

Upper Austin Lodge Farm Eynsford, Kent

Preliminary Ecological Appraisal

A Report for DHA Planning

June 2020



**Greenspace
Ecological
Solutions**

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01 of 02

01 DHA Planning

02 Greenspace Ecological Solutions Ltd

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*The content of this report is the responsibility of Greenspace Ecological Solutions Ltd.
It should be noted that whilst every effort has been made to meet the client's requirements, no site survey can ensure complete assessment or prediction of the changeable on-site environment. Furthermore, should more than 12 months elapse between the date of this survey and any subsequent development, it may be necessary to consider the need for an update survey to be undertaken.*

Report Number J20914

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1 PROJECT OVERVIEW

Client: DHA Planning

Site Address: Upper Austin Lodge Farm, Eynsford, Kent DA4 0HU

Attending Ecologists: Tanya Rowlinson

Survey Date: 29th May 2020

Site Proposals: Residential development

Associated Planning Reference Number: Not yet submitted

Source of Relevant Documents:

Document:	Source:
Site Location Plan:	Google Earth Pro
Desk Study:	Magic.gov.uk Kent Landscape Information System (KLIS)

2 INTRODUCTION

2.1 Context

2.1.1 In response to the proposed residential development at Upper Austin Lodge Farm, Eynsford Greenspace Ecological Solutions (GES) was commissioned to conduct a Preliminary Ecological Appraisal (PEA) of the land to be affected (henceforth referred to as the 'site'). Proposals are understood to involve the demolition of a large former agricultural barn and the construction of new dwellings with associated gardens and access.

2.1.2 The site's potential to support protected species and habitats has been assessed and appropriate recommendations have been provided. The building and trees have been assessed for their suitability to support roosting bats and nesting birds. Ecological features of interest are depicted in Figure 1.

2.2 Site Location

2.2.1 The site is located approximately 2.1km south of the village of Eynsford, Kent at Ordnance Survey (OS) Grid Reference: TQ 541 631. The geographical location of the site is depicted in Image 1.

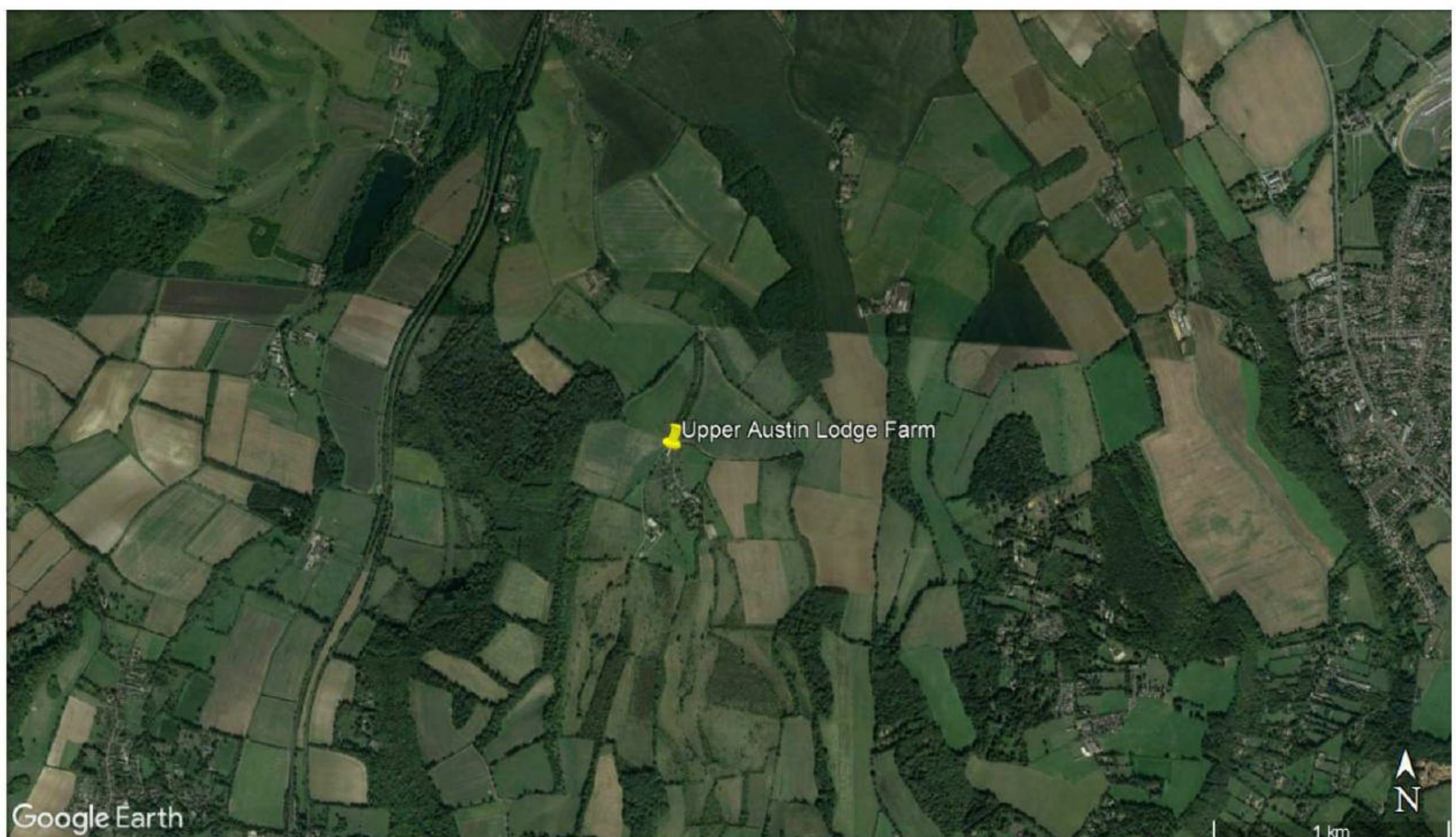


Image 1 – Site Location of Upper Austin Lodge Farm

2.3 Site Description

2.3.1 The site occupies approximately 0.5 hectares (ha) and comprises a large former agricultural barn surrounded by scattered trees, species-poor semi-improved grassland and a recently cleared scrub area to the south.

2.3.2 The site sits within a rural location and is surrounded by agricultural land, woodland and residential properties with associated gardens.

