

Preliminary Ecological Appraisal

Church Wood, Three Houses Lane, Codicote,
Hertfordshire, SG4 8TB

21/06/2024

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1 *Executive Summary*

- 1.1 Optimis Consulting Ltd (Optimis) was commissioned by D&A Engineering Ltd to undertake a Preliminary Ecological Appraisal at Church Wood, Three Houses Lane, Codicote, Hertfordshire, SG4 8TB to inform proposals for the conversion of three barns for commercial use, and the erection of a new substation.
- 1.2 A desk study and field survey of the Site were undertaken during May and June 2024. A Preliminary Roost Assessment was also undertaken to determine the suitability of the existing buildings for roosting bats.
- 1.3 The Site comprises a hardstanding agricultural yard with three extant sheds of modern construction and adjacent areas of bare ground. It is bordered off-site by woodland habitats to the east and west, Three Houses Lane to the north, and rural housing and gardens to the south. The Site habitats are all developed land with a sealed surfaces or bare ground, of limited or no ecological value.
- 1.4 No impacts to designated sites are anticipated provided a Construction Ecological Management Plan (CEcMP) is prepared to avoid indirect impacts to nearby Church Wood, Graffridge Wood, and Crouchgreen Wood during construction. This includes preventing noise and light pollution, dust, and waste materials impacting these woodland habitats and their associated flora and fauna.
- 1.5 The Site has potential to support nesting birds within the extant sheds and therefore precautionary impact avoidance measures during construction are recommended.
- 1.6 Enhancement measures are also provided for birds and bats. These measures can be secured via a suitably worded planning condition(s).

2 Introduction

Overview

- 2.1 Optimis Consulting Ltd (Optimis) was commissioned by D&A Engineering Ltd to undertake a Preliminary Ecological Appraisal (PEA) at Church Wood, Three Houses Lane, Codicote, Hertfordshire, SG4 8TB (hereafter referred to as the 'Site'). The Site is proposed for the conversion of three barns for commercial use, and the erection of a new substation.
- 2.2 The Site occupies an area of c. 0.3ha and is located around central grid reference TL21332054, to the southwest of Stevenage. The Site comprises a hardstanding agricultural yard with three extant sheds of modern construction and adjacent areas of bare ground. It is bordered off-site by woodland habitats to the east and west, Three Houses Lane to the north, and rural housing and gardens to the south and is situated within a mixed rural landscape comprising arable fields and discrete woodlands, with the Knebworth Estate to the east, and the settlement of Codicote to the south.

Objectives and Purpose

- 2.3 This appraisal has been undertaken with due regard for best practice guidelines¹ and standards². The objectives of the PEA were to:
- identify the likely ecological constraints associated with a project;
 - identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy';
 - identify any additional surveys that may be required to inform an Ecological Impact Assessment (EclA); and
 - identify the opportunities offered by a project to deliver ecological enhancement.
- 2.4 The purpose of this Preliminary Ecological Appraisal Report (PEAR) is to support the submission of a planning application. Where ecological constraints are identified it may not be appropriate to submit a PEAR in support of a planning application. Under these circumstances the PEAR would be used to inform an Ecological Impact Assessment (EclA) to fully meet planning authority requirements in respect of biodiversity.

¹ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

² British Standards Institution. (2013). BS 42020:2013: Biodiversity. Code of practice for planning and development. London, England: BSI.

3 Methodology

Desk Study

- 3.1 Herts Environmental Records Centre were requested to provide data of designated nature conservation sites, habitats and protected or priority species within a 2km radius from the grid reference (hereafter referred to as the 'search area'). The desk study was undertaken between April and May 2024.
- 3.2 The Multi-Agency Geographic Information for the Countryside (MAGIC)³ web-based database was reviewed to identify the following designated nature conservation sites within a 5km radius from the central grid reference (hereafter referred to as the 'search area'): Ramsar Sites, Special Areas of Conservation (SACs), Special Protection Areas (SPAs), National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSIs), and Local Nature Reserves (LNRs). A review of aerial photos and Ordnance Survey maps (including historical maps) was undertaken to identify ancient woodland within or adjacent to the Site and ponds within 250m.

Field Survey

- 3.3 A field survey was undertaken on 6th June 2024 in fine and dry weather conditions. The survey was carried out by Joanne Makin MSci CEnv MCIEEM, a suitably qualified ecologist with ten years' experience in ecological consultancy and local government combined. The surveyor is a Chartered Environmentalist (CEnv), Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM), and member of the Association of Local Government Ecologists (ALGE). The surveyor holds Natural England Class Licences for great crested newts, dormice and bats, as well as competence in botanical survey to Field Identification Skills Certificate (FISC) Level 4.

