



Ecological Impact Assessment

of

Land at Fern Bank Commons
Gentleshaw
Staffordshire

for

Mr Andrew Bond

(21st April 2021)

2021-03(10)

PROTECTED SPECIES

This report contains sensitive information relating to protected species. The information contained herein should not be disseminated without the prior advice of Ecolocation.

Survey date: 14th April 2021

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This report has been prepared in accordance with the CIEEM Guidelines for Ecological Report Writing Second Edition (2017) and is compliant with the CIEEM Code of Professional Conduct.

Summary

- An ecological impact assessment was carried out at the land at Fern Bank, Common side, Gentleshaw in Staffordshire by a suitably qualified ecologist on 14th April 2021. The survey was undertaken in order to support a planning application for a small replacement residential dwelling.
- The Site comprised a domestic garden with detached two storey dwelling dominated by hard standing and amenity grass with areas of bare ground. There is one detached dwelling with two outbuildings. The boundaries largely comprised low diversity native and non-native hedges with CBF and wire stock fencing. The hedges are predominantly holly and hawthorn with laurel in fill and are in poor condition being tall and gappy. Outside of the survey area the surrounding landscape was dominated by heathland to the west a plant nursery to the north and east and farmland to the south.
- The buildings were subject to a separate survey to determine their suitability to support roosting bats and therefore this aspect was scoped out of this survey. This report should be read in conjunction with the dedicated bat report.
- All the habitats within the Site were considered to have negligible to low ecological value that are likely to be common place within the locality, and therefore there is no significant anticipated biodiversity loss from the development of the Site. However, the boundary hedges with associated trees have moderate wildlife value some impact to the hedgerow through increased noise and light disturbance; and some risk to wildlife commuting through the Site. Recommendations such as nesting bird checks, buffering of the hedgerow and mitigation measures relating to open excavations have been made to safeguard wildlife during any construction on Site.
- The proposed development will have no impact on designated or non-designated wildlife sites
- The proposed development will have no impact on protected or priority species following the implementation of the recommendations within section 5 of this report
- The development provides opportunity to restore and augment UK BAP habitat native hedgerows

Contents

Summary.....	3
1 Introduction.....	5
2 Methodology.....	8
3 Results	10
4 Assessment of Ecological Impacts	21
5 Avoidance, Mitigation and Compensation	24
6 References.....	27
Appendix 1 – Proposed Plans.....	28
Appendix 2- Species List 14/04/2021	29

1 Introduction

1.1 Instruction

Ecolocation were commissioned by Mr Andrew Bond to undertake an ecological impact assessment of an area of land at Fern Bank, Common side, Gentleshaw in Staffordshire (hereafter referred to as the 'Site'), which was understood would be subject to a future planning application for a replacement residential dwelling.

1.1.1 Site location

The Site (grid reference SK0542211299) was located within a rural setting of Common side Gentleshaw between the village of Chorley and Cannock Wood in Staffordshire, some 6.2km south-east of Rugeley.

