



Amethyst Ecology

Land South of Pear Tree Lane, Shorne, Gravesend, Kent, DA12
3JX

Perfect Pitch Ltd

Preliminary Ecological Appraisal (PEA) & Preliminary Roost Assessment (PRA)

October 2024

Report Reference	Revision	Date	Prepared by	Comments
0184/01	-	22/10/2024	Charlie Vaughan-Jones BSc	None
0184/01/A	A	06/07/2025	Charlie Vaughan-Jones BSc	Updated report post update badger inspection. Designated sites beyond the Gravesham boundary have been removed from table 1, as per the request of the LPA.

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EXECUTIVE SUMMARY

An application for addition of two static caravans, day room and associated parking at the Site at Land South of Pear Tree Lane, Shorne, Gravesend, Kent, DA12 3JX, is proposed, for which detailed planning permission is sought.

Amethyst Ecology Ltd was instructed by Perfect Pitch Ltd to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of the Site to identify any ecological constraints to development, inform scheme design, highlight opportunities for ecological enhancement and determine the need for any additional investigation / survey. As part of this PEA, a desk study and field survey of the Site were undertaken in October 2024, including a UK Habitat Classification survey of the habitats present on-Site.

No statutory designations (national, international or local) occur on or within immediate proximity to the Site. Impacts to statutory and non-statutory designations (where present) have been scoped out from further assessment due to the distance, scale and nature of the proposed development.

Habitats within the Site comprise artificial unvegetated surfaces, buildings, other neutral grassland and non-native ornamental hedgerow. The habitats present are suboptimal for faunal species and are unlikely to support protected or notable wildlife. No evidence of any such species was recorded.

Buildings B1-B2 were assessed as 'negligible' potential for roosting bats, and B3 as 'none'. No evidence of nesting birds was recorded.

The proposed development is exempt from Biodiversity Net Gain (BNG) under the 'self-build' exemption.

A pre-commencement check for any new evidence relating to badgers prior to any construction activity is recommended (update inspection undertaken 26/06/25; no badger evidence recorded. Same inspection recommended >6 months between above date and construction). A Nesting Bird Check (NBC) for buildings B1 & B2 is also recommended if the development cannot avoid the active nesting period of March-August. Precautionary working methods for other fauna (e.g. common reptiles) has been recommended for the removal of grassland habitat.

A low-impact lighting strategy to protect foraging and commuting habitat for bats is recommended, detailed herein.

Recommendations for Site enhancements are also provided.

1.0 INTRODUCTION

- 1.1 This report has been prepared by Amethyst Ecology Ltd on behalf of Perfect Pitch Ltd. It sets out the findings of a PEA & PRA of Land South of Pear Tree Lane, Shorne, Gravesend, Kent, DA12 3JX (hereafter referred to as 'the Site'). The proposed application is for the addition of two static caravans, day room and associated parking, for which detailed permission is sought.
- 1.2 The Site occupies an area of c. 0.11ha and is located around central grid reference TQ 69536 70322, on the southeast extent of the Village of Shorne, c. 5.5km southeast of Gravesend and c. 0.8km north of the M2. The Site consists predominantly of artificial unvegetated unsealed surface, with a small, isolated area of other neutral grassland (ruderal species) in the eastern extent, outbuildings and vehicles. The northern boundary is formed of ornamental hedgerow, with the remaining boundaries fenced. The Site is bounded by low density residential housing, with open grassland and parcels of deciduous woodland in the wider landscape.
- 1.3 This PEA aims to:
- Characterise baseline ecological conditions of the Site and its wider context
 - Identify any ecological constraints to development of the Site
 - Inform scheme design
 - Identify further ecological surveys and investigation
 - Highlight opportunities for ecological enhancement
- 1.4 To achieve these aims, an ecological desk study and field survey were undertaken of the Site, the findings of which are presented herein.

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

Legislation

2.1 Legislation relating to wildlife and biodiversity of particular relevance to this PEA includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Protection of Badgers Act 1992
- The Environment Act 2021

2.2 This above legislation has been addressed, as appropriate, in the production of this report. Further information on the above legislation is provided in Appendix B.

National Planning Policy

2.3 The National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing & Communities, 2023) sets out the government planning policies for England and how they should be applied. Chapter 15: Conserving and Enhancing the Natural Environment, is of particular relevance to this report as it relates to ecology and biodiversity. Further details are provided in Appendix B.

2.4 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their effects within the planning system.

Local Planning Policy

2.5 A number of local planning policies relate to ecology, biodiversity and/or nature conservation. These are summarised in Table 1 of Appendix B. These policies have been addressed, as appropriate, in the production of this report.

