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Preliminary Ecological Appraisal – 145 Barnet Road



Site: 145 Barnet Road

Client: Tye Architects

Date: June 2021



FS 550934

EMS 563439

OHS 614432

DOCUMENT HISTORY AND STATUS

Document Control	
Prepared by	Luke Taylor BSc (Hons) Great Crested Newt licence (class 1) - 2017-28785-CLS-CLS Smooth Snake and Sand lizard licence - 2021-52691-SCI-SCI
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Life Span of Survey Data and Report	
Report	This report remains valid for 12 months from date of issue. The report, conclusions and recommendations are valid for current development plans only. Should these change the report should be reviewed and, if necessary, further survey work and desk study review undertaken.
Survey Data	Survey data are valid for 12 months from the date the survey was undertaken.

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Contents

1.	Executive Summary	4
2.	Introduction	5
2.1	Site context	5
2.2	Proposed Development	5
2.3	Objectives	6
2.4	Survey Limitations	6
3.	Legislation and Planning Policy.....	7
3.1	Protected Species and Species of Conservation Concern	7
3.2	Bats.....	7
3.3	Breeding Birds.....	7
3.4	Common Species of Reptiles.....	7
3.5	Invasive and Non-native Plant Species.....	8
3.6	Ecological Enhancement.....	8
4.	Methods.....	9
4.1	Data Search	9
4.2	Extended Phase 1 Habitat Survey.....	9
4.3	Protected Species Assessment.....	9
5.	Baseline Ecological Conditions	11
5.1	Desk Study	11
5.2	Designated sites of importance for nature conservation	11
5.3	Priority Habitats.....	11
5.4	Wildlife European Protected Species (EPS) Licenses.....	11
5.5	Protected Species and Species of Conservation Concern	11
5.6	Extended Phase 1 Habitat Survey – Habitats	12
5.7	Extended Phase 1 Habitat Survey – Species	13
6.	Ecological Constraints and Opportunities Assessment	15
7.	Conclusion.....	19
8.	Recommendations.....	20
8.1	Protected Species and Species of Conservation Concern	20
8.2	Breeding Birds.....	20
8.3	Bats.....	20
8.4	Invasive species.....	21
8.5	Ecological Enhancement.....	21
9.	References	23
10.	Appendix 1 - Figures	24
11.	Appendix 2 – Site Photographs.....	26
12.	Appendix 3 -Target Notes	34

1. Executive Summary

Below is a summary of findings and recommendations following the completion of the Preliminary Ecological Appraisal (PEA) of 145 Barnet Road. Please read the report in its entirety for full details.

- Microbee was commissioned by Mr Patel to undertake an Ecology survey of the site known as 145 Barnet Road. The report will support a planning application to redevelop the site by way of demolition of the existing structures with a new build single dwelling.
- In summary the works comprise the demolition of six buildings, including the Holmside residential property (hereafter described as B1), the removal of one isolated silver birch and the potential removal of a section of trees forming some of the northern site boundary and majority of the eastern site boundary.
- An extended phase 1 habitat survey was undertaken on 4th June 2021. The survey identified habitats including improved grassland, scattered trees, isolated trees, introduced shrub, buildings and other (hardstanding) on site.
- The most significant ecological constraint identified during the survey was that of the six buildings scheduled for demolition, works in association with B1 in particular may impact roosting bats, and as such has been graded as having moderate bat roost potential. A full description of potential for ecological constraints is fully detailed in Section 6. of this assessment.
- A minimum of two bat presence/likely absence surveys are required at B1 to further inform the potential for impacts on bats. Such surveys focussed on buildings of moderate suitability are undertaken between May and September, with at least one of the surveys being undertaken between May and August. Please see Section 8 of this assessment for further guidance.
- In summary the works associated with 145 Barnet Road have potential to impact nesting birds and most significantly bats. The further survey requirements, enhancements and mitigation measures highlighted within this report should be followed to safeguard and minimise possible disturbance to protected species.

2. Introduction

Microbee was approached by Tye Architects to undertake an Ecology survey of the site known as 145 Barnet Road (hereafter known as *the Site*). The report will support a planning application to redevelop the Site by way of demolition of the existing structures with a new build single dwelling (hereafter known as *the Scheme*). This assessment details the direct potential ecological constraints associated to the proposed demolition of the existing structures on site, along with the wider landscape on Site and within the zone of influence.

An extended phase 1 habitat survey was undertaken on 4th June 2021. The purpose of the survey was to assess the conservation value of the survey area, the potential for presence of notable or protected species, to identify any features, habitats or species which would constitute potential constraints to the proposed Scheme; and to make recommendations for mitigation and/or further survey work, as appropriate.

2.1 Site context

The Site is situated along Barnet Road, EN5 2JZ within the London Borough of Barnet. The Site is approximately 0.9 acres in size (2.1 acres total ownership) and is comprised of mixed habitat including buildings, hardstanding, improved grassland and landscape planting.



Figure 1 – General location of Holmside on Barnet Road. Central Ordnance Survey Grid Reference (OSGR) - TQ 22138 95519

2.2 Proposed Development

This assessment and its findings will inform the proposed Scheme which seeks to utilise the existing footprint of buildings on site, demolish the structures on site and create a new-build single dwelling residential property.