2.4 Legislation and Policies

Legislation

2.4.1 The main legislation that applies to ecological issues within England and Wales are:

- The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations (2019) provides safeguards for European Protected Sites and Species as listed in the Conservation of Habitat and Species Regulations 2018. These regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' and the adaptation of planning controls for the protection of such sites and species. Under the regulations, public bodies have a duty in exercising their functions to have regard to the EC Habitats Directive.
- The Wildlife and Countryside Act 1981 (as amended) provides detail on a range of protection and offences relating to wild birds, other animals, and plants. The level of protection depends on which Schedule of the Act the species is listed on. Licences are available for specific purposes to permit actions that would otherwise constitute an offence in relation to species.
- The Natural Environment and Rural Communities (NERC) Act 2006 imposes an obligation on all public bodies, including local authorities, to consider whether their activities can contribute to the protection of wildlife. The duty is created by section 40(1) of the Act, which states that: "Every 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."
- Hedgerows Regulations Act 1997 serves to; enforce under the Environment Act 1995, restrict the removal of hedgerows, or parts of hedgerows which are over 20m in length. In this case, removal includes digging up and replanting elsewhere, as well as removing from the land completely or destroying in the course of other actions. This includes developments or activities which destroy the roots, causing the vegetation to die.

- The Protection of Badgers Act 1992 exists to protect badgers *Meles meles* from cruelty. Under the act it a criminal offense to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so, or to intentionally or recklessly interfere with a sett.

2.4.2 The above summary serves as guidance only – the reader is referred to the original legislation for definitive interpretation.

UK Planning Policy

2.4.3 The recommendations of this report are in line with the key principles of the National Planning Policy Framework (NPPF), 2019 and Government Circular 06/05.

2.4.4 Local planning policies relating to ecology are invariably based on the conservation of species protected under the above legislation, including species and habitats of principal importance (HPI) listed under Section 41 (s41) of the NERC Act 2006; and the protection of designated sites. All of these features are considered within the scope of this PEA and therefore any recommendations made herein are likely to be in line with this policy.

2.5 Objectives of the Survey

2.5.1 The objectives of the survey were to:

- Classify the main habitats present within the site;
- Evaluate the ecological importance of these habitats;
- Assess building and trees for their potential to support roosting bats;
- Evaluate the potential for other protected species to occur within the site; and
- Provide appropriate recommendations for further surveys and mitigation where required.

2.6 Survey Constraints

2.6.1 All measurements and indications of area given within this report are approximate.

3 SURVEY METHODOLOGY

3.1 Desk Study

3.1.1 A desk study was undertaken to determine the presence of designated sites and habitats of conservation importance within 2km of the site.

3.1.2 Due to the ecological value of the site, a full suite of historical species data within 2km of the site was deemed onerous in this instance.

3.1.3 The following bodies were consulted for the desk study:

- Magic.gov.org
- Kent Landscape Information System (KLIS)

3.2 Preliminary Ecological Appraisal

Habitats

3.2.1 The site was surveyed using the methodology outlined in 'The Handbook for Phase I Habitat Survey: A Technique for Environmental Audit' (JNCC, 2010). This involves identifying the main plant communities present on-site and classifying the habitat types following the JNCC methodology. This technique provides an inventory of the basic habitat types present and enables areas of greater botanical interest which may require further, more detailed, surveys to be identified. Any occurrences of recognised invasive species as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were also noted.

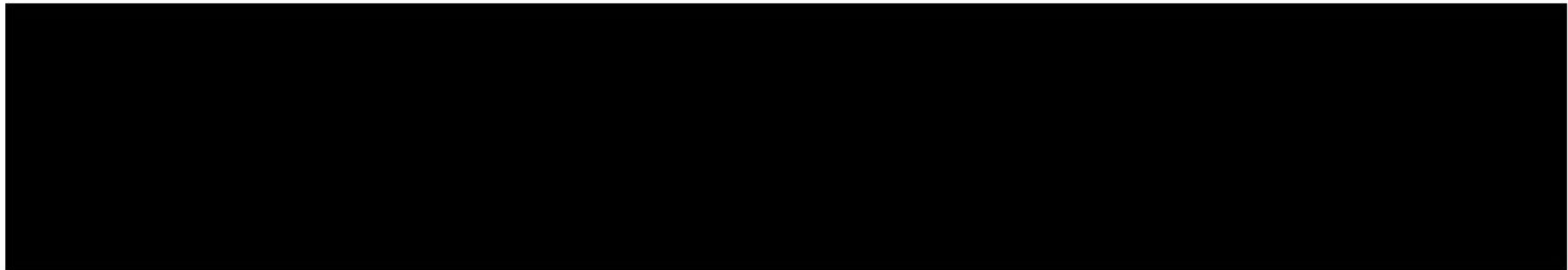
3.2.2 A map of the habitats and areas of interest (using a variation of the JNCC, 2010 protocol for Phase I Habitat plans) is provided in Figure 1. Photographs of features of interest are presented in Appendix A.

Protected Species

3.2.3 The survey was extended to include an assessment of the site's potential to support protected and notable species. This involved assessing the suitability of the habitats present within the site for these species as well as connectivity to the site from other areas of potentially suitable habitat nearby.

Badger

3.2.4





Bats

- 3.2.5 Where trees, buildings or other structures are present within the site, specific survey work was undertaken to assess their suitability to support roosting bats. In this instance, a variety of equipment was used to complete the bat scoping survey, including high powered torches, cameras with telephoto lens and a ladder.
- 3.2.6 Trees within the site which were deemed likely to be affected by the proposed development were surveyed in accordance with current best practice guidance (Collins, 2016). Trees were inspected for features such as splits, fissures, delaminated bark, heavy ivy *Hedera* sp. cover and woodpecker holes. Evidence of roosting bats such as droppings, staining and bats themselves were searched for below and in suitable features.
- 3.2.7 Where buildings were encountered, a full external and internal inspection was undertaken (access permitting). Any likely roosting or access points for bats such as raised fascia boards, missing/lifted tiles, cracks or crevices in brick/blockwork and gaps in soffit boxes were recorded and searched for evidence of use by bats (staining, droppings, scratch marks, or the presence of bats themselves). The results of a scoping survey enable the buildings and trees to be categorised as having Confirmed roosts or High, Moderate, Low or Negligible suitability to support roosting bats.

Breeding Birds

- 3.2.8 The site was assessed for its potential to support nesting and breeding birds. Factors considered include suitable cover and feeding habitat, the presence of used and disused nests and birds displaying nesting characteristics.

Great Crested Newt

- 3.2.9 The site was assessed for its potential to support great crested newt (GCN) *Triturus cristatus* populations. Suitable terrestrial habitat for GCN includes long grass, tall ruderals, scrub, woodland and hedgerow borders, as well as wood and rubble piles that act as hibernacula.

Hazel Dormouse

- 3.2.10 The site was surveyed for suitable hazel dormouse *Muscardinus avellanarius* habitat, such as the presence of a well-connected understorey broadleaf habitat, hedgerows, and suitable food sources such as oak *Quercus* sp., hazel *Corylus avellana* and other nut-bearing trees, fruiting trees and shrubs, flowers and invertebrates.