Standing Advice

2.6 Natural England and Defra's Standing Advice (Natural England & Defra, 2014) regarding habitats and protected species aims to support local authorities and forms a material consideration in determining applications in the same way as any individual response received from Natural England following consultation. Standing advice has therefore been given due consideration, alongside other detailed guidance documents, in the production of this report

3.0 METHODS

Desk Study

- 3.1 An ecological desk study was undertaken in August 2024 comprising a review of online resources and biological records as detailed below.
- 3.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) online database was reviewed to identify nature conservation designations within the following search radii:
 - Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 10km of the Site (including possible/proposed sites)
 - Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR) within 3km of the Site
 - Other relevant data e.g. Ancient Woodland Inventory within 1km of the Site
- 3.3 A review was undertaken of the location of any such designations, their distance from and connectivity with the Site, and the reasons for their designation. This information was used to determine whether they may be within the proposed development's Zone of Influence (Zoi).
- 3.4 Further online resources were reviewed for information which may aid the identification of important ecological features. The Woodland Trust's online Ancient Tree Inventory was reviewed for known ancient or veteran trees within the Site and adjacent land. Interactive online mapping provided by the charity 'Buglife' was used to determine whether the Site falls within an Important Invertebrate Area.
- 3.5 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken to identify ponds within 500m of the Site which may have potential to support breeding great crested newts *Triturus cristatus*, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography.

Field Survey

- 3.6 A UK Habitat Classification ('UKHab') survey was carried out in fine and dry weather conditions on 19 August 2024 by Charlie Vaughan-Jones (PID Level 3¹) encompassing the Site and immediately adjacent habitats that could be viewed.
- 3.7 UKHab is a unified and comprehensive system for mapping and classifying habitats, designed to provide a simple and robust approach to surveying and monitoring, and replaces Phase 1 Habitat survey methods. The method allows for identification of important habitat types, including

¹ Plant Identification Test, Canterbury Christ Church University 2023

habitats of Principal Importance under Section 41 (S41) of the NERC Act (2006) and Habitats Directive Annex I habitats. This method also allows for direct translation of habitats into the current Biodiversity Statutory Metric (Natural England, 2024).

3.8 The following parameters were adopted for the UKHab survey undertaken for this PEA:

- UKHab Professional edition (Butcher *et al.*, 2020, commercial End User Licence Agreement (EULA))
- Minimum Mappable Unit (MMU):
 - 10m²/0.001ha (polygons)
 - 5m (linear)
- Primary Habitats recorded to a minimum of Level 2 (see below) with UKHab codes provided
- Mandatory secondary codes used
- Base-mapping comprising a combination of aerial imagery and topographic information

3.9 Primary Habitats are recorded to a minimum of Level 2. Where the survey is conducted at an appropriate time of year (e.g. May to July for grassland) habitats may be recorded to Level 3, 4 or 5, only if conditions and the experience of the surveyor allow.

3.10 Alongside the UKHab survey, additional field survey information was collected, comprising:

- Detailed floral species lists recorded for each identified habitat/parcel
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt, dormouse and otter)
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, badger and certain invertebrates)
- Evidence of, or potential for, other notable species (including S41 Species of Principal Importance as well as notable, rare, protected or controlled plants and invertebrates)
- Any other survey information relevant to ecological matters

3.11 Results of the UKHab survey are presented on the Habitats Plan in Appendix A. Appendix C provides photographs of the habitats at the Site. Nomenclature for higher plants within this report is consistent with the fourth edition of The New Flora of the British Isles (Stace, 2019).

Limitations

3.12 There were no specific limitations to the field survey, which was conducted at an optimum time of year and in good conditions.

3.13 Biological records have not been obtained from Kent and Medway Biological Records Centre (KMBRC), as they do not add any significant

weight to any conclusions/recommendations in this instance, due to the low suitability of the habitats present on site and unlikely presence of protected species. Due to the developments type and scale any impacts are anticipated to have negligible effect on any surrounding designated sites, if present.