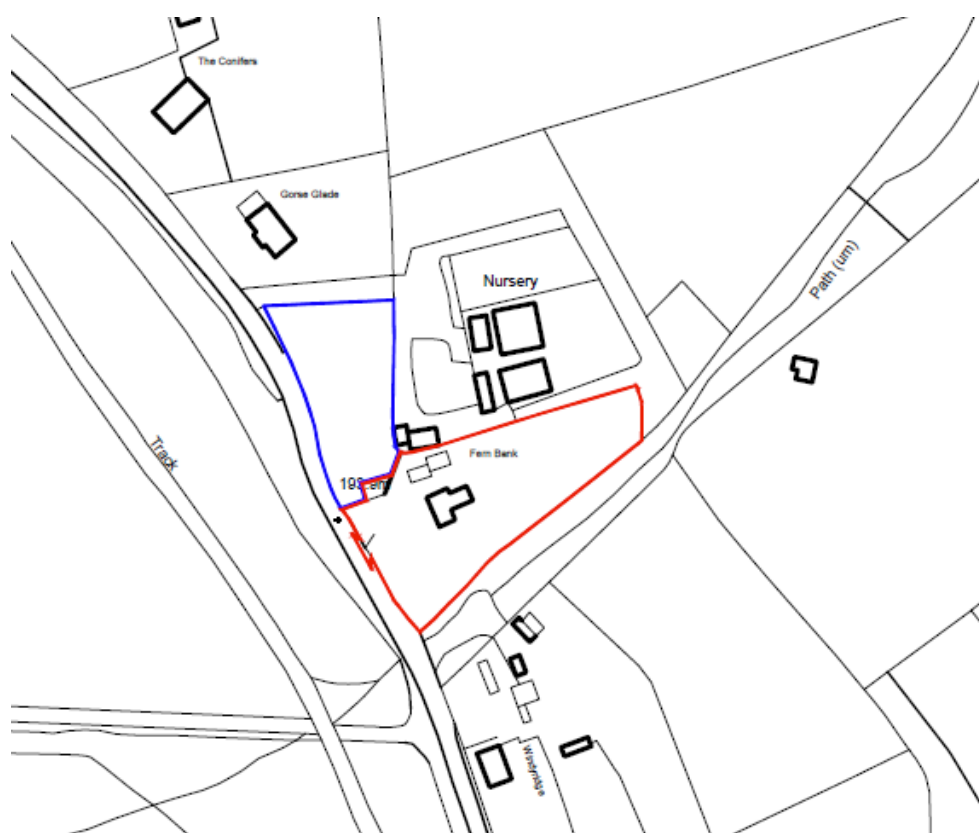


Figure 1: Survey boundary

1.1.2 Proposed Plans

- Fern Bank, Common side Gentleshaw, Proposed Site Plan, 1988-110, Revision A dated 03.12.2020

Was used in the production of this report. See proposed plans in Appendix 1.

1.2 Survey Purpose

The purpose of the survey was to:

- Identify and provide a description of the habitats present on the Site;
- Identify the potential for the presence of protected species on the Site;
- Determine the need for further ecological surveys;
- Assess the ecological impact of the proposed works and
- Identify any ecological constraints or opportunities on the Site.

1.3 Legislation & Planning Policies

A number of UK and European policies and legislation deal with the conservation of biodiversity. This section briefly outlines the legal and policy protection afforded to species and habitats scoped into this survey and described within the report.

1.3.1 Protected habitats & species

The Wildlife and Countryside Act 1981 (as amended by the Countryside Rights of Way Act 2000) Section 9 protects great crested newt (*Triturus cristatus*) and all UK species of bat and their resting places from disturbance, damage and destruction. The Conservation of Habitats and Species Regulations 2010 additionally lists great crested newt, and all UK species of bat as European Protected Species, and additionally prohibits killing or injury of individuals, as well as protecting their resting places from disturbance and destruction.

Common reptiles (grass snake (*Natrix natrix*), adder (*Vipera berus*), common lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*) are listed under Schedule 5 of the Wildlife and Countryside Act (as amended) and are protected from killing and injury.

The Wildlife and Countryside Act 1981 (as amended) provides protection to all species of wild bird and their nests. Under Section 1 it is an offence to intentionally or recklessly take, damage, destroy, or otherwise interfere with nests or eggs, or to obstruct or prevent any wild bird from using its nest.

Under the Protection of Badgers Act 1992 it is an offence to disturb, kill, injure or take a badger (*Meles meles*) or to disturb, damage, obstruct access to, allow a dog to access or destroy a sett.

1.3.2 Priority habitats & species

The NERC Act 2006 places a duty on public authorities to conserve biodiversity. Additionally, this Act states that a list of priority species and actions must be drawn up and published, to contain species and habitats of principal importance for the purpose of conserving biodiversity. These lists of Priority Species and Priority Habitats, which encompass the previous UK Biodiversity Action Plan (BAP) habitats and species, are those identified as being the most threatened and requiring conservation action. Priority habitats and species were chosen based on international importance, rapid decline and high risk. The list contains over 1000 habitats and species in total.

1.3.3 Invasive species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) contains introduced species which have been identified as having a severe economic and ecological impact through their introduction. It is an offence to release or allow to escape into the wild any species which is listed under Part I or Part II of Schedule 9, or any species which is not native.

1.3.4 *Planning policies*

The ODPM Circular 06/05 makes the presence of a protected species a material consideration within the planning process. It states that it is essential for the presence of protected species and the extent they may be affected by proposed development be established through appropriate surveys before the planning permission is granted and encourages the use of planning conditions to secure the long-term protection of the species.