Reptiles

3.2.11 The site was assessed for its potential to support reptile populations. Suitable habitat for reptiles includes long grass, tall ruderals, scrub, woodland and hedgerow borders and wood and rubble piles that act as hibernacula.

Other species

3.2.12 Consideration was given to the site's suitability to support other protected and notable species.

4 SURVEY RESULTS

4.1 Desk Study

Statutory Designated Sites

4.1.1 Two statutory designated site exists within 2km of the site. These are presented in Table 1.

Table 1 – Statutory designated sites within 2km of the site.

Site Name	Description	Distance from Site
Otford to Shoreham Downs SSSI	<i>"This site includes areas of species-rich chalk grassland, and chalk scrub, and woodlands on a variety of soils. It supports a range of scarce and rare invertebrates. Much of the chalk downland was traditionally managed by grazing, mainly by sheep, which over centuries led to the development of very species-rich chalk grassland. A lack of grazing in recent decades has led to an overgrown form of this grassland over much of the site which is dominated by upright brome grass Bromus erectus. This is still very diverse, supporting over a hundred plant species. Other plants in the sward include sheeps fescue grass Festuca ovina, red fescue Festuca rubra, birds-foot trefoil Lotus corniculatus, salad burnet Sanguisorba minor, rough hawkbit Leontodon hispidus, ribwort plantain Plantago lanceolata, fragrant orchid Gymnadenia conopsea, stemless thistle Cirsium acaule, quaking grass Briza media and devils bit scabious Succisa pratensis. Two nationally scarce*1 plants are found growing here: man orchid Acerus anthropophorum and chalk milkwort Polygala calcarea. The formerly widespread scrub species juniper Juniperus communis occurs here at one of its last Kent localities. The variety of habitats support outstanding communities of woodland and chalk grassland invertebrate species. Amongst the nationally scarce*1 species present are moths: plumed prominent Ptilophora plumigera which feeds on field maple and Eudonia delunella which feeds on lichens and mosses on the trunks of ash, apple Malus species and occasionally on elms Ulmus species. A scarce hoverfly Cheilosia soror is present, found on the chalk downs visiting umbels in glades of woods. It has been reported to breed in truffles".</i>	0.3km NW
Magpie Bottom SSSI	<i>"The principal interest of this site is the chalk grassland on the steep slopes which supports a herb-rich plant community, including the nationally rare Kentish milkwort Polygala amarella. The site also incorporates neutral grassland, scrub and a variety of woodland. Sheep's fescue Festuca ovina and upright brome Bromus erectus dominate the species-rich grassland areas. Associated herbs include characteristic downland plants such as dwarf thistle Cirsium acaule, common rockrose Helianthemum nummularium, squinancywort Asperula cynanchica and horseshoe vetch Hippocrepis comosa. Seven orchid species occur in the grassland, particularly in the northern part of the site, among them the scarce man orchid Aceras anthropophorum. The Kentish milkwort is present in small numbers, in areas of more open turf. Where the slopes are less steep, fewer species generally occur and some of the grassland has become rank, dominated by upright brome and cock's foot Dactylis glomerata. Ash Fraxinus excelsior, oak Quercus robur and beech Fagus sylvatica are the most common standard trees with ash and hazel Corylus avellana widespread in the coppice layer. Other tree and shrub species, such as wild cherry Prunus avium, field maple Acer campestre and hawthorn Crataegus monogyna, are also present. The ground flora on the upper slopes is bluebell Hyacinthoides non-scripta dominated, with bramble Rubus fruticosus and occasionally bracken Pteridium aquilinum. Dog's mercury Mercurialis perennis predominates on the thinner soils of the steeper slopes. In addition, a number of species indicative of ancient woodland occur, including midland hawthorn C. laevigata on the clay soils and spurge laurel Daphne laureola on the more chalky soils. Lower Wood contains a narrow chalky bank with mature beech and yew Taxus baccata and here the ground flora, though sparse, includes the saprophytes yellow bird's-nest Monotropa hypopitys and bird's-nest orchid Neottia nidus-avis; these plants derive their nourishment from decaying organic matter. Both species are scarce in Kent. Scrub is present in former woodland clearings and has also developed along hedge-lines and wood edges as well as in some of the ranker grassland. Hawthorn is</i>	1.3km S

	<i>generally the dominant species although bramble, traveller's joy Clematis vitalba and roses Rosa spp. Area bundant in places. Lime-loving species, such as whitebeam Sorbus aria and privet Ligustrum vulgare are also frequent. The fauna of this site is not well known. However, two locally distributed butterflies are found here, viz the chalkhill blue Lysandra coridon and the brown argus Aricia agestis"</i>	
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(SSSI – Site of Special Scientific Interest)

4.1.2 The site also lies within Otford to Shoreham Downs SSSI Impact Risk Zone (IRZ) however, the proposed development does not meet the criteria that would warrant further consultation from Natural England.

Non-statutory Designated Sites

4.1.3 There are four non-statutory designated sites within 2km of the site. These are presented in Table 2.

Table 2 – Non-statutory designated sites within 2km of the site.

Site Name	Distance from Site
Auston Lodge Valley LWS	0.4km E
Hog Hill, East Wood LWS	1.1km E
Shoreham Road RNR	1.2km SW
Lullingstone Park LWS	1.7km SW

(LWS – Local Wildlife Site, RNR- Roadside Nature Reserve)

Ancient Woodland

4.1.4 There are 36 parcels of ancient woodland present within 2km of the site. The closest is an area of Ancient & Semi-Natural Woodland (ASNW) which lies 0.4km west of the site known as The Birches.

NERC s41 Habitats of Principle Importance (HPI)

4.1.5 Habitats listed under s41 of the NERC Act (2006) within 2km of the site are presented in Table 3.

Table 3 – NERC s41 HPI within 2km of the site.

Habitat Type	Distance from Site
Deciduous woodland	0.4km W
Lowland calcareous grassland	0.6km N

4.2 Phase I Habitat Survey

4.2.1 The following habitat types were recorded within the site:

- Scattered trees

- Species poor semi-improved grassland
- Hedgerow
- Building

Scattered trees

4.2.2 Several semi-mature and mature trees are scattered along the site's eastern and western boundaries. Species present include hazel *Corylus avellana*, bird cherry *Prunus padus*, ash *Fraxinus excelsior*, field maple *Acer campestre* and whitebeam *Sorbus aria*.

Species-poor semi-improved grassland

4.2.3 The majority of the site is composed of well-managed species-poor semi-improved grassland with a short sward (>10cm). Grass species present include perennial rye-grass *Lolium perenne*. Herbaceous species present include common nettle *Urtica dioica*, dandelion *Taraxacum officinale* agg. and cow parsley *Anthriscus sylvestris*.