Preliminary Roost Assessment (PRA)

- 3.14 A detailed external and internal inspection of the building on-Site was completed on 19 August 2024, using high-powered torches, binoculars, and a ladder. The survey was carried out by Charlie Vaughan-Jones (Natural England Class Licence WML-CL18, Registration Number 2024-12120-CL18-BAT).
- 3.15 The external inspection focused on identifying potential bat access points to the interior of the structure (which could be potentially used by void dwelling bats; crevice dwellers may also utilise to gain access to any internal crevice features) and any external features that could potentially be used by crevice-dwelling species. Particular attention was given to windowsills, windowpanes, window/door frames, soffits, fascia's, timber cladding, lead flashing, and roof coverings; as these are typical bat roosting features and evidence is can found at these locations.
- 3.16 The internal inspection involved a systematic search for bats or any evidence of their activity, in particular droppings and/or feeding remains within the loft space of the buildings.
- 3.17 A description of the structures was made, including construction, condition (in respect of roosting, rather than building or structural integrity) and age (where known).
- 3.18 The aim of this inspection is to record direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of structures to support bats whilst in hibernation.
- 3.19 Assessing 'Potential' of Buildings to Support Roosting Bats
- 3.20 All structures were assigned to one of five categories in respect of their 'potential' to support roosting bats. 'Potential' in this context is taken to be the broad suitability of features to support roosting bats, based upon the nature, condition or structure of such features, in the absence of confirmed evidence of roosting.
- 3.21 Assigning the following categories is intended to determine the effort of any further survey or inspections such as emergence/re-entry surveys, which are necessary to prove presence or likely absence of roosting bats, rather than to assign importance to such features. The further surveys are

also to provide further indication of the character of the roost(s), including type and species assemblage, if found to be present.

3.22 The following categories are assigned to structures herein (in line with the BCT Good Practice Guidelines, 2023), Either:

- High – A structure with one or more potential 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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
- Moderate – 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, such as maternity and hibernation – this categorisation is made irrespective of species conservation status, which is established after presence is confirmed).
- Low – A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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 and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
- Negligible – No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
- 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).

3.23 The potential of a structure to support roosting bats is often influenced by its age and construction, thermal stability, lighting and levels of human activity. Furthermore, the proximity to foraging habitat – particularly woodland, parkland and wetland- as well as the presence of navigational routes (e.g. hedgerows, treelines and watercourses) influence both the potential for bats to roost, as well as the species which may roost. Professional judgement is therefore applied, based upon known factors which effect the potential of features to support roosting bats, insofar as determining the need or scope of further surveys or inspections.

Limitations

3.24 There were no specific limitations to the survey, which was conducted in fine and dry conditions.

Nesting birds

- 3.25 The surveyor made note of any other ecological constraints observed during the survey, notably the likelihood, presence, or field signs of breeding birds.
- 3.26 Field signs such as general bird activity, specifically birds flying to and from potential nest sites, foraging and alarm calls were recorded. Other field signs recorded included nesting materials, bird droppings, chicks (seen/heard) and eggs.

Limitations

- 3.27 There were no specific limitations with regards to the check for nesting birds, which was carried out in the nesting bird season.

4.0 BASELINE ECOLOGICAL CONDITIONS

Nature Conservation Designations

Statutory

- 4.1 There are no statutory designations covering any part of the Site, or within the 10km search buffer.
- 4.2 There are two national statutory sites that were identified within 3km of the Site. The designations are Titsey Woods Site of Special Scientific Interest (SSSI) (c. 2.5km southeast of the Site) and Saltbox Hill SSSI (c. 3km north).
- 4.3 One local statutory designation was identified within the 3km search buff. The local designation is Hill Park, Tatsfield Local Nature Reserve (LNR) (c. 1.3km southeast of the Site).

Non-Statutory

- 4.4 Non-statutory Sites have not been included due to the small scale of development proposed; any such impacts are anticipated to be negligible, if present in the surrounding landscape.

Table 1. Statutory Designations within search radii

Site Name & Designation	Distance & Direction from Survey Area	Special Interests or Qualifying Features
International Designations within 10km		
Thames Estuary & Marshes RAMSAR	c. 3.0km north of the Site	The Site meets RAMSAR criteria 2, 5 and 6, through supporting the following: - The site supports 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 45118 waterfowl (5 year peak mean 1998/99-2002/2003) - Ringed plover <i>Charadrius hiaticula</i> - Black-tailed godwit <i>Limosa limosa islandica</i> - Grey plover <i>Pluvialis squatarola</i> - Red knot <i>Calidris canutus islandica</i> - Dunlin <i>Calidris alpina alpina</i> - Common redshank <i>Tringa totanus totanus</i>
Thames Estuary & Marshes SPA	c. 4.3km north of the Site	The Thames Estuary and Marshes Special Protection Area is a wetland of European importance comprising a mosaic of intertidal habitats, saltmarsh, coastal grazing marshes, saline lagoons and chalk pits. The site provides