UK Habitat Classification

- 3.4 The survey was carried in accordance with UK Habitat Classification (UKHab) methodology⁴. UKHab is a rapid system for recording and classifying habitat which can be used for both earth-observed and field-based surveys. The system comprises a principal hierarchy (the Primary habitat) – which include ecosystems, broad habitats, priority habitats and Annex 1 habitat – and non-hierarchical Secondary codes.
- 3.5 In addition, typical plant species were recorded for each habitat type and species names used follow Stace⁵. Features of interest were identified as target notes on the 'Baseline Habitats Plan' (**Appendix B**). Descriptions of habitat structure, evidence of management and an assessment of habitat condition were made. Identification of Priority Habitats under Section 41 of the NERC Act and Habitats Directive Annex I habitat types was undertaken.

Protected and Priority Species Assessment

- 3.6 The site was inspected for evidence of and assessed for potential to support protected and notable species. This included species listed under the Conservation of Habitats and Species Regulations 2017 (as amended), the Wildlife and Countryside Act 1981 (as amended) (WCA), and those given extra protection under the Natural Environment and Rural Communities (NERC) Act 2006, Countryside and Rights of Way (CRoW) Act 2000, and the Protection of Badgers Act 1992.

³ Magic.gov.uk. (2019). *MAGIC*. [online] Available at: <http://www.magic.gov.uk/> [Accessed May 2024].

⁴ UK Hab Ltd (2023). *UK Habitat Classification Version 2.0*. [online] Available at: <http://www.ukhab.org/> [Accessed June 2024].

⁵ Stace, C. (2019). *New flora of the British Isles*. 4th ed. C&M Floristics.

Further Ecological Surveys

- 3.7 Further ecological surveys were undertaken, and the methodologies used are included in the relevant appendices for Bats (**Appendix C**).

Limitations

- 3.8 There were no significant limitations to the desk study or field survey.
- 3.9 Any limitations to further ecological surveys are included in the relevant appendices.

Evaluation and Assessment

- 3.10 Legislation, planning policy and standing advice of relevance to ecology and biodiversity has been considered in this appraisal. Further information is provided in **Appendix A**.
- 3.11 Evaluation and assessment have not been undertaken as it falls outside the objectives and purpose of this appraisal. The detailed evaluation and assessment of any identified important ecological features should be undertaken as part of either an EclA, or further ecological survey and assessment in accordance with the published guidelines.

4 Results and Evaluation

Designated Sites

- 4.1 Four statutory designated sites were identified within the search area. The Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR) are listed in Table 4.1 below.

Table 4.1 Statutory Designated Sites

Site Name and Designation	Distance and Direction	Description and Connectivity
Knebworth Woods SSSI	0.8km northeast (closest point)	A 129ha SSSI site designated for its lowland mixed deciduous woodland, lowland dry acid grassland, and lowland neutral grassland habitats. The SSSI is buffered from the site by 0.8km of woodland habitats at its closest point, whilst the majority of the designation falls >1km from the Site.
Mardley Heath LNR	3.7km southeast	A 41ha LNR Site owned and managed by Welwyn Hatfield Council designated for its regenerating heathland habitats on sandy soils and oak-hornbeam woodland with historic pollards.
Singlers Marsh LNR	3.7km south	A 6.3ha LNR owned and managed by Welwyn Hatfield Council designated for its chalk river and lowland flood meadow habitats.
Danesbury Park LNR	3.9km south.	A 24.5ha LNR Site owned and managed by Welwyn Hatfield Council designated for its botanically rich grasslands and historic parkland habitats, including mature and veteran trees.

- 4.2 There are no SSSI Impact Risk Zones within the Site area for this type of planning application.
- 4.3 15 non-statutory designated sites were identified within the search area, comprising 9 Local Wildlife Sites (LWS) and 6 Ancient Woodland Inventory Sites (AWIS), of which 3 were Plantations on Ancient Woodland Sites (PAWS). The LWSs and AWISs are listed in Table 4.2 below. Distances and directions are provided in **Appendix B**.

Table 4.2 Non-Statutory Designated Sites

Site Name and Designation	Distance and Direction	Description and Connectivity
Crouchgreen Woods LWS	0.02km west	Crouchgreen Woods covers 2.53ha and is designated for its ancient hornbeam woodland habitats with historic coppice and evidence of ancient and old-secondary woodland canopy with associated floral indicator species. The LWS lies adjacent to the west of the Site.
Church Wood LWS	0.03km east	Church Wood covers 1.59ha and is designated for its ancient woodland habitats and associated indicator species, including evidence of original ancient woodland canopy sections. The LWS is lies adjacent to the east and north of the Site.
Graffridge Wood LWS, ASNW & PAWS	0.11km north	Graffridge Woods is recorded as containing 4 AWISs, two ASNW parcels totalling 30.60ha and 2 PAWS parcels totalling 24.28ha. The LWS covers 42.22ha and is designated for its ancient woodland habitats and associated indicator species. These designations are physically separated from the site by Three Houses Lane, albeit the woodland habitats bordering the site to the east and west provide a continuation of habitat.
Crouchgreen Meadow LWS	0.14km northwest	Crouchgreen Meadow covers 0.86ha and is designated for its herb-rich wet acid grassland and associated floral indicator