4.2.4 A rubble pile and brash pile is present within the grassland, denoted TN1 and TN2 in Figure 1.

4.2.5 An area of recently cleared scrub is present along the western elevation of B1, denoted TN3 in Figure 1.

4.2.6 A porter cabin was present along the eastern elevation of B1, denoted TN4 in Figure 1.

Hedgerow

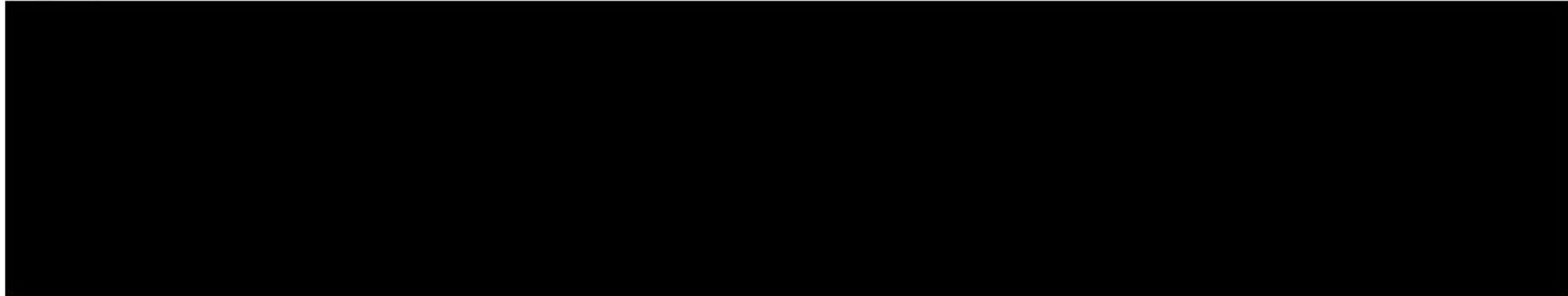
4.2.7 A mature, regularly managed hedge; denoted H1 on Figure 1 and consisting of blackthorn *Prunus spinosa*, dogwood *Cornus sanguinea*, bird cherry and hazel, with an understorey of common nettle, cleavers *Galium aparine* and common ivy *Hedera helix*; is present along the eastern boundary. The hedge is 2m in height x 1m wide x 70m in length.

Buildings

4.2.8 A single building was recorded within the site. A more detailed description of the building and its suitability to support roosting bats and nesting birds, is provided in Section 4.3.

4.3 Protected Species

4.3.1



*Bats Roosting Habitat**Buildings - B1*

- 4.3.2 With a footprint of 816m², B1 is a single storey corrugated metal structure to a height of 3m. The roof is made of corrugated metal and asbestos sheets. Overall, the building is in good condition.
- 4.3.3 Potential Roosting Features (PRF) and access points recorded externally include gaps between asbestos overhang and the metal frame. The roof has multiple windows, which some have the plastic coverings missing, so are open to the elements.
- 4.3.4 Internally, there is no insulation or roof lining present and the windows makes the building light and airy. There are no internal PRF's within the building.
- 4.3.5 A single barn owl *Tyto alba* pellet was recorded within B1. No other evidence of barn owl roosting or nesting within the building was identified.

Bats Roosting Habitat- Trees

- 4.3.6 No trees suitable to support roosting bats were identified within the site.

Bats Foraging and Commuting Habitat

- 4.3.7 The site's boundaries and immediate surroundings offer suitable foraging or commuting habitat present within the site, the surrounding landscape provides suitable foraging and commuting habitat in the form of the areas of woodland, hedgerows and grassland.

Birds

- 4.3.8 The building and trees provide suitable habitat for nesting birds.

Great Crested Newt

- 4.3.9 The species-poor semi-improved grassland provides limited habitat of sub-optimal suitability for GCN within the site and suitable refugia are limited to a rubble pile (TN1) and brash pile (TN2). No evidence of the species was recorded during the survey. Furthermore, there are no waterbodies potentially suitable for GCN were identified on or within 250m of the site.

Hazel Dormouse

- 4.3.10 The on-site habitats are unsuitable for hazel dormouse. No evidence of the species was recorded during the survey.

Reptiles

- 4.3.11 The species-poor semi-improved grassland provides limited habitat of sub-optimal suitability for reptiles within the site and suitable refugia are limited to a rubble pile (TN1) and brash pile (TN2). No evidence of the species was recorded during the survey.

Other species

- 4.3.12 Beyond those noted above, the survey recorded no evidence of other species of conservation concern within the site.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Designated Areas

- 5.1.1 The closest designated site is Otford to Shoreham Downs SSSI which lies approximately 0.3km north-west of the site and the closest non-statutory site is Auston Lodge Valley LWS which lies approximately 0.4km east of the site.
- 5.1.2 The site also lies within Otford to Shoreham Downs SSSI IRZ however, the proposed development does not meet the criteria that would warrant further consultation with Natural England.
- 5.1.3 Due to the small-scale and localised nature of the proposed development, it is not considered likely to affect any designated areas.

5.2 Ancient Woodland

- 5.2.1 The closest ancient woodland site lies 0.4km west of the site. This distance is well beyond the 15m buffer recommended by Natural England the Forestry Commission when working near ancient woodland sites and consequently, development of the site will have no detrimental impact on this or any other areas of ancient woodland.

5.3 Habitats and Botanical Species of Interest

- 5.3.1 The on-site habitats are common and widespread and no further botanical surveys are required.
- 5.3.2 The development will have no detrimental impact to any NERC s41 HPI due to its small-scale, localised nature and the distance between the site and priority habitats.
- 5.3.3 It is recommended that trees are retained where possible. Retained trees should be protected in accordance with British Standard (BS) 5387:2012 'Trees in relation to design, demolition and construction'.

5.4 Protected Species

Badger

- 5.4.1 Habitats within the site provide no opportunities for badger sett creation and no further surveys for the species are required.

Bats – Roosting habitat

- 5.4.2 The building within the site was deemed to have Negligible suitability to support roosting bats and no further surveys for this species are required.

- 5.4.3 The trees within the site were deemed to have Negligible suitability to support roosting bats and no further surveys are required.

Bats – Foraging habitat

- 5.4.4 There is suitable foraging or commuting habitat present along the site boundaries and within the surrounding areas. The proposed development is not anticipated to affect suitable foraging and commuting habitats. As a result, bat activity surveys are not required in this instance.