		wintering and breeding habitats for important assemblages of wetland bird species, particularly wildfowl and waders as well as supporting migratory birds on passage. The site forms part of the wider Thames Estuary together with other classified SPAs in both Essex and Kent.
North Downs Woodlands SAC	c. 5.0km southwest of the Site	Annex I habitats that are a primary reason for selection of this site: - Asperulo-Fagetum beech forests - Taxus baccata woods of the British Isles (*Priority feature) Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: - Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
National Designations within 3km		
Great Crabbles Wood SSSI	c. 0.40km east of the Site	This site is representative of woods on North West Kent Tertiary sediments; these comprise a succession of strata over Upper Chalk ranging from Blackheath gravels to Woolwich loams and Thanet sands, which give rise to a range of soil types. Most of the woodland is mixed coppice under oak standards, with sweet chestnut as the dominant species. A number of scarce plants occur, including lady orchid <i>Orchis purpurea</i> and man orchid <i>Aceras anthropophorum</i> .
Shorne and Ashenbank Woods SSSI	c. 0.45km east of the Site	Shorne and Ashenbank Woods form 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, especially its Coleoptera (beetles), Hemiptera (true bugs), and Odonata (dragonflies).
Cobham Woods SSSI	c. 1.50km south of the Site	This woodland and old parkland is representative of woods in North Kent which occur in part on acidic Thanet Sands and in part on chalk soils. One nationally rare plant species occurs in the arable land close to the wood. An outstanding assemblage of plants is present at this site which is also of importance for its breeding birds.
Local Designations within 2km		
There are no local designations within 2km of the Site.		

Ancient Woodland

- 4.5 There is no ancient woodland, as shown on the ancient woodland inventory, covering any part of the Site or immediately adjacent land (MAGIC, 2024).
- 4.6 No trees on or adjacent to Site are listed on the Ancient Tree Inventory.

Habitats and Flora

- 4.7 Habitats recorded on-site are illustrated in Appendix A. Relevant UKHab codes are provided within parentheses for each habitat type recorded [e.g. Other Neutral Grassland (g3c)].
- 4.8 No invasive or protected species were recorded on-Site.

'Artificial unvegetated, unsealed surface' and 'ruderal or ephemeral' (u1c 81)

- 4.9 The majority of the site (c. 0.07ha) is covered with gravel. There is a small amount of vegetation that has colonised localised areas of the gravel. The species include hedge bindweed *Calystegia sepium*, dandelion *Taraxacum sp.*, black medic *Medicago lupulina*, bristly oxtongue *Helminthotheca echinoides* and Yorkshire fog *Holcus lanatus*.
- 4.10 Many of the species present are representative of disturbed ground.

'Other neutral grassland' and 'and 'ruderal or ephemeral' (g3c 81)

- 4.11 A small area of other neutral grassland (c. 0.02ha) is situated on the eastern extent of the Site.
- 4.12 The vegetation is formed predominantly of goosefoot *Chenopodium sp.* (D), common nettle *Urtica dioica* (A), sow thistle *Sonchus* (F), cow parsley *Anthriscus sylvestris* (O), germander speedwell *Veronica chamaedrys* (O), common hogweed *Heracleum sphondylium* (O) and white campion *Silene latifolia* (R).
- 4.13 The grassland species recorded are typically fast growing and dominate fertile soils and disturbed ground, such as common nettle and goosefoot. The grassland is generally species poor (7sp/m²), colonised predominantly by common broadleaf species, and has low forb diversity and abundance.

Buildings (u1b5)

- 4.14 There are three structures present on-Site, which include two outbuildings formed of pallet wood (B1 & B2) and a metal shipping container (B3).

Hedgerows (h2)

H1 – Non-native and ornamental hedgerow (h2b)

- 4.15 Hedgerow H1 is located along the northern boundary of the Site. The hedgerow is formed predominantly of Leyland cypress *Cupressus x leylandii*. The hedgerow is c. 3m width x 4m height, with no gaps present in the hedge.
- 4.16 The ground flora consists of common nettle, common mugwort *Artemisia vulgaris* and common mallow *Malva sylvestris*.

Fauna

Bats

- 4.17 There are no granted bat EPSL record within the 2km search buffer from the Site (MAGIC Database).
- 4.18 The hedgerow provides a suitable commuting corridor for bats, although due to its low species diversity and lack of flowering species, is unlikely to attract invertebrates which is suboptimal for foraging. The other neutral grassland parcel contains flowering plant species and is likely to attract moderate levels of invertebrate activity.
- 4.19 There is parcel of ancient woodland c. 0.15km north of the Site, as well as further parcels of deciduous woodland locally, which is typically suitable habitat for bats as it provides insects to forage and cover when commuting to other suitable habitat, as well as potential roosting opportunity among the trees. The Site has moderate connectivity to such habitats.