		species. The LWS is separated from the Site by Three Houses Lane and Crouch Green Wood.
Holl Lays Wood LWS	0.26km northwest	Holl Lays Wood covers 16.11ha and is designated for its ancient woodland habitats including features such as coppice, wood banks, and ancient woodland indicator species. The LWS is separated from the site by Three Houses Lane, adjacent woodland habitats provide a continuation of habitat.
Node Wood LWS & PAWS	0.33km south	Node Wood is a 6ha site designated for its ancient woodland habitats and associated indicator species. The site is also recorded as containing 5.6ha of PAWS. The LWS and PAWs are separated from the Site to the south by an arable field.
Knebworth Park LWS	0.54km east	Knebworth Park covers 141ha and is designated for its grassland habitats and associated indicator species, but also supports other habitats of note including areas of bog, marsh, streams, lakes, ponds, and parkland. The LWS is separated from the site by the B656 Road and arable landscape.
Newton/Cannocks Wood ASNW	0.81km northeast	Newton Cannocks Wood is recorded as containing a 13ha parcel of ASNW habitat. It is separated from the site by sizeable woodland habitats and arable landscape.
Rusling End Meadow LWS	0.85km north	Rusling End Meadow covers 0.77ha and is designated for its neutral and acid grassland habitats and associated indicator species. This LWS is separated from the Site by woodland and arable landscape.
Rusling End Meadow South LWS	0.94km northwest	Rusling End Meadow South covers 0.94ha and is designation for its neutral and acid grassland habitats and associated indicator species. This LWS is separated from the Site by woodland and arable landscape.

- 4.4 The proposed development is unlikely to result in any direct negative impacts to the LWSs and AWISs detailed above, based on the extent of the site boundary and works described. However, given the proximity of the site to several designated sites, namely, Church Wood, Graffridge Wood, and Crouchgreen Wood, it is possible that indirect impacts such as noise and light pollution, dust, and waste materials could impact the surrounding woodland habitats and their associated flora and fauna. **A Construction Ecological Management Plan (CEcMP) is recommended to avoid impacts to these designated sites.**
- 4.5 No impacts to the remaining designated sites are anticipated given both the reasons for their designation, as well as the size, scale and the distance from the proposed development. No further survey or mitigation is recommended.

Habitats

- 4.6 The Site comprises a hardstanding agricultural yard with three extant sheds of modern construction and adjacent areas of bare ground. It is bordered off-site by woodland habitats to the east and west, Three Houses Lane to the north, and rural housing and gardens to the south.
- 4.7 The Site habitats are all developed land with a sealed surfaces or bare ground, of limited or no ecological value A 'Baseline Habitats Plan' is provided in **Appendix B** showing the location and extent of each habitat type.

Urban

Developed land, sealed surface (UKHAB u1b)

- 4.8 A hardstanding agricultural yard surrounds the buildings and forms the access road. The soil surface is sealed with impervious materials.
- Buildings (UKHAB u1b5)*
- 4.9 Structures present include three extant sheds of modern construction (B1-B3). These structures are described in more detail in **Appendix C**.

Artificial unvegetated, unsealed surface (UKHAB u1c)

- 4.10 Areas of bare earth, that has been cleared for development or disturbed, is unvegetated and are not sealed with impervious materials.

Species

Plants

- 4.11 93 records of notable plants, comprising of 34 species were identified within the search area. 63 records pre-date the year 2000. Owing to the Sites woodland surrounds, those of potential relevance to the Site with contemporary records include Bluebell *Hyacinthoides non-scripta*.
- 4.12 The Site habitats do not support a rich diversity or importance assemblage of plant species.
- 4.13 No further survey or mitigation is recommended.

Invertebrates

- 4.14 570 records of invertebrates were identified within the search area. Most of these records are Lepidoptera (491) and Coleoptera (67). 381 of the records pre-date the year 2000.
- 4.15 The Site habitats are do not to support a rich diversity or important assemblage of invertebrates.
- 4.16 No further survey or mitigation is recommended.

Amphibians

- 4.17 15 records of 'common' amphibians were identified within the search area of which all were common toad *Bufo bufo*. These records date from 1964 to 2018 and are c. 0.6km from the Site for the most contemporary records, all of which were for common toad. Records of great crested newt *Triturus cristatus* were identified within the search area, however there were no contemporary records for great crested newt. The nearest Natural England EPS licence for great crested newts is located over c. 3.3km away.
- 4.18 Amphibians require aquatic habitat for breeding and utilise nearby terrestrial habitat for feeding and shelter. They typically inhabit water bodies such as ponds, reservoirs, or lakes, as well as nearby woodland, scrub and grassland. There are five water bodies located within 250m of the Site, with a further five within 500m of the Site. There are no suitable terrestrial habitats for amphibians within the Site, therefore amphibians are likely absent.
- 4.19 No further survey or mitigation is recommended.