- 5.4.5 However, since lighting can be detrimental to bats using vegetation for foraging and commuting, any external lighting proposed for the development should be sensitive to these boundaries commuting features, avoiding direct illumination of them, for example through the use of directional and low-level bollard lighting. The Institution of Lighting Professionals (ILP), in partnership with the Bat Conservation Trust (BCT), has published guidance relating to bats and lighting – this is available at the following link; <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>.

Barn Owls

- 5.4.6 Evidence of barn owls was found during the inspection of B1. However, the building does not provide suitable nesting habitat and no further surveys for barn owls are required.

Birds

- 5.4.7 The building and trees within the site provide suitable habitat for nesting birds.
- 5.4.8 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) and it is recommended that works to these areas (where necessary) are conducted outside the core breeding period for birds of late February – August inclusive.
- 5.4.9 Should this timeframe be unobtainable, a thorough search for the presence of breeding birds should be conducted by a suitably experienced ecologist prior to the start of works. Should evidence of breeding birds be recorded, works within 5m of any nest, or works that have potential to destroy any nest(s), should stop until the eggs have hatched and the chicks fledged, or the nest is deemed by a suitably experienced ecologist to have been abandoned.

Great Crested Newt

- 5.4.10 Habitats within the site are of sub-optimal suitability for GCN and limited in their extent across the site, with refugia limited to a rubble pile and brash pile. Therefore, further surveys for

GCN are considered disproportionate. In order to discourage GCN from colonising, the grass should be kept in its current short, well-maintained state.

5.4.11 Although limited suitable terrestrial habitat for GCN is present on the site, no waterbodies were identified on or within 250m of the site and as a result, GCN are deemed to be likely absent from the site. No further surveys for the species are required.

5.4.12 Should the rubble and brash piles (TN1 and TN2) require clearance, this clearance should be preceded by a sensitive, fingertip, destructive search of the area to be cleared, carried out by a suitably experienced ecologist. This should take place during the active season for GCN (April to early October).

5.4.13 During construction, a precautionary method of works should be implemented to account for the potential presence of GCN and other wildlife in the surrounding area, including:

- All trenches/holes resulting from the works will be covered overnight to prevent reptiles falling into them. If not practical to cover trenches/holes then a suitable mean of escape for animals will be provided (e.g. graded slope/plank installed).
- If left overnight, all trenches/holes will be checked for the presence of reptiles and other wildlife prior to back filling.
- All building materials required for the development will be stored above the ground and on/in pallets or a suitable metal container.

5.4.14 So long as the above mitigation strategy is implemented in full then the welfare of GCN will be maintained and no further surveys for GCN will be required.

Hazel Dormouse

5.4.15 No evidence of hazel dormouse was identified within the site and no suitable habitat will be affected by the proposed development. No further surveys for the species are required.

Reptiles

5.4.16 Habitats within the site are of sub-optimal suitability for reptiles and limited in their extent across the site, with refugia limited to a rubble pile and brash pile. As a result, further surveys for reptiles are considered disproportionate. In order to discourage reptiles from colonising the site, the grassland should be kept in its current short, well-maintained state.

5.4.17 Should the rubble and brash piles (TN1 and TN2) require clearance, this clearance should be preceded by a sensitive, fingertip, destructive search of the log piles, carried out by a suitably

experienced ecologist. This should take place during the active season for reptiles (April to early October).

- 5.4.18 The above precautionary methods of works for GCN will also serve to protect any reptiles within the site.

Other species

- 5.4.19 Beyond those noted above, there are no obvious and immediate issues regarding other protected species on the site and no further surveys to determine the presence of other protected species is required in this instance.

- 5.4.20 Should at any point during the development a protected or notable species be identified within the site, then all works should **stop** and the appointed ecologist consulted on the appropriate manner in which to proceed.

6 ECOLOGICAL ENHANCEMENTS

6.1 Opportunities to include biodiversity enhancements within the site exist and in accordance with the requirements of the NPPF the following recommendations are considered appropriate for the site:

- The installation of bird boxes onto the buildings within the site would benefit a diversity of bird species. Boxes should be selected from either integrated boxes such as those available from www.habibat.co.uk for inclusion within the proposed structures or open fronted and hole fronted nest boxes for within trees, fencing and planting. To maximise suitability, boxes should be installed on sheltered aspects close to vegetation at a height of 2-3m, preferably on north, north-east or north-west facing elevations.
- The installation of bat boxes in suitable locations would increase the site's potential for roosting bats. These boxes should be installed at a height of 3m or more or at eaves height on sunny, sheltered aspects, away from direct illumination by artificial lighting and in a location, which ensures connectivity to foraging habitats within the wider landscape. In this instance, Boxes such as those provided by www.habibat.co.uk are recommended for within built structures. the Kent Bat box or Schwegler 3FN (or similar) are recommended for within any remaining trees.
- As the site sits well over 1km away from any major roads and contains suitable foraging habitat the erection of a barn owl box nest box within a suitable tree within the site would enhance the site for this species. A suitable box for installation is also available from [The Nest Box Company](http://TheNestBoxCompany.com).
- The incorporation of a wildlife-friendly planting scheme, using native plant species, would be of benefit to invertebrates and subsequently species such as birds and bats.
- Any tree planting should be undertaken using native species such as pedunculate oak, small-leaved lime *Tilia cordata*, black poplar *Populus nigra*, wild service tree *Sorbus torminalis* or similar.

7 SUMMARY

- 7.1 In response to the proposed development at Upper Austin Lodge Farm, Eynsford, the site has been subject to a PEA and the site's potential to support habitats and species of conservation concern were assessed.
- 7.2 The development of the site is considered unlikely to affect designated sites of conservation importance, areas of ancient woodland or HPI listed on s41 of the NERC Act 2006.
- 7.3 Habitats within the site are common and widespread and no further botanical surveys are required. It is recommended that trees are retained where possible. Retained trees should be protected in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction'.
- 7.4 Evidence of barn owl was found during the survey; however, the building was deemed to not be suitable for nesting barn owls and no further surveys are required.
- 7.5 Lighting can be detrimental to bats using tree lines for foraging and commuting, any external lighting proposed for the redevelopment should be sensitive to the surrounding habitats, avoiding direct illumination of them, for example through the use of directional and low-level bollard lighting.
- 7.6 Suitable nesting habitat exists within the site and recommendations in regard to timings and methods of best practice for breeding birds have been provided in Section 5 of this report.
- 7.7 The proposed development is not anticipated to affect GCN or reptiles however, precautionary methods of works to ensure these species are not disturbed by the proposed works have been provided in Section 5 of this report.
- 7.8 The likelihood of other protected and notable species to occur within the site is considered negligible and no further surveys for other protected species are required as detailed in Section 5 of this report.
- 7.9 Should at any point a protected or notable species be identified within the site then all works should **stop**, and the appointed ecologist consulted on the appropriate manner in which to proceed.
- 7.10 In accordance with the requirement of the NPPF, recommendations to enhance the site's suitability for wildlife have been provided in Section 6 of this report.