2.3 Objectives

The purpose of the survey and report was to:

- Check for evidence of protected species and habitats present on site and assess the potential for protected and notable species to be present on Site.
- Identify the existing habitats within the survey area adopting the classification system published by UK Joint Nature Conservation Committee (JNCC).
- Make recommendations for further survey work as appropriate.
- Propose mitigation measures to avoid, mitigate or compensate for ecological impacts, as appropriate.

2.4 Survey Limitations

Due to the level of survey commissioned a full Local Environment Records Centre (LERC) search was not considered necessary. However, a desktop study conducted through Multi-Agency Geographical Information for the Countryside (MAGIC) and National Biodiversity Network (NBN) was completed.

3. Legislation and Planning Policy

This section provides a summary of legislation for protected species and habitats that may be present on Site.

The legislation and planning policy detailed in this section is intended to provide a summary only. The relevant legislation and planning policy should be referred to for full information. Below is a summary of legislation and National Planning Policy that protects wildlife in England:

- Wildlife and Countryside Act, 1981 (as amended)
- Countryside Rights of Way Act, 2000
- Natural Environment and Rural Communities Act, 2006
- National Planning Policy Framework (NPPF), 2012
- Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System
- Green Infrastructure Supplementary Planning Document (SPD) 2017

3.1 Protected Species and Species of Conservation Concern

The NPPF sets out government policy on biodiversity in planning decisions. Under the NPPF, the presence of a protected species is a material consideration when a planning authority is considering a development proposal.

3.2 Bats

All British bat species and their roosts are fully protected under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) and the Conservation of Habitats and Species Regulations, 2010. Therefore, it is a criminal offence to:

- Deliberately capture, injure or kill a bat.
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time).
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.

Some species of bats are also species of principal importance, as listed under Section 41 of the NERC Act 2006.

3.3 Breeding Birds

Under the Wildlife and Countryside Act (1981) as amended, it is illegal to take, damage or destroy the nests of wild birds whilst being built or in use.

3.4 Common Species of Reptiles¹

¹ In this case, common species of reptile refers to the more commonly observed and wider distributed reptile species within the UK, namely grass snake (*Natrix helvetica*), adder (*Vipera berus*), slow-worm (*Anguis fragilis*) and viviparous lizard (*Zootoca vivipara*)

Adder, viviparous lizard, grass snake and slow-worm are fully protected under the Wildlife and Countryside Act 1981 (as amended) Section 9 (1&5). Within which, it is considered an offence to intentionally kill or injure any common reptile species.

3.5 Invasive and Non-native Plant Species

Invasive and non-native plant species including but not limited to cotoneaster, Japanese knotweed, giant hogweed, rhododendron and Himalayan balsam are listed in the Wildlife and Countryside Act 1981 (as amended) Section 14. Under which protection, it is illegal to plant or otherwise cause these species to grow in the wild. Any contaminated soil or plant material is classified as controlled waste and should be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with section 34 of the Environmental Protection Act 1990.

3.6 Ecological Enhancement

Both national and local policy support ecological enhancement in the design of developments. The NPPF and accompanying Office of the Deputy Prime Minister (ODPM) Circular 06/05 state that Local Planning Authorities should aim to conserve and enhance biodiversity.

4. Methods

This report has been produced with reference to current guidelines for Extended Phase 1 Habitat Surveys and guidelines for Ecological Report Writing (CIEEM, 2015). The assessment comprised a desktop search and site visit, followed by a review of the data to provide habitat summaries and key notes concerning relevant protected species.

4.1 Data Search

An online data search was undertaken, where the following materials were consulted:

- Multi-Agency Geographical Information for the Countryside (www.magic.gov.uk)
- National Biodiversity Network (NBN) Atlas (www.nbnatlas.org/)
- Green Infrastructure Supplementary Planning Document (SPD) 2017

4.2 Extended Phase 1 Habitat Survey

The survey was conducted observing the supporting national guidelines literature (JNCC, 2010), with the following accompanying equipment available:

- Apple iPad Mini (for digital Extended Phase 1 mapping)
- Binoculars.
- Thermometer/hygrometer.
- Camera
- Sample bags for collecting dropping and feeding evidence.

Target notes (TN) were used to identify potential for protected or notable species or habitats, and to give more detailed Site descriptions. If a deviation from the standard guidelines has been made the reason and justification will be explained below:

No deviation from the standard guidelines and methodology has been made for this survey.

4.3 Protected Species Assessment

As part of the assessment the Site was assessed for its potential to support protected or notable species. The assessment was made based on the habitats present within the Site and their suitability for protected species (information on the legislation of protected species can be found in Section 3). Protected species assessed for, but not limited to, were:

- Badger (*Meles meles*),
- bats,
- breeding birds,
- common species of reptile,
- great crested newt (*Triturus cristatus*),
- hazel dormouse (*Muscardinus avellanarius*),
- invertebrates of conservation concern,
- otter (*Lutra lutra*),

- plants of conservation concern,
- and water vole (*Arvicola amphibius*).

In addition to the above, a search was undertaken for evidence of non-native, invasive species.