Reptiles

- 4.20 2 records of reptiles were identified within the search area including adder *Vipera berus* and slow worm *Anguis fragilis*. These records date from 1934 and 2000, respectively. The adder record is only available at the 10km grid square scale. The slow worm record was located c. 0.5km from the Site at the 2km grid square scale.
- 4.21 Reptiles require a varied vegetation structure and topography with a sunny aspect. They typically inhabit rough grassland, heathland and moorland, as well as other land uses such as allotments and embankments. There are no habitats suitable for reptiles within the Site, therefore reptiles are likely absent.
- 4.22 No further survey or mitigation is recommended.

Birds

- 4.23 1412 records of birds, comprising 312 species were identified within the search area. Those of potential relevance to the Site owing to its extant barn structures include Barn Owl, Tawny Owl, Little Owl, Swallow, Swift, and House Martin.

- 4.24 Habitats are unlikely to support a rich diversity or important assemblage of birds. The existing barns do however provide suitable habitat for common nesting birds. **Precautionary impact avoidance measures during construction are therefore recommended.**
- 4.25 Ecological enhancement measures are recommended to provide opportunities for nesting birds within the proposed development.

Bats

- 4.26 245 records of bats were identified within the search area including common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii*, brown Long-eared *Plecotus auritus*, noctule *Nyctalus noctula*, Leisler's bat *Nyctalus leisleri*, serotine *Eptesicus serotinus*, Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri*, and barbastelle *Barbastella barbastellus*. These records date from 1900 to 2017. 145 of the 245 records are only available at the 10km grid square scale. 86 of the remaining records are available at the 100m grid square scale, for which the closest record is c. 0.14km from the Site.

Roosting

- 4.27 Bats typically roost within trees, buildings, built structures and underground sites. Preliminary Roost Assessment of the three existing barns confirmed that these structures all have no suitability for roosting bats. Full survey details are provided in **Appendix C**.
- 4.28 No further survey or mitigation is recommended. Ecological enhancement measures are recommended to provide opportunities for roosting bats within the proposed development.

Foraging and Commuting

- 4.29 Foraging bats require habitats such as broadleaved woodland, tree-lined watercourses and grazed parkland that is well connected to the wider landscape. Commuting bats utilise habitats such as streams, hedgerows, lines of trees and woodland edge. The adjacent ancient woodland habitats are suitable for bat foraging and commuting, therefore bats are likely present in the surrounding area. The proposed works are limited to the existing barns and a small area of hardstanding only. There are no habitats suitable for bat foraging or commuting within the Site itself.
- 4.30 No further survey or mitigation is recommended.

Badger

- 4.31 48 records of badger *Meles meles* were identified within the search area. These records date from 1973 to 2020 and are c. 0.5km from the Site for the most contemporary record.
- 4.32 Badgers typically inhabit woodland, farmland and grassland including parks and gardens. The adjacent woodland habitats are suitable for badger foraging and sett creation, therefore badgers are possibly present in the surrounding area. The proposed works are limited to the existing barns and a small area of hardstanding only. There are no habitats suitable for badger within the Site, therefore badger are likely absent.
- 4.33 No further survey or mitigation is recommended.

Dormouse

- 4.34 No records of dormouse *Muscardinus avellanarius* were identified within the search area. Dormice are largely restricted to southern England, with a few scattered populations in the Midlands, Wales and Lake District.
- 4.35 Dormice typically inhabit ancient or diverse woodland, coppiced woodland, conifer plantation, dense scrub or well-connected hedgerows. The adjacent ancient woodland habitats are sufficient in size and connectivity to support a viable dormouse population, therefore dormice are possibly present in the surrounding area. The proposed works are limited to the extant sheds and hardstanding only. There are no habitats suitable for dormice within the Site, therefore dormice are considered likely absent.

4.36 No further survey or mitigation is recommended.

Water Vole

4.37 2 records of water vole *Arvicola amphibius* were identified within the search area. These records date from 1975 and 1979 and are only available at the 10km and 2km grid square scale, respectively. They are both c. 0.5km from the Site at these scales.

4.38 Water vole typically inhabit rivers, streams and wet ditches, ponds and lakes, marshes, reedbeds or areas of wet moorland. There are no habitats suitable for water vole within the Site, therefore water voles are likely absent.

4.39 No further surveys or mitigation are recommended.

Otter

4.40 No records of otter *Lutra lutra* were identified within the search area.

4.41 Otters typically inhabit wetlands, rivers or coastal areas, and utilise nearby vegetation such as woodland or scrub for shelter. There are no habitats suitable for otter within the Site, therefore otter are likely absent.

4.42 No further surveys or mitigation are recommended.

Hedgehog

4.43 12 records of hedgehog *Erinaceus europaeus* were identified within the search area. These records date from 1960 to 2019 and are c. 0.6km from the Site for the most contemporary record at the 100m grid square scale.

4.44 Hedgehogs typically inhabit hedgerows, woodlands and meadows, but are also commonly found in parks and sub-urban gardens. There are no habitats suitable for hedgehogs within the Site, therefore hedgehogs are likely absent.

4.45 No further surveys or mitigation are recommended.

Brown Hare

4.46 60 records of brown hare *Lepus europaeus* were identified within the search area. These records date from 1985 to 2022 and are c. 0.2km from the Site at the closest record, dated 2015. The most contemporary records were only available at 10km grid square scale.