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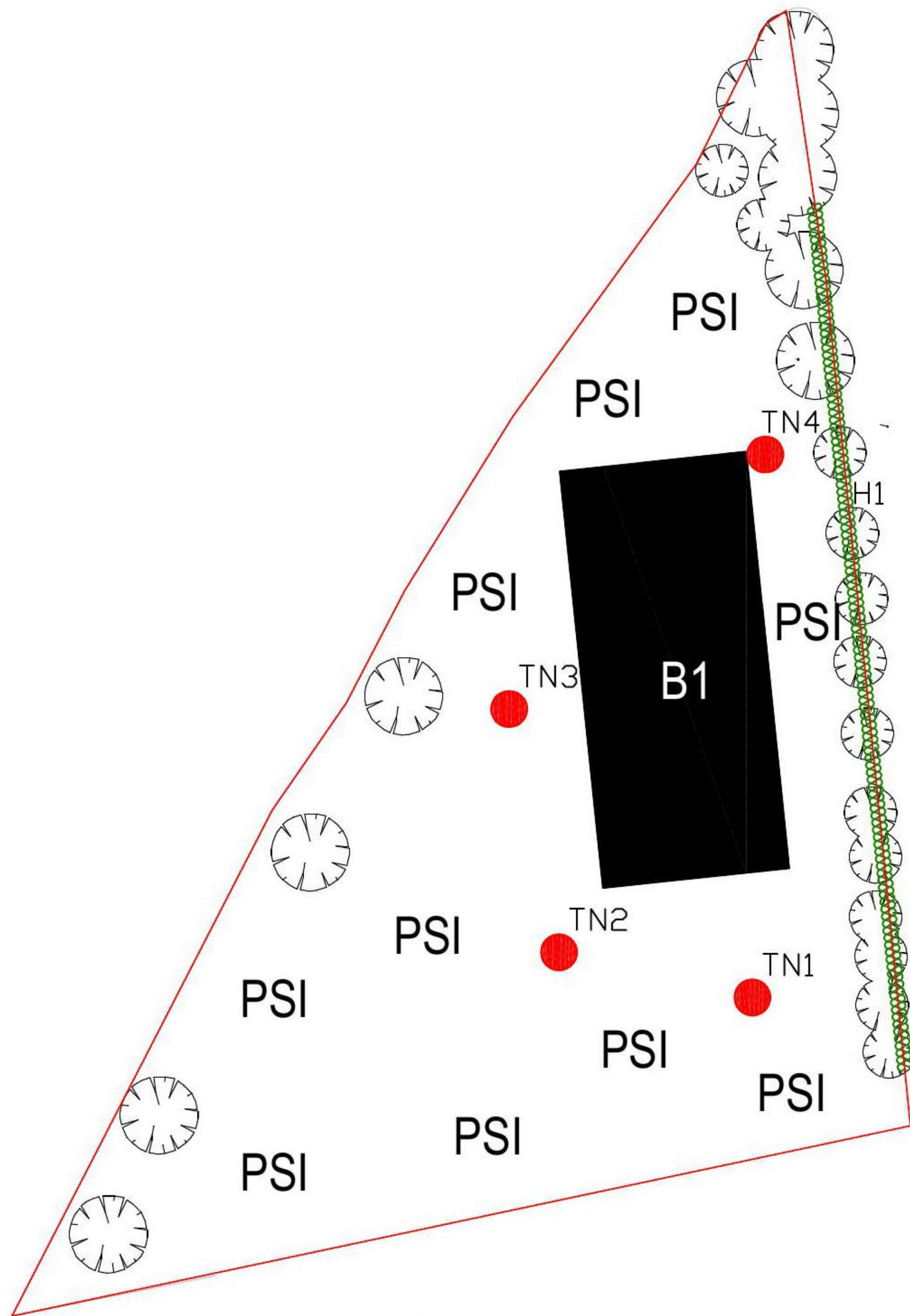
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




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Figures



Legend

-  Site Boundary
-  Species- poor semi-improved Grassland
-  Hedgerow
-  Tree
-  Building
-  Target Note