The National Planning Policy Framework (NPPF) section 15 outlines how applications need to conserve and enhance the natural environment. Paragraphs 174 to 177 state that sites with biodiversity value should be protected and enhanced, minimising impacts on biodiversity and establishing ecological connectivity. Furthermore, the protection of priority sites and species through developments is outlined and states where significant harm is unavoidable through alternatives or mitigation, planning permission should be refused. Finally, this section concludes that developments with aims to conserve or enhance biodiversity should be supported and any improvement around developments should be encouraged to achieve net gains for biodiversity.

Stafford District Council's the Plan for Stafford Borough 2011-2031 (adopted June 2014) contains policy N4 relating to the natural environment and green infrastructure. This policy states that any development must include measures to mitigate and/or compensate for any damage to the natural environment via the establishment of replacement habitats or features.

2 Methodology

2.1 Desk Study

Prior to the site visit a desk-top data gathering exercise was undertaken. The MAGIC website was accessed to search for statutory designated sites within a 1km radius of the Site. The Staffordshire Ecological Records was contacted for information on non-statutory designated sites and protected and notable species records within a 1km radius of the Site.

2.2 Extended Phase 1 Habitat Survey

The Site was visited by suitably qualified ecologist Richard Billingsley (Landscape Ecologist) on Wednesday 14th April 2021. The survey took approximately 1 hour and weather conditions at the time of survey were recorded.

2.2.1 Phase 1 Habitats

The walkover survey of the Site was carried out based primarily on the standard methodology for Phase 1 Habitat Assessment (JNCC, 1993). The survey covered all accessible areas of the Site including the boundaries. Habitats were identified, described and mapped and a list of plant species was made, with relative abundances recorded using the DAFOR scale (see Appendix 2). Incidental sightings of fauna were recorded and included within the species list for the Site (Appendix 2).

2.2.2 Protected & Priority Species

The survey additionally included an assessment of the potential for protected and priority species to be present on the Site:

Badger – the Site was searched for areas that might be used for foraging and sett building. Incidental foraging signs, tree scratching, paths, latrines and setts were recorded if found (Harris *et al.*, 1989). The Site itself and land immediately adjacent to the Site and visible from the Site boundaries were included within the survey.

Bats – the Site was searched for suitable trees and natural features for roosting and an assessment was made of potential foraging value. All trees found were assessed from the ground to determine the suitability for roosting bats (BCT, 2016).

Notable mammals – the Site was searched for evidence and suitable habitat for BAP/Priority Species mammals (Cresswell *et al.*, 2012).

Nesting birds – the Site was searched for areas of habitat/structures that could be used for constructing a nest or for foraging and any evidence of current or historic nesting.

Amphibians – Terrestrial habitat on the Site was assessed for suitability to support amphibians.

Reptiles – the Site was searched for areas that could be used for insulation, shelter, foraging and breeding (Froglife, 1999).

Invertebrates – the Site was searched for areas of habitat that may be used for shelter, and include food plants and species suitable for egg-laying.

Invasive species – the Site was searched for evidence of species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

All other protected and notable species were scoped out of the survey work due to an absence of records and lack of suitable habitat within the surrounding area.

2.3 Ecological Impact Assessment

The results of the desk study and field surveys were then used in an assessment of the ecological impacts of the proposed development works, following the Guidelines for Ecological Impact Assessment in the UK and Ireland (2018).

2.4 Limitations

The survey was undertaken at a suboptimal time of year for botanical identification. However, it was considered that enough plants were identified during the survey to provide an accurate classification of the broad habitat types present

3 Results

3.1 Desk Study

3.1.1 Designated Sites

The Site lay within the impact risk zones of two Sites of Species Scientific Interest (SSSI), namely Gentleshaw Common, some 20m to the west of the Site boundary and Chasewater and The Southern Staffordshire Coalfield Heaths some 1.9km to the west. Gentleshaw Common was designated for its lowland heathland vegetation. Chasewater and The Southern Staffordshire Coalfield Heaths was designated for its nationally important wet and dry lowland heath, fens and oligotrophic (nutrient-poor) standing open water habitats and for its populations of two nationally scarce vascular plant species: floating water-plantain *Luronium natans* (listed in Schedule 8 to the Wildlife and Countryside Act 1981, as amended) and round-leaved wintergreen *Pyrola rotundifolia* (a regional rarity).