4.47 Brown hare typically inhabit open farmland and grassland. The adjacent arable farmland is suitable for brown hare foraging and refuge, therefore brown hare are possibly present in the surrounding area. There are no habitats suitable for brown hare within the Site, therefore brown hare are likely absent.

4.48 No further surveys or mitigation are recommended.

Harvest Mouse

4.49 2 records of harvest mouse *Micromys minutus* were identified within the search area, both are dated 1985 and occur at 2km grid square scales, the closest record occurred within the same 2km square as the Site, the closest point of the second 2km square was c. 0.9km from the Site.

4.50 Harvest mice typically inhabit areas of tall grassland and arable land, such as cereal crops, roadside verges, reed beds and hedgerows where nests can be built. There are no habitats suitable for harvest mice within the Site, therefore harvest mice are likely absent.

4.51 No further surveys or mitigation are recommended.

5 Conclusions and Recommendations

Proposed Development

- 5.1 There are no baseline habitats of ecological importance. The proposals are limited to the conversion of extant sheds and the erection of a small substation on existing hardstanding only. Therefore the proposed development applied for will not result in the loss any habitats of ecological value.

Impact Avoidance and Mitigation Measures

Church Wood, Graffridge Wood, and Crouchgreen Wood Country Wildlife Sites

- 5.2 The proposed development could potentially indirectly impact Church Wood, Graffridge Wood, and Crouchgreen Wood Country Wildlife Sites (CWS) in the absence of mitigation. Indirect impacts such as noise and light pollution, dust, and waste materials could negatively affect the woodland and its associated flora and fauna.
- 5.3 A Construction Ecological Management Plan (CEcMP) prepared prior to commencement of the proposed development will avoid and reduce negative impacts upon the woodland and its associated flora and fauna. The CEcMP provides details and specifications for practical measures intended to avoid or minimise adverse effects on biodiversity during the construction process.

Nesting Birds

- 5.4 The proposed conversion and construction works will follow precautionary methods of working to avoid impacts to nesting birds. The works will be undertaken between November and February, avoiding the nesting bird season (March to August). Where this is not possible, a check for nesting birds will be undertaken by a suitably qualified ecologist, prior to vegetation clearance. If an active nest is present, clearance of that part of the site (including a buffer zone defined by the ecologist) will be postponed until all young birds have fledged.

Enhancement Measures

- 5.5 Enhancements can be incorporated into the proposed development as below:

Bird Nest Boxes

- 5.6 Nest boxes can be attached to the exterior of the extant sheds. The boxes should be long-lasting and safeguard against predators such as woodpeckers, cats and squirrels. The boxes will be north-facing and in shaded areas out of direct sunlight. The boxes will be placed 2-4 metres above ground level. The boxes provide additional nest sites for small birds such as great tits, pied flycatchers, tree sparrows and house sparrows.

Bat Boxes

- 5.7 Bat boxes can be attached to the exterior of the extant sheds. The boxes should be placed 3-6 metres above ground level in an open sunny position and can face different directions to offer a variety of micro-habitats. The boxes provide additional roosting spaces for smaller crevice dwelling bats, such as common pipistrelle, soprano pipistrelle or brown-long eared bats.

Appendix A Legislation and Planning Policy

Sites and Habitats Legislation

Designation	Brief Description
Ramsar Sites	Ramsar Sites are wetlands of international importance. Ramsar Sites are protected, through the planning system, under the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way Act 2000 through their notification as SSSIs and through other regulatory systems addressing water, soil and air quality.
Special Areas of Conservation (SAC)	SACs are sites selected to conserve the natural habitat types and species of wild flora and fauna listed in the Annexes of the Habitats Directive. They are the best areas to represent the range and variety of habitats and species within the European Union (EU).
Special Protection Area (SPA)	SPAs are strictly protected sites classified in accordance with Article 4 of the EC Directive on the conservation of wild birds (79/409/EEC), the Birds Directive.
National Nature Reserve (NNR)	NNRs are designated and protected under the National Park and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). They receive additional protection under the Countryside and Rights of Way Act 2000.
Site of Special Scientific Interest (SSSI)	The SSSI series provide statutory protection for the best examples of the natural environment. SSSI were originally notified under the National Park and Access to the Countryside Act 1949 and they were renotified under the Wildlife and Countryside Act 1981. Improved provisions for their protection and management were introduced in the Countryside and Rights of Way Act 2000.
Local Nature Reserve (LNR)	LNRs are declared under the National Park and Access to the Countryside Act 1949 by local authorities. LNR are declared and managed for nature conservation, education and research or opportunities for public access to nature.
Local Wildlife Site (LWS)	Local Wildlife Sites are areas of land which are rich in wildlife and are the equivalent to Sites of Importance for Nature Conservation. Criteria for selection take in threats and declines in certain species, national priorities and local distinctiveness. The LWS system is managed, in partnership, by The Wildlife Trust, local authorities, statutory nature conservation agencies, local naturalists and landowners. Local Wildlife Sites were previously known as County Wildlife Site (CWS) in the past.