Buildings

B1 – Description

- 4.20 The structure B1 is an outbuilding/shed, constructed of chipboard and pallet wood. The roof is flat and covered with a plastic sheet that is pinned to a fascia. The door and door frame are also constructed of timber.

Exterior

- 4.21 There are no features present suitable for the use of bats on the exterior of B1.
- 4.22 The timber exterior walls do not contain any suitable PRFs that crevice dwelling bat species, such as a common pipistrelle *Pipistrellus pipistrellus* could utilise. The timber fascia is secured tight to the exterior walls, with no suitable gaps behind them. The plastic sheeting is also pinned tight to the building and offers no bat potential.
- 4.23 The door frame does not contain any suitable gaps that are suitable for roosting bats.

Interior

- 4.24 The interior of B1 is sealed shut from the exterior, with no potential gaps that could allow the passage of a bat into the interior.
- 4.25 The underside of the roof and supporting timbers are exposed, which are provided as suitable perches for void dwelling bats, such as a brown long-eared bat.
- 4.26 The interior space contains stored materials, of which were inspected for bat evidence (e.g. droppings). No evidence of roosting bats was discovered internally. As such, void dwelling species are ruled out from further consideration.
- 4.27 The shed is single skin and likely subject to fluctuating internal temperature. This is typically unsuitable conditions for roosting bats.

Table 1. Photographs of B1



Photograph 1. Exterior of B1



Photograph 2. Interior of B1

Building B2 – Description

- 4.28 The structure B2 is also an outbuilding/shed, constructed of pallet wood. The roof is mono-pitch and covered with bitumen felt. The door and door frame are also constructed of timber.

Exterior

- 4.29 The timber cladding does not contain any suitable PRFs for crevice dwelling bats. The cladding is tight and does not provide any suitable gaps.
- 4.30 The bitumen felt roof covering is laid flush, with no gaps, lifts or tears that a bat could utilise as a roost entry point.
- 4.31 The door frame is secured and does not contain any gaps around its perimeter that are suitable for bats to roost in.

Interior

- 4.32 The interior of B2 is sealed shut from the exterior, with no potential gaps that could allow the passage of a bat into the interior.

- 4.33 The underside of the roof and supporting timbers are exposed, which provide as suitable perches for void dwelling bats, such as a brown long-eared bat.
- 4.34 The interior space contains stored materials and flat surfaces (where droppings can typically accumulate), of which were inspected for bat evidence (e.g. droppings). No evidence of roosting bats was discovered internally. As such, void dwelling species are ruled out from further consideration.
- 4.35 The shed is single skin and likely subject to fluctuating internal temperature. This is typically unsuitable conditions for roosting bats.



Photograph 3. Exterior of B2



Photograph 4. Interior of B2



Photograph 5. Interior of B2

Building B3 – Description

- 4.36 The structure B3 is a metal shipping container.

Exterior

- 4.37 The exterior of the structure is completely sealed and does not contain any suitable PRFs.

Interior

- 4.38 No access to the interior of B3 was possible; however, the exterior is completely sealed with no possible entry to the interior of the structure. As such, any internal suitability for bats is ruled out from further consideration.



Photograph 6. Exterior of B3

Other species

- 4.39 There are no other granted EPSL records within the 2km search buffer (MAGIC, 2024). There are a group of three great crested newt (GCN) class survey licence returns c. 1.50km southwest of the Site. The records are beyond the typical commuting range of GCN (0.25-0.50km) and the closest ponds that could extend the range of a GCN metapopulation are >500m apart, thereby isolating these records from the Site. There are no ponds located on the Site, with five ponds present within 0.50km. The closest pond is c. 0.1km north of the Site on the northern side of Pear Tree Lane. The connectivity to the pond is suboptimal commuting habitat for GCN, with buildings and a surfaced road with curbs and regular drainage points separating the pond and the Site. The majority of habitats present on-site are typically unsuitable for GCN. As such, their presence on-site is unlikely.
- 4.40 No evidence of any protected or notable species was recorded on the site.
- 4.41 The hedgerows could be used as foraging and commuting corridors by bats as well as providing opportunities for nesting birds and shelter for small animals such as common amphibians and hedgehogs. Badgers and other species may cross the site, but the habitats present are considered to be of low value for wildlife, offering very limited opportunity.