Job Reference : J20914
 Project Title: Upper Austin Lodge Farm, Eynsford

Drawing Title
 Figure 1: Phase 1 Habitat Map

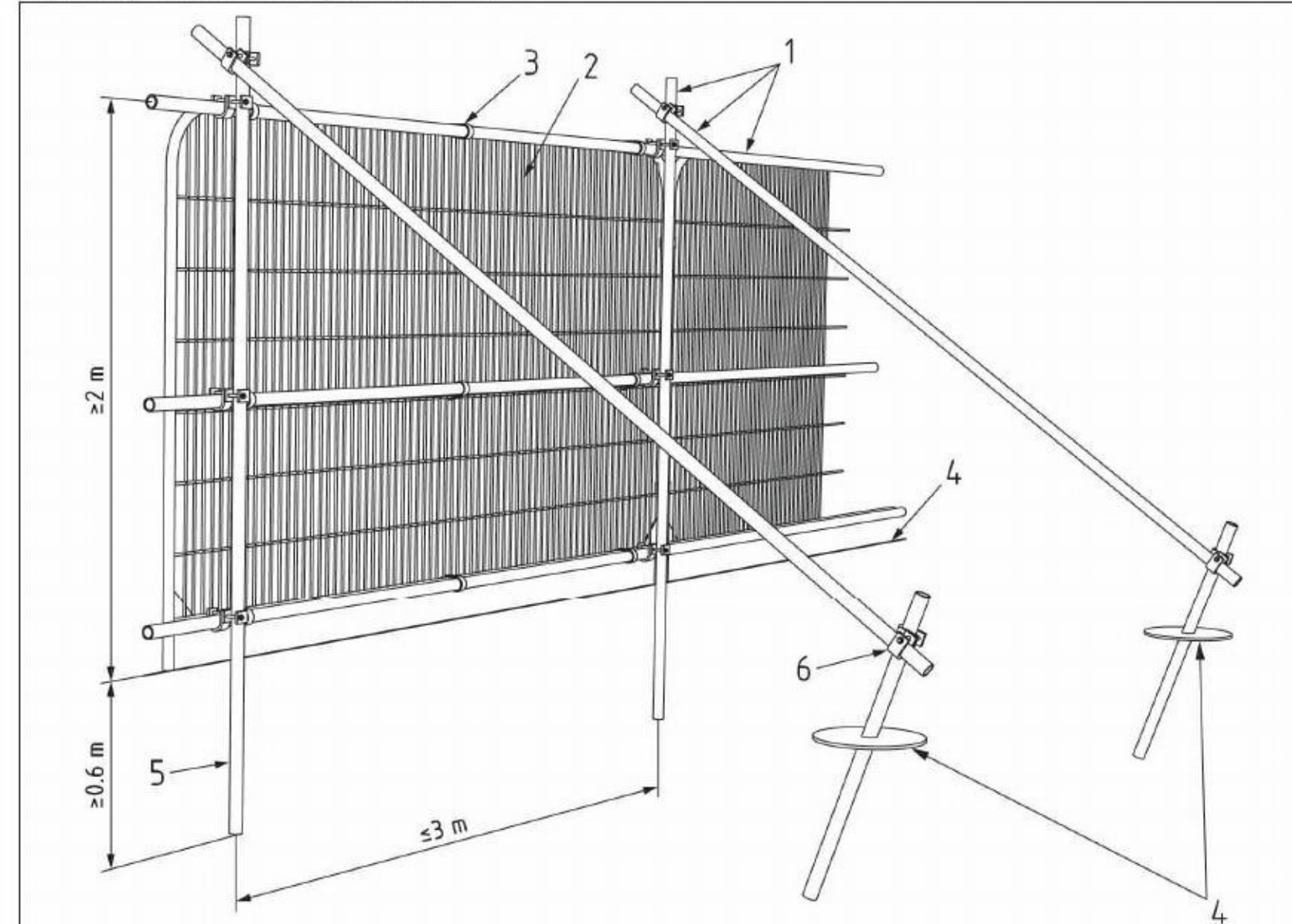
Date : 08-06-20 Checked : JD

Drawn : TR Approved : N/A

Status : Final Scale : NTS

Copyright - Greenspace Ecological Solutions
 No dimensions are to be scaled from this drawing.
 All dimensions are to be checked on site. All measurements are for indicative purposes only.

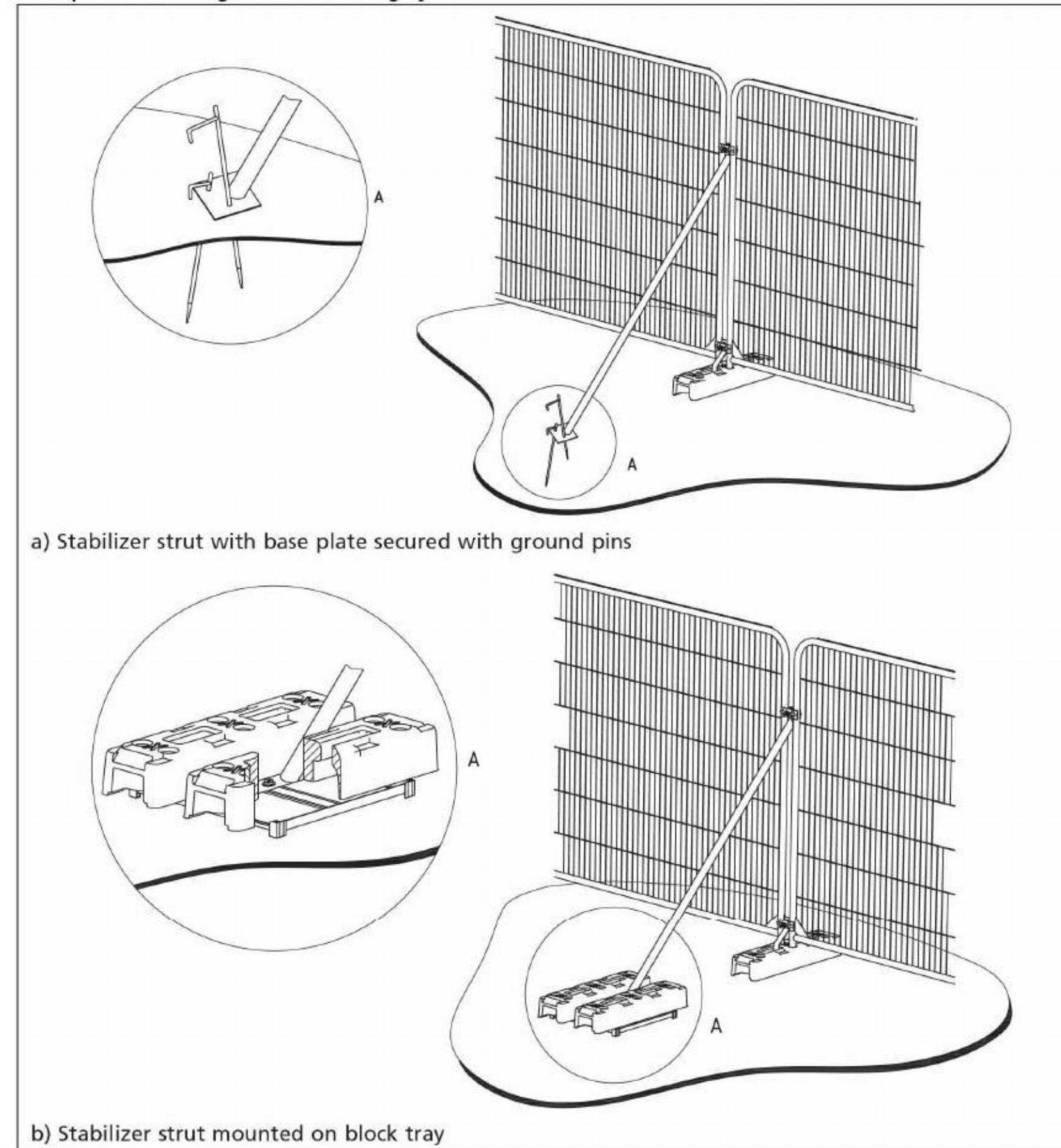
Default specification for protective barrier



Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps

Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

Job Reference : J20914
 Project Title: Upper Austin Lodge Farm, Eynsford
 Drawing Title
 Figure 2: Tree Protection Measures
 Date : 08-06-20 Checked : JD
 Drawn : TR Approved : N/A
 Status : Final Scale : NTS

Appendices

APPENDIX A – PHOTOGRAPHS



Plate 1: Area of species-poor semi-improved grassland within the site.



Plate 2: Rubble pile (TN1) and brash pile (TN2) present within the grassland.



Plate 3: H1 and scattered trees along eastern boundary.



Plate 4: B1- Negligible suitability to support roosting bats.