Protected and Priority Species Legislation

Legislation	Brief Description
Conservation of Habitats and Species Regulations 2017	European Protected Species (EPS) listed under Schedule 2 and 5 of The Conservation of Habitats and Species Regulations 2017 include all species of bats , the large blue butterfly, wild cat, all species of dolphin, porpoise and whale, dormouse , pool frog, sand lizard , Fisher's Estuarine moth, great crested newt , otter , Lesser Whirlpool Ram's-horn snail, smooth snake , sturgeon, natterjack toad and marine turtle species. Plant species listed include shore dock, Killarney fern, early gentian, Lady's-slipper, creeping marshwort, slender naiad, fen orchid, floating-leaved water plantain and yellow marsh saxifrage.
Wildlife and Countryside Act 1981	Several bird species are listed under Schedule 1 (Part 1) of the Wildlife and Countryside Act 1981 (as amended). The protection covers birds and their young, for which it is an offence to intentionally or recklessly disturb at, on or near an 'active' nest. Several animal and plant species are listed under Schedule 5 of the act, for which they are given full protection or partial protection. This act provides protection for native reptile (common lizard, grass snake, adder, slow worm) and amphibian (common toad, common frog, palmate newt, smooth newt) species not covered by European legislation. Several plant species are listed under Schedule 8 and are protected from

Natural Environment and Rural Communities (NERC) Act 2006	The act established a new independent body - Natural England - responsible for conserving, enhancing, and managing England's natural environment for the benefit of current and future generations. Fifty-six habitats of principal importance and 943 species of principal importance are included on the S41 list. These are all the habitats and species in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.
Protection of Badgers Act 1992	Animal welfare legislation protecting badgers and their setts. This act makes it illegal to wilfully capture, injure or kill a wild badger, be in possession of a live or dead badger and to destroy or obstruct access to an active badger sett.

National Planning Policy

The National Planning Policy Framework⁶ (NPPF) sets out the government planning policies for England and how they should be applied. **Chapter 11: Conserving and enhancing the natural environment** includes:

Paragraph 174 - "Planning policies and decisions should contribute to and enhance the natural and local environment by: ...

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; ...

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"

Paragraph 180 - "When determining planning applications, local planning authorities should apply the following principles: ...

a) if significant harm to biodiversity resulting from 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; ...

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity".

Government Circular OPDM 06/2005 Biodiversity and Geological Conservation

Paragraph 98 of Government Circular 06/2005 advises that "the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult Natural England before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers

⁶ Department for Levelling Up, Housing and Communities (5 September 2023) National Planning Policy Framework.

that they must comply with any statutory species' protection provisions affecting the site concerned..."

Paragraph 99 of Government Circular 06/2005 advises that "it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted".

GOV.UK Standing Advice

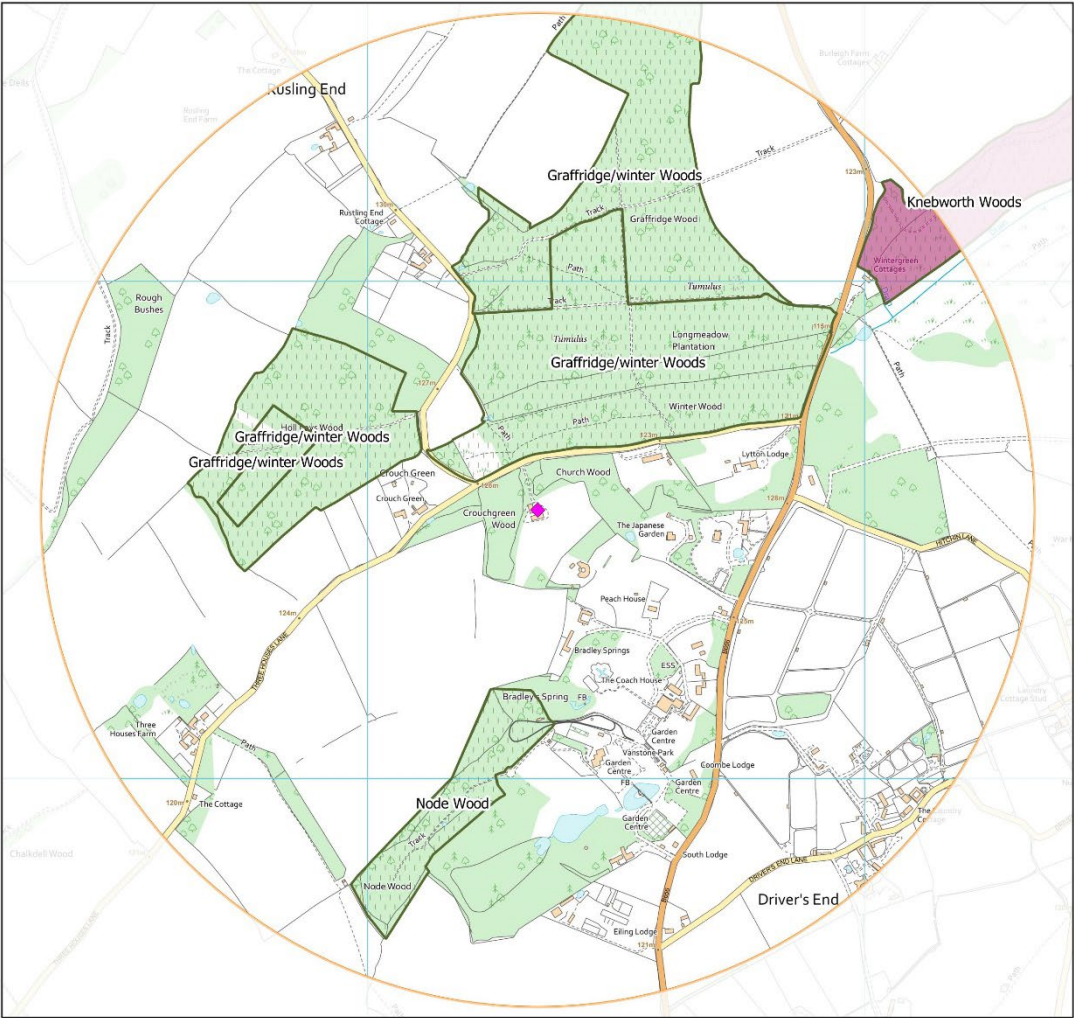
Standing advice seeks to support local authorities and forms a material consideration in determining planning applications in the same way as an individual response received from Natural England following consultation.