5.0 DISCUSSION AND RECOMMENDATIONS

Nature Conservation Designations

Statutory

International Sites

- 5.1 There six international designations within 10km of the Site, with the closest being Thames Estuary and Marshes RAMSAR (c. 3.0km north of the Site). No habitats associated with the identified sites occur on-site, and no qualifying species are likely to be present. As such, no direct impacts as a result of the development are anticipated.
- 5.2 Due to the small scale of the site, distance from the designated sites, and type of development proposed, no indirect impacts, such as air, light or water pollution, are anticipated.

National Sites

- 5.3 There are three national designations within 3km of the Site, the closest being Great Crabbles Wood SSSI (c. 0.40km east). Under the same rationale above, due to the type, scale and distance of the proposed development, no impacts (direct or indirect) are anticipated as a result of the proposals.

Non-Statutory

- 5.4 Details on non-statutory Sites have not been obtained from the records centres due to the small scale and nature of the development. As above, any impacts (direct / indirect) are anticipated to be negligible due to the type and scale of the proposals, if such sites are present within the vicinity.

Habitats and Flora

- 5.5 Current legislation and existing policy supports the provision of Biodiversity Net Gain (BNG) through development. The NPPF states that planning decisions should provide net gains for biodiversity, and central government have legislated a requirement for at least 10% net gain in relation to all planning permissions, which took effect in early 2024, with suitable exemptions in place. The Gravesham Local Plan Core Strategy makes no specific mention of a local minimum net gain target, and so the statutory minimum of +10% net gain stands.
- 5.6 The Site is dominated by artificial unvegetated substrate, which generally holds low biodiversity value. There is a small section of other neutral grassland, which is of moderate value of wildlife. Although is formed mainly of ruderal/ephemeral species.

- 5.7 The Site contains non-native ornamental hedgerow. Where possible, new hedgerow creation should be incorporated into the proposals at the perimeter of the Site, utilising native species, where possible.
- 5.8 The proposed development includes the removal of c. 70% of the other neutral grassland located in the eastern extent of the Site to accommodate a static home. As the proposals are a 'self-build' for <9 units, the proposals are exempt from mandatory net gain.

Fauna

Bats

- 5.9 All British bat species and their roost Sites are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife & Countryside Act 1981 (as amended).
- 5.10 The hedgerows offer moderate commuting habitat and low foraging potential. No hedgerows are being removed as part of the proposals. A small area of grassland will be lost, which is anticipated to be inconsequential to local foraging resources. As such, no direct impacts to foraging or commuting are anticipated.
- 5.11 As the proposals may result in an increase in artificial light sources, this could deter bats from using the features such as the hedgerows. As such, it is recommended that any artificial lighting incorporated into the design follows the guidance from the BCT and Institute of Lighting Consultants (ILC, 2023). The lighting strategy adopted should include:
- Use narrow spectrum light sources to lower the range of species affected by lighting.
 - Use light sources that emit minimal ultra-violet light.
 - Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin.
 - Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal.
 - Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only.
 - External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on.

- Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.

5.12 The structures B1 – B2 are assessed as 'Negligible' suitability for roosting bats, and B3 is assessed as 'None', due to the lack of suitable PRFs and typically unsuitable materials and construction. No evidence of roosting bats was recorded across either building, internally or externally. As such, no impacts to roosting bats as a result of the proposals are anticipated.

Badger

5.13 Badgers and their setts are protected under the Protection of Badgers Act (1992). No evidence of badgers was recorded on-Site, including setts, latrines, paths or snuffle holes.

5.14 The Site is suitable for foraging, commuting and sett creation for badgers across the grassland and base of hedgerows. Prior to a planning application being submitted (assuming more than 6 months has elapsed since the publication of this report), further inspection for any new badger activity is recommended. Should any badger setts be discovered which would be impacted by the proposals (i.e., development activity within 30m of a sett) then appropriate survey, mitigation and licensing will be applicable.

Update badger inspection 26/06/25

5.15 An update badger inspection was undertaken due to a time period of greater than 6 months elapsing since the last visit. No new badger evidence was recorded anywhere across the Site, paying particular attention to the boundaries such as the hedgerow on the northern bound and the vegetated area to the east (see appendix C for updated photographs). Evidence such as latrines, sett excavation, 'push-throughs' and foraging holes were searched for; none were recorded. Furthermore, attention was paid to the immediate surroundings of the Site, as setts can be created in proximity to the site. Again, no evidence of this was recorded and there are no field signs suggesting badgers are present in the immediate area.

5.16 Badgers are likely absent from the Site, as such no impacts as a result of the proposed development are anticipated. Should another 6 months elapse between the date of the last visit and construction starting, it is recommended an update site walkover is undertaken.