5. Baseline Ecological Conditions

5.1 Desk Study

A basic data search was carried out as per section 4.1

5.2 Designated sites of importance for nature conservation

The Site is not located within a designated site of importance for nature conservation. Several sites occur within the 2 km search, the closest of which is Rowley Green Common Local Nature Reserve (LNR) situated 220 m north-west. Totteridge Fields (LNR) is located 1.2 km south and Scratchwood and Moat Mount Open Spaces (LNR) 1.6 km south-west. The Site is not located within an area of ancient woodland or plantation on ancient woodland. The nearest ancient woodland is Barnet Gate Wood (ancient and semi-natural woodland) located 750 m south-west.

5.3 Priority Habitats

Woodland – Several areas of woodland were recorded within the 2 km search; the closest of which is the land adjacent to Rowley Lane, 370 m west.

Grassland – Several areas of good quality semi-improved grassland and lowland meadows are found within the 2 km search, located to the north and south of the Site. An area approximately 550 m north known as Rowley Green resembles the closest area of priority grassland to Site.

5.4 Wildlife European Protected Species (EPS) Licenses

The Magic website identified one application for an EPS species licence within the 2 km search, an application for common pipistrelle (*Pipistrellus pipistrellus*) located 1.6 km south. No further information on the application was available through the means of desk study employed.

5.5 Protected Species and Species of Conservation Concern

The below provides a summary of records of protected species and species of conservation concern within 2 km of Site, found on the NBN Atlas. Only records considered recent, ≤10 years of the report date, have been included.

Amphibians: Common toad (*Bufo bufo*) (16 records), smooth newt (*Lissotriton vulgaris*) (17 records) and common frog (*Rana temporaria*) (28 records).

Bats: One unnamed bat roost was identified in a tree in Arkley Golf Club approximately 460 m north of Site in 2013.

Other mammals: European hedgehog (*Erinaceus europaeus*) was identified within the data search (23 records), the closest of which occurring within a residential area approximately 760 m east in 2020.

Reptiles: No reptiles were identified within the data search area.

Birds: Several species of notable status and/or conservation concern were identified during the data search, including but not limited to skylark (*Alauda arvensis*), house sparrow (*Passer domesticus*) and common starling (*Sturnus vulgaris*).

Invertebrates: One record of stag beetle (*Lucanus cervus*) was returned from the data search. This was identified in 2017 near Totteridge Fields approximately 1.5 km south of Site.

Plants of conservation concern: No plants of conservation concern were identified during the data search.

5.6 Extended Phase 1 Habitat Survey – Habitats

The following habitats were recorded on Site. For details on relevant target notes (TN) associated with given habitats refer to Table 2

Mixed Scattered Trees (A3.3)²

The northern, eastern, and western boundaries of the Site comprise linear scattered trees habitat. The species composition includes both broad-leaved and coniferous species, hence being classified as mixed. Coniferous species composition is of only one species, Leyland cypress (*Cupressus × leylandii*), which dominates the northern and eastern Site boundary. Broad-leaved species within the Site boundary habitat includes pedunculate oak (*Quercus robur*), apple (*Malus x domestica*), ash (*Fraxinus excelsior*) and silver birch (*Betula pendula*).

Improved grassland (B4)

The garden areas north and south (rear and back) of Holmside and the disused area adjoining the tennis court to the west may be described as Improved grassland habitat (Photograph 18). The species composition within these areas comprises grasses such as false oat-grass (*Arrhenatherum elatius*), cocksfoot grass (*Dactylus glomerata*), perennial ryegrass (*Lolium perenne*) and Yorkshire fog (*Holcus lanatus*), with other vegetation including ragged robin (*Lychnis flos-cuculi*), meadow buttercup (*Ranunculus acris*) and oxeye daisy (*Leucanthemum vulgare*).

Introduced shrub (J1.4)

Much of the Site comprises introduced shrub habitat, including the landscaping vegetation bordering the residential property, raised bed planting and hedge-features within the garden. Such plants include lemon balm (*Melissa officinalis*), bay laurel (*Laurus nobilis*), Spanish bluebell (*Hyacinthoides hispanica*) and daisy bush (*Brachyglottis greyi*) as well as a non-native/invasive cotoneaster sp.³ (of the *Cotoneaster* genus).

Buildings (J3.6)

² Habitat coding as defined in JNCC (2010). Handbook for Phase 1 habitat survey. Joint Nature Conservation Committee.

³ 'Sp.' Widely used scientific abbreviation for the term 'species'

Six buildings were present on Site. The purpose and characteristics of these buildings are varied, including a typical residential-type building, a wooden storage shed, a concrete garage, a conservatory-type building and two corrugated metal structures.

Specifically the buildings will be referred to as the following throughout the assessment, Holmside residential property (B1) (TN1), the conservatory (B2) (TN7), the garage (B3) (TN6), the shed (B4) (TN9) and metal sheds (B5 and B6) (TN4 and TN5). For further information and location of each building, refer to Figure 2 and Photographs 1 – 9. Each building was assessed for its suitability to support protected species, most notably for nesting birds and roosting bats.

Other habitat (J5)

The majority of the Site can be classified as 'Other habitat' which in this case includes areas such as hardstanding and the tennis court. Vegetation within these habitats, though sparse and limited to 'weeds', included commonly encountered species in association with areas of hardstanding such as herb robert (*Geranium robertianum*), bramble (*Rubus fruticosus*), garden forget-me-not (*Myosotis sylvatica*), common daisy (*Bellis perennis*), common dandelion (*Taraxacum officinale*) and petty spurge (*Euphorbia peplus*).