Four non-statutory designations were identified within a 1km radius of the Site boundary, the closest of which was Commonsides (east of), Gentleshaw, a retained biodiversity alert site (BAS) located 0.2km north-east of the Site and consisting of a planted oak woodland, wooded bridal path, damp ditch and two fields of semi-improved neutral grassland. A second retained BAS site was identified within 0.8km of the site to the north-west, namely Hayfield Hill (near Redmoor) species rich semi-improved neutral grassland. Gentleshaw Grassland, a BAS composed of Semi-improved neutral grassland areas of marshy grassland and scattered trees, was identified 0.8km north-west of the Site. Finally, Courtbanks Covert, Redmoor Wood, a Local Wildlife Site designated for Ancient semi-natural woodland remnant containing a site of archaeological interest, was located 0.9km north west of the Site.

3.1.2 Habitat Connectivity

The habitat connectivity of the Site was considered to be good, as summarised in Figure 2 (below). The Site was situated within a rural setting, largely surrounded by fields bounded by hedgerows and situated within close proximity to Gentleshaw Common SSSI lowland heathland, semi-improved neutral grassland and areas of marshy grassland. These habitats provide good potential foraging opportunity for bats and their close proximity to the Site increases their likelihood of being present within the Site's boundary.

A number of broadleaved deciduous woodland pockets were present within the Gentleshaw Common SSSI and the surrounding landscape within 1km of the Site, three of which were connected directly to the Site via hedgerows to the east. Deciduous woodland is a particularly valuable habitat, often supporting a diverse and complex understory, providing opportunities for a number of species and likely increasing the density of populations within the locality of the Site. The presence of additional woodland pockets to the west of the Site and trees within the Site boundary would allow for dispersal via the Site.

Woodland patches may comprise mature trees with roosting opportunities for bats and birds whilst also acting as good foraging ground for many species such as bats, birds, badgers and other notable mammals.

The Site was also surrounded by water courses on three sides, namely Shaw brook 0.7 km to the west, Redmoor Brook 0.7 km to the south and Maple Brook 0.3 km to the east. Two large ponds were identified within 1km of the Site, both of which were situated along the Maple Brook course. The closest of these ponds was 400m north-west and well connected to the site via hedgerows. The second pond was some 700m south-east of the Site boundary and whilst located along the water course and surrounded by trees and hedgerows, its connection to the Site was less notable. These ponds may act as suitable breeding grounds for great crested newts of feeding grounds for bats that utilise the Site.

Two traditional orchards were also identified within 1km of the Site, one situated only 700m north and a second 900m north-west. Orchards often provide good potential foraging and roosting sites for bats and birds as the trees here are often mature and the fruits support a rich diversity of invertebrates.

The hedgerows on Site were found to connect apparently to mature hedgerows beyond the Site, providing commuting corridors for a range of species moving throughout the local habitats such as reptiles, amphibians, birds, bats and terrestrial mammals. However, it was noted that where pasture and arable fields extended further

to the to the north-east the hedgerows appeared to lack further connections, reducing the connectivity in this direction. Larger, more mobile species, such as badger, may still cross large expanses of fields without hedgerow cover; however most other species, including bats, often avoid commuting across open expanses. This increases the likelihood that any species using the Site or moving through the local landscape would disperse to the north, south or west of the Site.