Local Planning Policy

Local planning policies of relevance are provided in the 'North Hertfordshire Local Plan 2011 - 2031', adopted on 8th November 2022 and the 'Knebworth Neighbourhood Plan 2019 - 2031', adopted on 24th March 2022

Appendix B Figures and Photographs

Appendix B2. National Site Designations (SSSI and AWS) within the Search Area (provided by Herts ERC)



National Sites Map 1

Search Information

◆

 Search point

○

 Search area

National Sites

Statutory Sites

■

 SSSI

▨

 Ancient Woodland Inventory

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Photo 1. Modern shed (B3) within hardstanding agricultural yard



Photo 2. Modern shed (B2 and B3) within hardstanding agricultural yard.

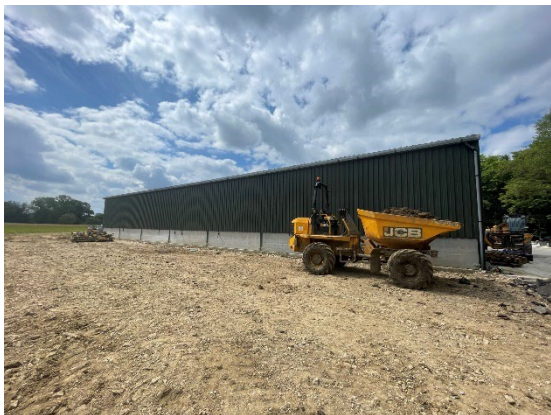


Photo 3. Rear of modern shed (B3) adjacent to bare ground



Photo 4. Modern shed (B3) within hardstanding agricultural yard.



Photo 5. Modern shed (B2) with hardstanding perimeter



Photo 6. Modern shed interior (B1).



Photo 7. Modern shed (B1 and B2) with hardstanding adjacent



Photo 8. Modern shed (B2 and B1) within hardstanding agricultural yard



Photo 9. Interior of modern shed (B2)