Other faunal species

5.17 The Site has very low biodiversity value for any protected or notable species due to the quantum and low diversity of vegetated habitats and

present. The east, south and western boundaries are formed of a solid wooden fence, which restricts any potential dispersal routes to the north. The northern boundary backs directly onto a surfaced road, with low density residential housing in the vicinity. As such, the Site's connectivity to the wider landscape is suboptimal.

- 5.18 The hedgerow offers suitable foraging, commuting and resting habitat for range of species, such as nesting birds; however, are not being impacted by the proposed development. The buildings B1 and B2 are also suitable for nesting birds; although, no evidence of this was recorded. As such, it is recommended that the demolition be conducted outside of the nesting bird season (March-August, inclusive). If the nesting period cannot be avoided, a Nesting Bird Check (NBC) by a suitably experienced ecologist will be required prior to any works commencing. If nesting activity is confirmed, the works must be delayed until the eggs have hatched and the chicks fledged. If the NBC confirms no active nesting, the works must begin within the next 48hrs to avoid any reoccupation of the nest.
- 5.19 There is an off-site pond c. 0.10km southwest of the north of the Site. The connectivity to the pond is suboptimal, being separated by a surfaced road and low-density housing. Although a small area of grassland will be lost to the development, the GCN rapid risk assessment tool (Natural England) returned a result of 'offence highly unlikely', due to the distance of the pond and scale of the proposed impacts. As such, no impacts to GCN are anticipated.
- 5.20 The grassland in the eastern extent of the Site is suitable for common reptiles, amphibians and small mammals. As the majority of this grassland will be lost to development, the following precautionary measures are recommended to protect such animals during development:
- Heras fencing will be erected around the working area to prevent any machinery encroaching into suitable retained habitat i.e., hedgerows and grassland (g3c).
 - Removal of the grassland must be subject to a staged clearance, with one cut to reduce to 0.3m, to then be left for 24hrs, with a second cut to reduce to ground level, to allow any animals present to disperse.
 - The removal of these habitats must be undertaken outside of the main hibernation period November-March, inclusive.
 - Any common species (e.g. common frog *Rana temporaria*, hedgehog, slow worm) must be moved (with gloved hands) to an undisturbed area of vegetation on-site, such as hedgerow H1.
 - Any excavations or open drainage pipes must be covered/sealed overnight, and ramps installed in excavations if left open to allow any trapped animals to escape
 - In the unlikely event that a protected species (e.g. GCN) is identified, works must cease and advice must be sought from a suitably qualified ecologist.

Summary of Recommendations

- 5.21 Based on the ecological constraints identified above, Table 3 summarises recommendations for further work necessary to determine the need for, and scope of, any avoidance, mitigation and/or compensation measures to address potential adverse effects of development.

Table 3. Recommendations for further investigation/works/survey

Ecological Feature	Further Work	Applicable Timescales
Foraging/commuting bats	Low-impact lighting strategy	N/a
Badger	Pre-commencement inspection	<6 months before construction (no seasonal constraint)
Nesting birds	Nesting bird check	March-August (inclusive)
Other fauna	Precautionary working method	Avoid hibernation season, November-March (inclusive)

Opportunities for Ecological Enhancement

- 5.22 To promote adherence to the NPPF and the Gravesham Local Plan Core Strategy (2014), the following opportunities for ecological enhancement have been identified:

- Log piles and hibernacula to provide opportunity to small mammals, reptiles and invertebrates across the hedgerow boundaries of the Site
- Incorporation of native plants and those of wildlife importance in to landscaping scheme to provide foraging opportunities for birds, invertebrates and bats
- Improved connectivity of green infrastructure, with new hedgerow planting and infill planting using native locally sourced species, in addition to management techniques that promote structural enhancement, such as rotational cutting (information can be found in published by PTES on hedge management cycles)
- Provision of new bat roosting opportunities within on-Site buildings and mature trees, such as the inclusion of bat boxes like the Beaumaris Bat Box (buildings) (or integrated bat box into the fabric of the building) or Schwegler bat boxes (trees)
- Cutting 'hedgehog highways' in each boundary fence (13x13cm square cut-outs) to allow the passage of hedgehogs through the Site
- Provision of bird nesting opportunities within on-Site buildings and/or retained mature trees, such as the inclusion of bird boxes, similar to the Schwegler 1B nest box and (on a suitable mature tree) and the Schwegler 1SP sparrow terrace (on buildings)

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Appendix A
Habitats Plan



-  Site boundary
-  Other neutral grassland (g3c)
-  Buildings (u1b5)
-  Artificial unvegetated unsealed surface (u1c)
-  Trees
-  Non-native ornamental hedgerow (h2b)
-  Fence