5.7 Extended Phase 1 Habitat Survey – Species

The following flora was recorded during the survey:

- Apple
- Ash
- Bay laurel
- Black medick (*Medicago lupulina*)
- Bramble
- Broad-leaved dock (*Rumex obtusifolius*)
- Cocksfoot grass
- Common box (*Buxus sempervirens*)
- Common daisy
- Common dandelion
- Common evening primrose (*Oenothera biennis*)
- Common lilac (*Syringa vulgaris*)
- Common mouse-ear (*Cerastium fontanum*)
- Common nettle (*Urtica dioica*)
- Cotoneaster sp.
- Couch grass (*Elymus repens*)
- Cow parsley (*Anthriscus sylvestris*)
- Cuckooflower (*Cardamine pratensis*)
- Daisy bush
- Elder (*Sambucus nigra*)
- False oat-grass
- Field horsetail (*Equisetum arvense*)

- Garden forget-me-not
- Garlic mustard (*Alliaria petiolate*)
- Green alkanet (*Pentaglottis sempervirens*)
- Hawthorn (*Crataegus monogyna*)
- Hedge bindweed (*Calystegia sepium*)
- Herb robert
- Holly (*Ilex aquifolium*)
- Ivy sp. (*Hedera*)
- Lemon balm
- Leyland cypress
- Meadow buttercup
- Meadow dock (*Ranunculus acris*)
- Mexican fleabane (*Erigeron karvinskianus*)
- Oxeye daisy
- Pedunculate oak
- Pendulous sedge (*Carex pendula*)
- Perennial ryegrass
- Petty spurge
- Purple toadflax (*Linaria purpurea*)
- Ragged robin
- Red campion (*Silene dioica*)
- Ribwort plantain (*Plantago lanceolate*)
- Rosebay willowherb (*Chamaenerion angustifolium*)
- Rough hawkbit (*Leontodon hispidus*)
- Silver birch
- Spanish bluebell
- Spear thistle (*Cirsium vulgare*)
- Sycamore (*Acer pseudoplatanus*)
- White clover (*Trifolium repens*)
- Wild strawberry (*Fragaria vesca*)
- Wisteria sp.
- Wood avens (*Geum urbanum*)
- Yorkshire fog

The following fauna was recorded during the survey:

- Blackbird (*Turdus merula*)
- Blue tit (*Cyanistes caeruleus*)
- Collared dove (*Streptopelia decaocto*)
- Eurasian jay (*Garrulus glandarius*)

6. Ecological Constraints and Opportunities Assessment

Table 1 sets out known and potential ecological constraints to the development, as a result of the data search and the extended Phase 1 habitat survey, including designated sites, priority habitats, ancient woodland, and protected species or species of conservation concern. Where a potential ecological constraint has been identified, further survey work and/or appropriate mitigation is likely to be required to address the issue. For details on relevant target notes (TN) associated with given species or habitats refer to Table 2.

Table 1. Ecological Constraints and Opportunities Assessment

Ecological Receptors	Potential for impact	Assessment and Justification
Designated sites	None	Though several designated sites occur within 2 km of the Site, due to the localised limited scale of the proposed works on Site no negative impacts are anticipated on the designated sites within the search area. Therefore, designated sites are not discussed any further in this assessment.
Priority habitats	None	Woodland and grassland, classified priority habitats, were identified as present within the search area of Site. The works on Site are not anticipated to incur the removal of any areas of woodland or grassland. Considering this, and the localised limited scale of the proposed works on Site no negative impacts on woodland, grassland or other priority habitats are anticipated. Therefore priority habitats are not discussed further in this report.
Bats	Moderate	<p>Of the six buildings present on Site, five of which exhibited a level of bat roost potential. Based on the external suitability of B2, and the full internal access available, no evidence of bats or potential roost features were identified. Subsequently the building was deemed to be of negligible suitability for roosting bats.</p> <p>Buildings B3, B4, B5 and B6 all exhibited low bat roost potential upon initial external assessment. However, as full internal access was available, a detailed investigation of the buildings and any potential roost features was achievable. Following this, B3, B4, B5 and B6 were able to be degraded from low, to negligible bat roost potential.</p> <p>Numerous features of bat roost potential were identified on the external structure of building B1. These are further detailed below with specific separation of building aspects for clarity. For full information on building aspects, see Figure 3</p> <ul style="list-style-type: none"> Northerly aspect - Photograph 2 indicates cracked, slipped, and lifted tiles on the front of B1, as well lifted tiles between the two gables and on the western-most gable. All such features are of a northerly orientation. Photograph 5 indicates the extent of ivy coverage on the northern and western aspect of B1. As well as the potential for the ivy to have created/conceal features of access/egress into the building brickwork, the