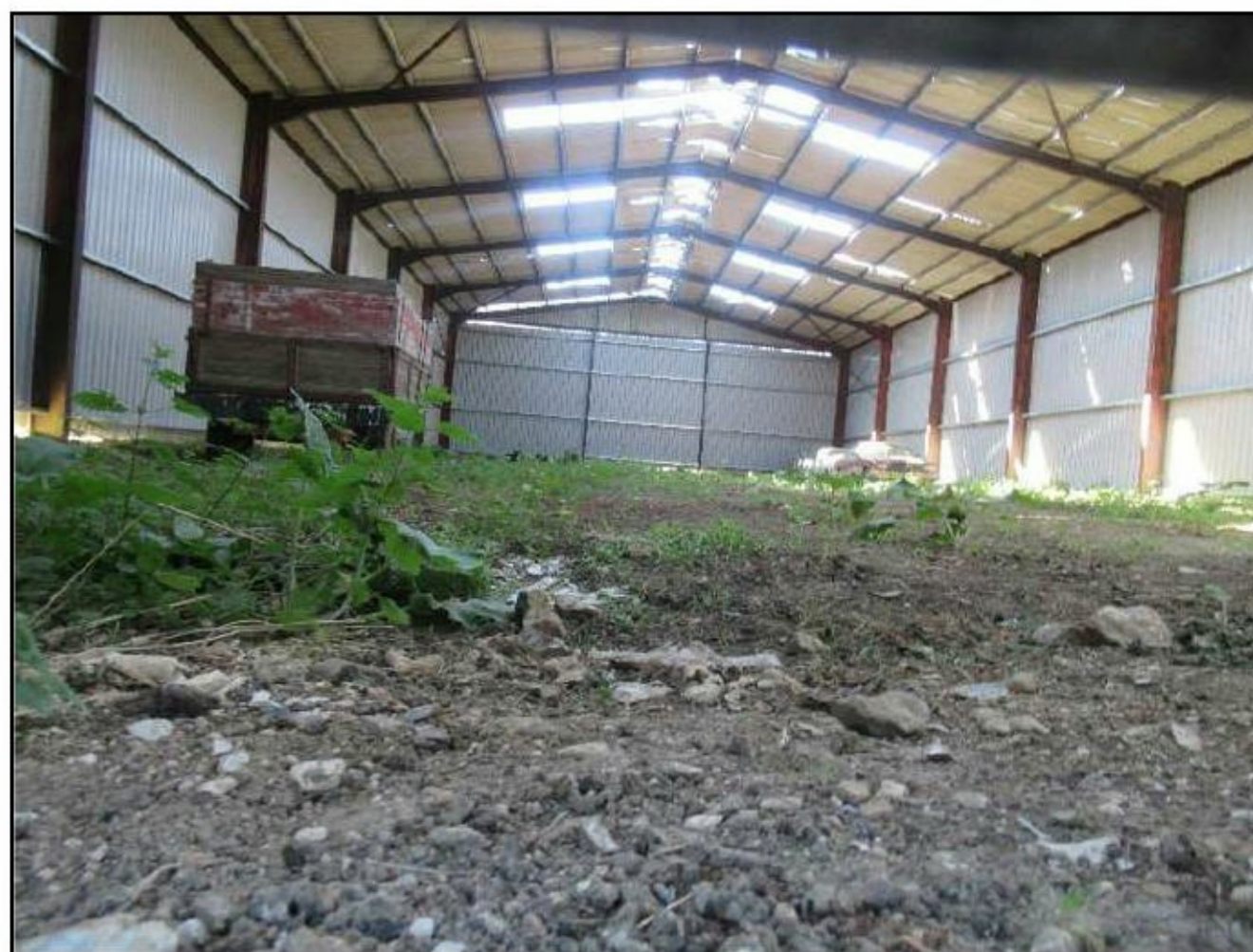


Plate 5: Internal of B1.



Plate 6: Barn owl pellet found within B1.

APPENDIX B – Categories of Bat Roost Suitability

Roost type Level of suitability	Summer Roost used by Non- Breeding Bats	Maternity Roost	Hibernation Roost
Confirmed roost	Presence of bats or evidence of bats identified. Confirmation of a roost will likely require further surveys.		
High	Building/Structure or tree with multiple opportunities for one or more species of roosting bat. Optimal orientation. Good connectivity to optimal foraging habitats.	Building/Structure or tree with multiple roosting opportunities for pregnant female bats and young pups. Optimal orientation. Good connectivity to optimal foraging habitats.	Building/Structure or tree that has suitable thermal stability and levels of humidity to support torpid bats throughout the winter months.
Moderate	Building/Structure for tree with some opportunities for roosting bats. Preferable orientation. Connectivity to moderate to high quality foraging habitat available.	Building/Structure or tree with some roosting opportunities for pregnant female bats and young pups. Good orientation. Good connectivity to moderate to high quality foraging habitats.	Building/Structure or tree that has suitable thermal stability and levels of humidity to support torpid bats for some of the winter months. Moderate connectivity to suitable foraging areas.
Low	Building/Structure or tree with limited opportunities for roosting bats. Poor connectivity to foraging habitat.	Building/Structure or tree with limited opportunities for breeding bats. Poor connectivity to foraging habitat.	Building/Structure or tree with limited potential to support hibernating bats due to instable environmental conditions.
Negligible	Building/Structure or tree with no or very limited opportunities for roosting bats. Little to no connectivity to foraging habitat	Building/Structure or tree with no or very limited opportunities for breeding bats. Little to no connectivity to foraging habitat.	No suitable roosting opportunities for hibernating bats.

APPENDIX C – Minimum Number of Bat Surveys Required in Most Instances

Negligible	Low roost suitability	Moderate roost suitability	High roost suitability*
<p>Dusk emergence and/or pre-dawn re-entry surveys unlikely to be required.</p>	<p>Structures: 1 survey visit. 1 dusk emergence or pre-dawn re-entry survey^a.</p> <p>To be conducted during May – August.</p> <p>Trees: Dusk emergence and/or pre-dawn re-entry surveys unlikely to be required.</p>	<p>2 separate survey visits. 1 dusk emergence survey and 1 pre-dawn re-entry survey^b.</p> <p>To be conducted during May-September with at least one of the surveys May – August.</p>	<p>3 separate survey visits. At least 1 dusk emergence survey and a separate pre-dawn re-entry survey. The third visit could be either a dusk or dawn survey^b.</p> <p>To be undertaken during May-September with at least two of the surveys between May and August.</p>
<p>^a Structures that have been categorised as low suitability can be problematic and the number of surveys required should be judged on a case by case basis. If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.</p> <p>^b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; It is recommended that surveys are spaced out at least two weeks apart, preferably more. A dawn survey immediately after a dusk survey is considered one visit. If there is potential for a maternity colony, then consideration should be given to seasonal detectability and the ecologist should use their professional judgement to design the most appropriate survey regime.</p> <p>*For the purpose of this exercise a confirmed roost is considered under the criteria of 'High roost suitability'</p>			