Project Land South of Pear Tree Lane, Gravesend

Date October 2024

Drawing No. 0184_01

Drawing Title Habitats Plan

Scale Refer to scale

Rev -

Client Perfect Pitch Ltd

Drawn CVJ

Appendix B

Legislation and Planning Policy

- 1.1. The Conservation of Habitats and Species Regulations 2017 (as amended) make prescriptions for the designation and protection of Sites of Community Importance ('European sites', i.e. Special Areas of Conservation and Special Protection Areas) and European Protected Species (EPS). The latter include all native bats, great crested newts, dormice, otters and certain reptiles, listed under Annex II of the Regulations. Following the UK's departure from the European Union, the provisions of the Regulations have been retained through enactment of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which came into force on 31 December 2020.
- 1.2. The Wildlife and Countryside Act 1981 (as amended, principally by the Countryside and Rights of Way Act 2000) forms the basis for protection of statutory designated sites of national importance (e.g. Sites of Special Scientific Interest; SSSIs) and native species that are rare and vulnerable in a national context. Additionally, badgers are protected under the Protection of Badgers Act 1992.
- 1.3. The Environment Act 2021 received Royal Assent in November 2021. Through an amendment to the Town and Country Planning Act 1990 the Environment Act will introduce a mandatory requirement for all planning permissions to be conditional upon the submission of a Biodiversity Gain Plan for approval by the Local Planning Authority. The Plan will need to demonstrate a net gain of at least 10% in the biodiversity value of the development site. These provisions are not yet in force, pending their enactment through secondary legislation.
- 1.4. Section 40(1) of the Natural Environment and Rural Communities (NERC) Act 2006 states that each public authority, "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications, with particular regard to the Section 41 (S41) lists of 56 habitats and 943 species of principal importance. The UK Biodiversity Action Plan (BAP) has been superseded by the Biodiversity 2020 Strategy, however Local BAPs continue to influence biodiversity management and conservation effort, including through the spatial planning system, at the local scale.
- 1.5. The National Planning Policy Framework (2023) (NPPF) sets out government planning policies for England and how they should be applied. With regards to ecology and biodiversity, Chapter 15: Conserving and Enhancing the Natural Environment, paragraph 174, states that the planning system and planning policies should minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

- 1.6. Paragraph 180 sets out the principles that local planning authorities should apply when determining planning applications:
- 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.
 - 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.
 - 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.
 - 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.
- 1.7. Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Policy Guidance (PPG). The Natural Environment PPG addresses principles across a broad spectrum of topics targeting biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services, and the use of local ecological networks to support the national Nature Recovery Network. In particular, the PPG promotes the delivery of measurable Biodiversity Net Gain through the creation and enhancement of habitats alongside development.
- 1.8. The Government Circular 06/2005, which is referred to within the NPPF, defines statutory nature conservation sites and protected species as a material consideration in the planning process.
- 1.9. Local planning policies of relevance to ecology, biodiversity and/or nature conservation have been set out in Table 1 below.

Table 1. Summary of regional and local planning policy relating to ecology

Policy	Summary
Gravesham Local Plan Core Strategy 2014	
Policy CS12: Green Infrastructure	5.7.22 A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained. The network will improve access within the urban area, from the urban area to the rural area and along the River Thames. The key parts of the network are identified on Figure 19: Strategic Green Infrastructure Network. 5.7.23 Sites designated for their biodiversity value will be protected, with the highest level of protection given to internationally designated Special Protection Areas, Special Areas of Conservation and Ramsar sites, followed by nationally designated Sites of Special Scientific Interest, followed by Local Wildlife Sites and then by other areas of more local importance for biodiversity. 5.7.24 There will be no net loss of biodiversity in the Borough, and opportunities to enhance, restore, re-create and maintain habitats will be sought, in particular within the Biodiversity Opportunity Areas shown on the Strategic Green Infrastructure Network map and within new development. 5.7.25 Where a negative impact on protected or priority habitats/species cannot be avoided on development sites and where the importance of the development is considered to outweigh the biodiversity impact, compensatory provision will be required either elsewhere on the site or off-site, including measures for ongoing maintenance.

Appendix C
Photographs



Photograph 12. Artificial unvegetated unsealed surface



Photograph 13. Unsealed surface cont.



Photograph 14. Other neutral grassland



Photograph 15. Other neutral grassland cont.



Photograph 16. Hedgerow H1 (south)



Photograph 17. Hedgerow H1 (north)



Photograph 18. Northern boundary hedgerow 26/06/25



Photograph 19. Northern boundary vegetated area and hedgerow 26/06/25