		<p>ivy may also provide suitability for roosting between the ivy and the building, or within the ivy itself.</p> <ul style="list-style-type: none"> • Easterly aspect – Photograph 3 indicates cracked and lifted tiles on the external wall of the living room of B1. Further points of access are present above all the windows on the eastern aspect in the form of lifted tiles above the frame. All described features are of an easterly orientation. • Southerly aspect – Photograph 4 indicates missing tiles on the external wall beneath/adjacent to the main rear bedroom. Though no specific points of access/egress were identified within the fascia above the main rear bedroom, its deteriorated condition increases potential for concealed/unidentified features of bat roost potential. All features identified were of a southerly orientation. • Westerly aspect - Photograph 1 indicates slipped and absent tiles on the gable roof (northerly orientation), as well as lifted tiles above the bedroom window fitting (westerly orientation). Photograph 5 indicates the extent of ivy coverage on the northern and western aspect of B1. As well as the potential for the ivy to have created/conceal features into the building brickwork, the ivy may also provide suitability for roosting between the ivy and the building, or within the ivy itself. <p>Full internal access was achievable for the interior of B1, including the loft space (Photograph 16). The full extent of B1 interior including loft space was able to be investigated which identified no evidence of roosting bats.</p> <p>Whilst no evidence of roosting bats was identified within B1, a detailed inspection of the external features mentioned above was not achievable.</p> <p>Due to the required demolition of B1, a building which has been deemed of moderate suitability for roosting bats, a minimum of two presence/likely absence surveys⁴ are required at these locations to further inform the potential for impacts on bats.</p> <p>The silver birch present due for removal (TN8) (Photograph 11) and the section of trees along the eastern and northern Site boundary potentially subject to removal (TN10) (Photographs 12 and 13) are of negligible potential for roosting bats. Both the silver birch and section of trees are considered negligible due to the apparent absence of any features of suitability for roosting bats such as cracks, cavities, rot holes, woodpecker holes or decaying limbs.</p>
Breeding birds	Low	The Site comprises habitats which could support nesting birds such as the areas of improved grassland, introduced shrub, scattered trees, isolated trees, and

⁴ To include two separate survey visits. One dusk emergence and a separate dawn re-entry survey (Collins, 2016)

		<p>buildings. Based on the nature of the works, of these habitats the buildings, scattered trees and isolated trees are anticipated to be impacted.</p> <p>The silver birch present due for removal (TN8) (Photograph 11) is considered suitable for nesting birds. The section of trees along the eastern and northern Site boundary potentially subject to removal (TN10) (Photographs 12 and 13) would also provide highly suitable nesting habitat. Leyland cypress, identified as dominant within the boundary vegetation in Section 5.6, commonly accommodates nesting birds such as wood pigeon (<i>Columba palumbus</i>) and collared dove, the latter of which was observed in the Leyland cypress during the survey.</p> <p>A small unoccupied passerine nest was identified within an artificial bird nest box situated at the rear of the property (Photograph 15) (TN3). Whilst no birds were identified as using the nest box it evidences the suitability of the feature for nesting birds and its future occupation by nesting birds cannot be excluded.</p> <p>Another example of historic nesting bird occupation within the Site was identified within the loft space, where the remains of two juvenile pigeons were identified. The bird remains appeared historic, and no evidence of recent occupation in the loft space by birds was identified. Despite this, and that the inspection of the loft space could not determine the point of entry for such a species, it could be that the access point exists, though undetected during the inspection.</p>
Invasive species	Low	Cotoneaster was identified in proximity to the B1 (TN2) (Photograph 14). Works associated with B1 will be undertaken immediately adjacent to the cotoneaster present. Works must be undertaken sensitively as not to perpetuate the spread of the species.
Common species of reptiles	None	The areas of improved grassland identified within the survey boundary are of suitability for common species of reptile, most likely slow-worm and viviparous lizard. However, due to the absence of any reptiles identified during the survey, an absence of any records within the search area, and the localised limited scale of the proposed works on Site no negative impacts are anticipated. Due to the suitability of the habitats present, some general management and mitigation processes are suggested in Section 8.
Invertebrates of conservation concern	None	Though stag beetle was identified within the search area, no stag beetle or other notable invertebrates were identified during the survey. Furthermore, habitat suitable for stag beetle was not identified on Site, so is not considered to be impacted during the works. Considering this, and the localised limited scale of the proposed works on Site no negative impacts are anticipated. Therefore, invertebrates are not discussed further in this assessment.

Birds of conservation concern ⁵	None	No Schedule 1 bird species were identified during the survey. There is habitat present on Site which may support other notable species, such as those which were identified during the data search, however due to the localised nature of the works, and limited footprint there is no anticipated impact on habitats which may support notable bird species on Site. Therefore, birds of conservation concern are not discussed any further in this assessment.
Great crested newt and other species of amphibian ⁶	None	No amphibians were identified as present on Site during the Extended Phase 1 Survey. Despite the occurrence of recent records of common toad, common frog and smooth newt returned from the data search, due to the localised nature of the works, and limited footprint works are not anticipated to result in the disturbance or loss of any suitable habitat for great crested newt or other species of amphibian. Therefore, amphibians are not discussed any further in this assessment.
Badger	None	Due to the absence of any badger within the search area, no evidence of badger being identified on Site and the localised limited scale of the proposed works on Site no negative impacts are anticipated. Therefore, badger are not discussed further in this assessment.
Plants of conservation concern	None	Due to the absence of any plants of conservation concern identified within the data search and the absence of any identified on Site, based on the localised limited scale of the proposed works on Site no negative impacts are anticipated. Therefore, plants of conservation concern are not discussed any further in this assessment.

⁵ Birds of Conservation Concern as defined within Eaton, et al (2015), with detailed species considered for the purpose of this assessment

⁶ In this case, other species of amphibian refers to common toad, common frog, smooth newt and palmate newt (*Lissotriton helveticus*).