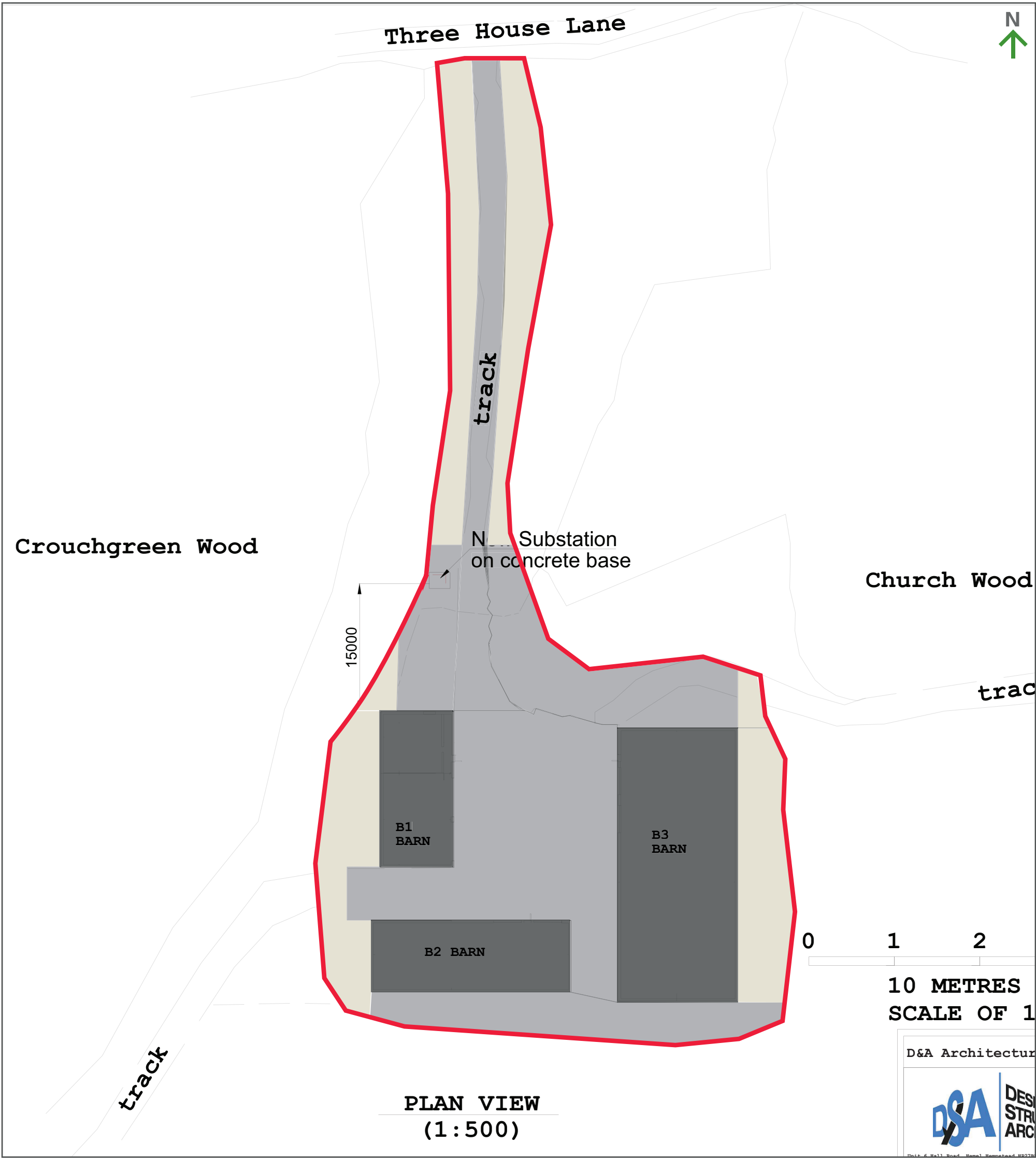
Photo 10. Interior of modern shed (B1).



Photo 11. Hardstanding access to yard area with adjacent woodland



Photo 12. Hardstanding near yard entrance and adjacent woodland.



-  Site Boundary
-  Building
-  Hardstanding
-  Bare ground/earth



Project	Church Wood, Three Houses Lane, Codicote	Date	23 May 2024	Drawing No.	ECO85_101
Drawing Title	Baseline Habitats Plan	Drawn	JM	Version	-
Client	D&A Architectural and Structural Designs Ltd	Check	-	Scale	NTRS

Appendix C Bats

Preliminary Roost Assessment (Structures)

Methodology

A preliminary roost assessment of the three existing barns (Barns 1-3) was undertaken. The survey involved an external inspection to identify potential roost entry/exit points and an internal inspection to identify any evidence of bats. The survey was undertaken on 6th June 2024 by Joanne Makin MSci CEnv CIEEM, a licensed bat surveyor, and carried out in accordance with best practice guidelines⁷.

Evaluation

The potential suitability of the proposed development site for bats was categorised in accordance with the following assessment guidelines:

Table C.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement

Potential suitability	Description	Potential flight-paths and foraging habitats
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).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging 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.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
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 number 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).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
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 – the	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for

⁷ Collings, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good practice guidelines. 4th edition*. The Bat Conservation Trust, London

	categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	foraging such as trees, scrub, grassland or water.
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.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

There were no significant limitations to the survey.

Results

A summary of results is provided in the table below:

Building	External Inspection	Internal Inspection	Suitability
Modern Shed (B1)	Modern agricultural shed of metal construction. The walls are clad in metal sheets. The roof is pitched and covered by metal roof sheets. There is a brickwork plinth and details.	There is a vaulted ceiling and no separate no roof space. Roof lights allow natural light to enter the shed. The shed is regularly disturbed and used for storage or workshop purposes. There is a separate unused area that was formally being converted to usable rooms. No evidence of bats was identified.	None
Modern Shed (B2)	Modern agricultural shed of metal construction. The walls are clad in metal sheets. The roof is pitched and covered by metal roof sheets.	There is a vaulted ceiling and no separate no roof space. There is a large open floor area with a concrete floor. Roof lights allow natural light to enter the shed. The shed is regularly disturbed and used for storage or workshop purposes. No evidence of bats was identified.	None
Modern Shed (B3)	Modern agricultural shed of metal construction. The walls are clad in metal sheets. The roof is pitched and covered by metal roof sheets.	There is a vaulted ceiling and no separate no roof space. There is a large open floor area with a concrete floor. Roof lights allow natural light to enter the shed. The shed is regularly disturbed and used for storage or workshop purposes. No evidence of bats was identified.	None