be installed on mature trees surrounding the Site. Boxes should be located at least 3m above ground level and preferably over 4m and in a variety of aspects.

BIRD BOXES

- 12.8 Bird boxes, including for house sparrow and starlings, could be integrated into the converted 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.
- 12.9 Integrated swift boxes, such as the Ibstock Swift Eco Habitat, or similar, could be incorporated into the fabric of the eastern elevation of proposed new dwellings, at least 4.5m above the ground.
- 12.10 Bird boxes suitable for hole nesting species, including for a range of tit and flycatcher species, could be installed on mature trees or the converted building within the Site. Boxes such as Schwegler 1B or similar, should be located on north or east elevations to avoid direct sunlight.

BEE BRICKS

- 12.11 To increase the nesting opportunities for pollinating solitary bees, bee bricks (Green&Blue, or similar) could be incorporated into the fabric of the converted building. In conjunction with the nectar-rich planting plans, 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.
- 12.12 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.

13. REFERENCES

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14. APPENDIX 1: SUMMARY OF PLANNING POLICY AND LEGISLATION

BIODIVERSITY NET GAIN

- 14.1 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.
- 14.2 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

- 14.3 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.
- 14.4 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
- 14.5 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
- 14.6 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

14.7 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

14.8 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

14.9 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

14.10 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

14.11 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

14.12 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

14.13 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.

14.14 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

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

- 14.16** 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.
- 14.17** 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

- 14.18** 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

- 14.19** 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.
- 14.20** 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

- 14.21** 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.
- 14.22** 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

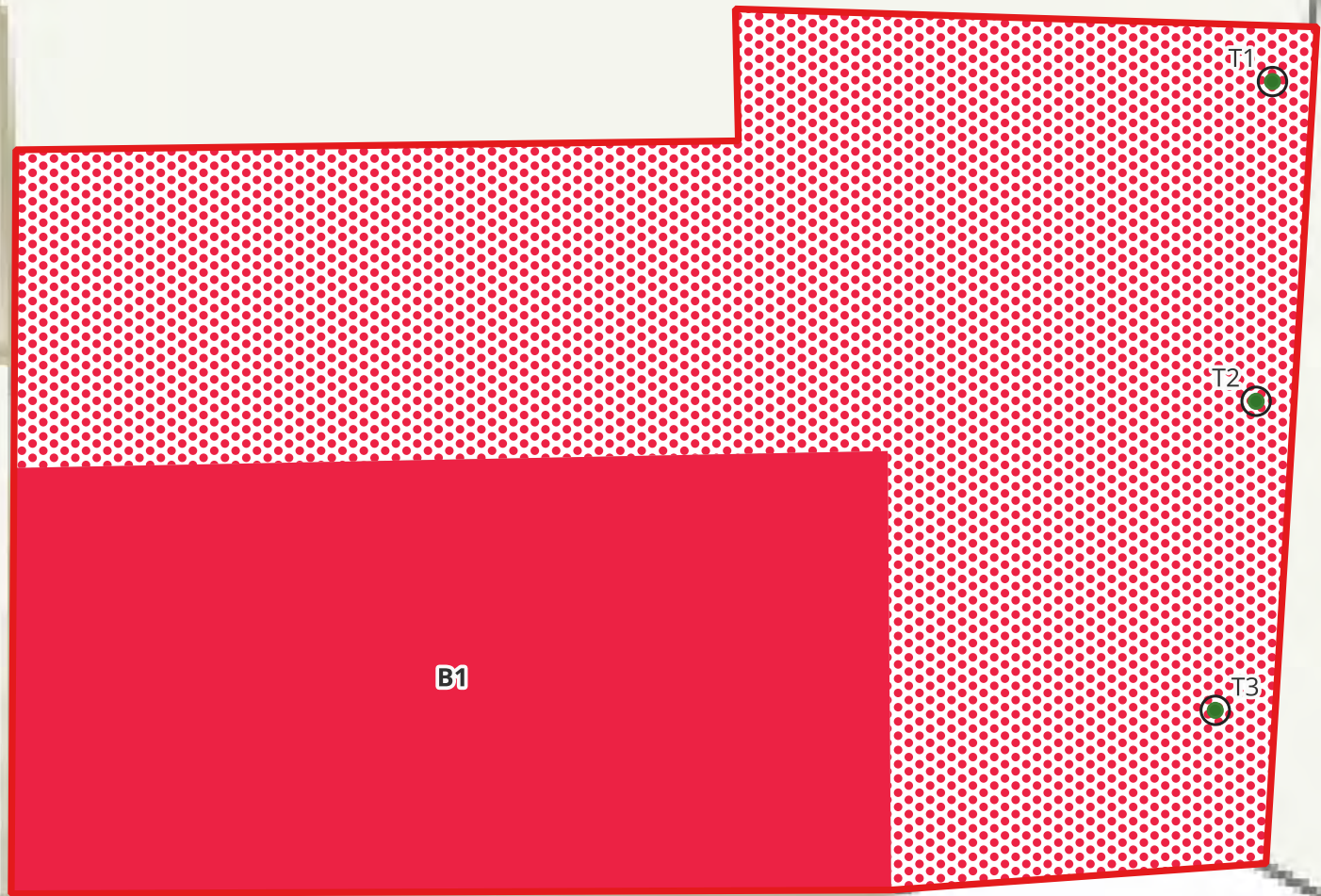
d) Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public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

15. APPENDIX 2: SUITABILITY ASSESSMENT OF ROOSTING HABITAT FOR BATS

Table 7. Assessing potential suitability of roosting habitat (structures and trees) for bats and survey effort required. Adapted from Bat Surveys for Professional Ecologists, Good Practice Guidelines 4th Edition (Collins, 2023).

SUITABILITY	DESCRIPTION OF ROOSTING HABITAT	SURVEY EFFORT AND TIMING
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices / suitable shelter at all ground / underground levels).	None required.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	None required.
Low (Buildings / structures) PRF-I (trees)	A structure or tree with one or more PRF-I roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Buildings/structures: One survey visit. One dusk emergence survey (or dawn re-entry survey if appropriate). Timing: May to August. Trees: PRF-I - No further surveys required. Compensation for loss of roosting opportunity recommended.
Moderate (Structures only)	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Buildings/structures: Two separate dusk emergence surveys (or dawn re-entry surveys if appropriate). Surveys should be spaced a minimum of three weeks apart. Timing: May to September with at least one survey undertaken between May - August.
High (structures) PRF-M (trees)	A structure or tree with one or more PRF-M roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Buildings/structures: Three separate dusk emergence survey visits (or dawn re-entry surveys if appropriate). Trees - Three inspection surveys using ladder, climbing or MEWP, or if features are too extensive to survey thoroughly, these could be emergence surveys supported by NVAs. Surveys should be spaced a minimum of three weeks apart. Timing: May to September with at least two surveys undertaken between May - August.

Cottage



Legend

-  Site boundary
-  Developed land; sealed surface (buildings)
-  Sparsely vegetated urban land



Habitat Plan

Tudor Cottage
Meopham, Kent

Figure ref:	1805_Figure 4
Revision:	-
Date:	22/07/2025
Scale:	1:100
Paper size:	A3

Biodiversity Net Gain

BASELINE TO PLANNING APPROVAL