7. Conclusion

- The Site overall exhibits moderate ecological value. This valuation arrives principally from the moderate bat roost potential of B1, as well as the suitability for nesting birds in numerous habitats present on Site. The safeguarding of these habitats, with due consideration paid to survey requirements, mitigation and management must be treated as a priority. With the correct employment of all recommendations and requirements detailed within this assessment, the Scheme will not be considered to negatively impact upon the habitats or species present.
- The most significant ecological constraint identified during the survey was that of the six buildings scheduled for demolition, works in association with B1 in particular may impact roosting bats, and as such has been graded as having moderate bat roost potential.
- A minimum of two bat presence/likely absence surveys are required at B1 to further inform the potential for impacts on bats. Such surveys focussed on buildings of moderate suitability are undertaken between May and September, with at least one of the surveys being undertaken between May and August.
- Habitats on Site including improved grassland, scattered trees, isolated trees (such as the silver birch subject to removal) and buildings provide suitability for nesting birds. Any works which could impact nesting birds should ideally be undertaken outside of the typical nesting season (mid-January – August). If this is not achievable, then all suitable habitats for nesting birds must be checked by a suitably experienced ecologist prior to works.
- Despite the Site having potential to support other protected species, such as reptiles, the localised nature of the works and limited footprint are not anticipated to result in the disturbance or loss of any species or indeed suitable habitat other than those previously highlighted within the assessment.
- Please see the next chapter of this report for the actions now required, including best practice guidance to be followed and ecological enhancement options for the Site.

8. Recommendations

8.1 Protected Species and Species of Conservation Concern

8.2 Breeding Birds

- There is considered to be a moderate potential impact upon nesting birds from the proposed Scheme; this would predominantly be through the removal of the silver birch, potential removal of the section of trees along the northern and eastern Site boundary as well as the building demolitions. Though appearing to be inactive during the survey, a bird nest was identified during within an artificial bird nest box (TN3). Any works which could impact nesting birds should ideally be undertaken outside of the typical nesting season (mid-January – August).
- If this is not achievable, then all suitable habitats for nesting birds such as the bird nest identified at TN3, must be checked by a suitably experienced ecologist prior to works. Should any evidence of actively nesting birds being found, the works will require suspension until the young have hatched and fledged or a 10 m buffer zone provided to allow works elsewhere on Site to continue.

8.3 Bats

The Site has moderate potential for bats; therefore further surveys/actions are required.

- B2, B3, B4, B5, B6 and the silver birch scheduled for demolition/removal respectively are considered negligible suitability for bats. The section of trees potentially subject to removal is also of negligible suitability for bats.
- B1 was determined as exhibiting moderate suitability for bats.
- A minimum of two presence/ likely absence surveys should be undertaken at B1 to further inform the potential for impacts on bats. Surveys of structures of moderate bat roost potential must include two separate survey visits, one dusk emergence and a separate dawn re-entry survey (Collins, 2016).
- Due consideration must be paid to any presence/likely absence surveys undertaken at B1 in September as completing a survey in such a period is both weather and location dependent.
- Multiple survey visits, such as those required at B1, should be spaced accordingly to sample within as much of the recommended survey period as possible. A minimum duration of two weeks between surveys is recommended. Furthermore, such efforts should be scheduled accordingly with the works, ensuring they are undertaken within as close proximity to the works progressing as the recommended survey period allows to reduce the likelihood of bats occupying features which may have been identified as unoccupied during the presence/likely absence surveys.
- Following the completion of the full suite of presence/likely absence surveys, in the event that a bat roost is identified within B1, or any other feature likely to be destroyed or disturbed during the works on Site, an EPS Natural England mitigation licence must be approved for the Site ahead of any works with potential to disturb or destroy any bat roosts.

- Irrespective of whether a bat roost is identified at any stage of the project timeline, due to the moderate bat roost potential of B1 an appropriately EPS Natural England licensed bat ecologist should be present acting as an Ecological Clerk of Works (ECoW) during demolition of B1 as the likelihood of encountering a roosting bat may not be fully eliminated following the full required suite of presence/likely absence surveys.
- If a bat is found at any time, work must stop, and further advice be obtained from a bat licensed ecologist.
- In the event that the works are not undertaken within 12 months of this assessment being issued, an update survey should be undertaken to check for material change with respect to bat roost potential on Site.

8.4 Invasive species

- Cotoneaster is amongst the invasive and non-native plants identified within the Wildlife and Countryside Act 1981 (as amended) Section 14. This legislation details that it is illegal to plant or otherwise cause these non-native invasive plant species to grow in the wild.
- The Scheme must not perpetuate the spread of the cotoneaster identified as present at the rear of B1 (TN2). If removal is required, then specialist contractor advice should be sought.

8.5 Ecological Enhancement

It is recommended that the following ecological enhancements are considered for the final development design, in order to enhance the biodiversity of the Site post development:

- Lighting for bats
 - Any lighting within proximity to trees or buildings should be designed to minimize the impact it has on potential bat roosting and commuting. Lighting should be in-line with the Bat Conservation Trust (BCT) lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2008)⁷.
 - This lighting should be of low level, be on downward deflectors and ideally be on Passive Infrared (PIR) sensor. Using LED directional lighting can also be a way of minimizing the light spill effecting the habitat. No up-lighting should be used.
- Reptiles
 - Though no evidence of reptiles was identified either during the survey or within the data search, the improved grassland present on Site exhibits suitable habitat for reptiles.
 - During works the rear garden area should be maintained as a low sward (e.g. ≥ 150 mm in height) to reduce the suitability of the habitat for reptiles, therefore reducing any likelihood of encountering reptiles during the Scheme. Any reptiles intentionally injured

⁷ http://www.bats.org.uk/publications_download.php/1136/guidance_notes_light_pollution_20111.pdf.

or killed during the works would be causing an offence under the Wildlife and Countryside Act (as amended) 1981 Section 9.

- Following the completion of the works, it is recommended that areas of the sward in connectivity to the rear paddock be allowed to return to the height observed during the survey (approximately 500 mm in height), to maintain a connective corridor for any reptiles present.
- It is also recommended that the conditions of the rear paddock are maintained as observed during the survey (approximately 500 mm in height), with any cutting or vegetation removal being limited to periods outside of the active reptile season (March – September inclusive).
- If vegetation removal is required within the rear paddock, maintaining well vegetated margins of 500 mm in height and 3 m in width would be recommended to promote connectivity for any reptiles present.
- All such recommendations for grassland management would also be of benefit to numerous other ecological receptors such as providing habitat for invertebrates (pollinators and otherwise), as well as hibernating, foraging and sheltering amphibians and foraging bats.

9. References

Chartered Institute of Ecology and Environmental Management (2017). *Guidelines for Preliminary Ecological Appraisal. Technical Guidance Series*. CIEEM.

Chartered Institute of Ecology and Environmental Management (2015). *Guidelines for Ecological Report Writing. Technical Guidance Series*. CIEEM.

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). *The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1*

Eaton, M., Brown A., Noble D., Musgrove A., Hearn R., Aebischer N., Gibbons D., Evans A., and Gregory R. (2015) *Birds of Conservation Concern 4: The Population Status of Birds in the United Kingdom, Channel Islands and the Isle of Man*. *British Birds* 102, pp296-341.

English Nature (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

HM Government (1980) Environmental Protection Act 1990

HM Government (1981). *Wildlife and Countryside Act 1981* (as amended).

HM Government (2000). *Countryside and Rights of Way Act, 2000*.

HM Government (2005) *ODPM Circular 06/05 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

HM Government (2006). *Natural Environment and Rural Communities Act 2006*.

HM Government (2010). *Conservation of Habitats and Species Regulations 2010*.

HM Government (2012) *National Planning Policy Framework*. Department for Communities and Local Government.

JNCC (2010). *Handbook for Phase 1 habitat survey*. Joint Nature Conservation Committee.

The National Biodiversity Network (NBN) Atlas (<https://nbnatlas.org/>)

Natural England MAGIC map (<https://magic.defra.gov.uk/home.htm>)

10. Appendix 1 - Figures

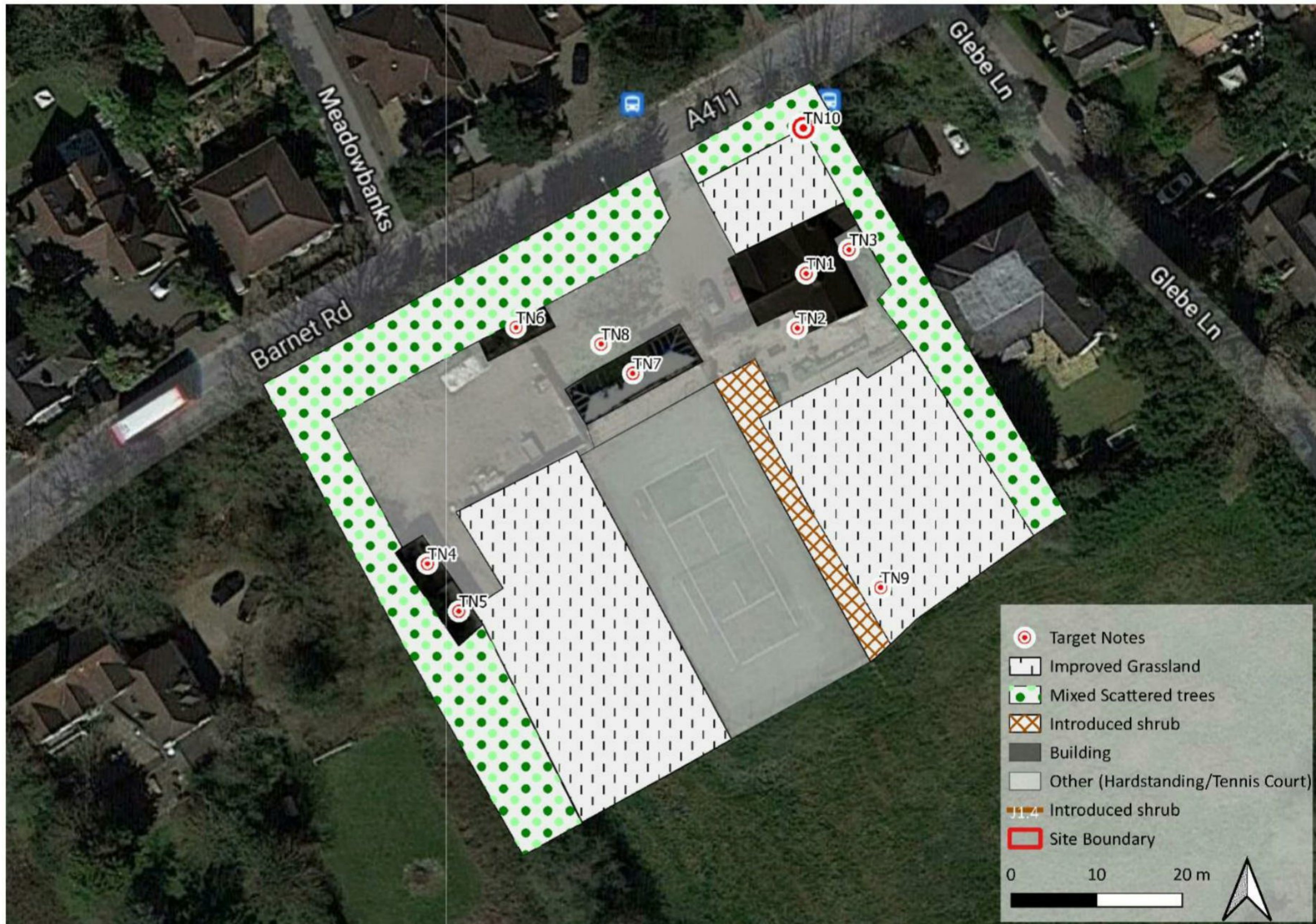


Figure 2 – Extended Phase 1 Habitat Survey Map at 145 Barnet Road



Figure 3 – Viewing aspects specific to B1 when determining bat roost suitability.

11. Appendix 2 – Site Photographs



Photograph 1 – Western aspect of B1. Slipped tiles on gable roof, as well as lifted tiles above bedroom window



Photograph 2 – Northern aspect of B1. Cracked, slipped, and lifted tiles on front wall and roof.



Photograph 3 – Eastern aspect of B1. Lifted tiles highlighted in proximity to bedroom windows. Note also slipped and cracked tiles over living room window



Photograph 4 – Southern aspect of B1 missing tiles evident beneath and adjacent to main rear bedroom window. Fascia board also in poor condition.



Photograph 5 – Northern and western aspect of B1 ivy coverage indicated



Photograph 6 – B2 conservatory, exhibiting negligible bat roost potential



Photograph 7 – B3 garage, exhibiting negligible bat roost potential



Photograph 8 – B4 shed, exhibiting negligible bat roost potential



Photograph 9 – B5 metal shed exhibiting negligible bat roost potential



Photograph 10 – B6 metal shed exhibiting negligible bat roost potential



Photograph 11 – Silver birch (TN8) scheduled for removal. Feature exhibits suitability for nesting birds



Photograph 12 – Southern extent of section of trees potentially subject to removal



Photograph 13 – Front of B1, improved grassland garden area and northern extent of section of trees potentially subject to removal



Photograph 14 – Cotoneaster present on southern aspect of B1 (TN2)



Photograph 17 – Indicative of hardstanding habitat typical and representative of the Site as a whole



Photograph 18 – General Site photograph, as well as being indicative of improved grassland habitat typical and representative of Site as a whole

12. Appendix 3 -Target Notes

Table 2 – Full description, location and photograph referencing for all Target Notes (TN) identified during survey on Site

Target Note (TN) Reference	OSGR	Description	Relevant Photographs
TN1	TQ 22155 95543	Holmside residential property (B1). Numerous potential bat roost features including slipped, cracked, lifted and missing tiles, damaged fascia boards, damaged window fittings and dense ivy coverage on the northern and western aspect of the building. Fully open access internally allowing for full inspection including within loft space. Loft space inspection exhibited no evidence of use by bats or any obvious points of access/egress. Historic remains of two juvenile birds present within loft space (appear to be of the Columbidae/pigeon family)	1, 2, 3, 4, 5, 16, 18
TN2	TQ 22154 95537	Cotoneaster species identified at rear of B1.	14
TN3	TQ 22159 95547	Currently unoccupied bird nest identified within artificial bird nest box at rear of B1.	15
TN4	TQ 22111 95509	Building comprising metal corrugated sides and roof (B5). Negligible suitability for both nesting birds and roosting bats. Fully open access internally allowing for full inspection.	9
TN5	TQ 22115 95504	Building comprising metal corrugated sides and roof (B6). Negligible suitability for both nesting birds and roosting bats. Fully open access internally allowing for full inspection.	10
TN6	TQ 22121 95537	Concrete external garage (B3). Partially open shutter permitting full internal access and inspection.	7
TN7	TQ 22135 95532	Conservatory/summer house type building (B2). Exhibits negligible suitability for both nesting birds and roosting bats. Fully open access internally allowing for full inspection.	6
TN8	TQ 22131 95535	Silver birch subject to removal to enable development. Exhibits potential for nesting birds, though negligible suitability for roosting bats.	11
TN9	TQ 22165 95507	Small garden shed (B4) within area of improved grassland. Exhibits negligible suitability for both nesting birds and roosting bats. Fully open access internally allowing for detailed inspection.	8
TN10	TQ 22154 95560	Section of trees potentially subject to removal to enable development. Exhibits potential for nesting birds, though negligible suitability for roosting bats. Species composition within the tree section includes box, holly, Leyland cypress, ash, apple and pedunculate oak.	12, 13