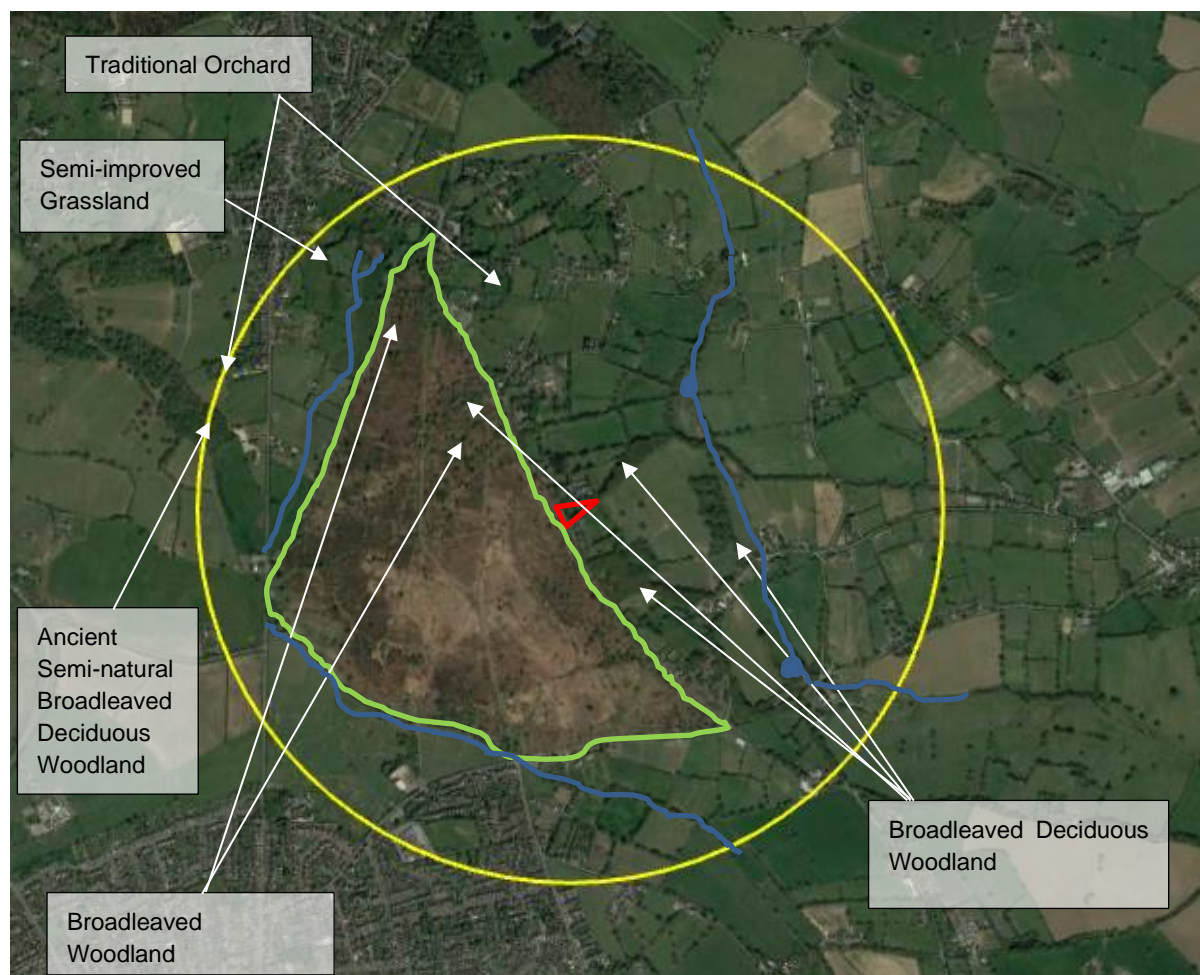


Figure 2: Habitat connectivity features within a 1km radius (yellow) of the Site. Site boundary in outlined in red, Gentleshaw Common SSSI outlined in green and water bodies in blue.

3.2 Protected Species Records

3.2.1 Badger

***** All badger information should be kept confidential and remain out of the public domain*****

A single badger sett was recorded 927m from the Site in 2005 and was confirmed to support breeding Badgers. Badger prints were also identified 927m from Site in 2008.

3.2.2 Bats

There was a total of 4 bat records within a 1km radius of the Site. This included a single brown long eared (*Plecotus auratus*), a single noctule (*Nyctalus noctula*) and two records of pipistrelle one of which was identified to be a

common pipistrelle (*Pipistrellus pipistrellus*). All bats were recorded within 450m of the site in 2009 and noted as foraging or commuting.

3.2.3 Hazel dormice

No records were returned within 1km of the Site.

3.2.4 Otters

No records of otters were returned within 1km of the Site.

3.2.5 Water vole

24 records of water vole were found within a 1km radius of the Site, the most recent was recorded in July 2004 and noted 1 adult individual 1.2km from Site. A further 20 individuals were recorded 1.2km from the Site, 10 in May and 10 in June. The remaining 3 records were recorded throughout 2003, the closest of which was 870m from Site.

3.2.6 Notable mammals

2 Polecat (*Mustela putorius*) records were returned within 1km of the Site, the most recent being recorded 892m from Site in 2018. The second recorded 987m from Site in 2009.

3.2.7 Birds

A large number of records of notable bird species were found within a 1km radius of the Site, kingfisher (*Alcedo atthis*), barn owl (*Tyto alba*), skylark (*Alauda arvensis*), lesser redpoll (*Acanthis cabaret*), Goshawk (*Accipiter gentilis*), nightjar (*Caprimulgus europaeus*), swift (*Apus apus*), tree pipit (*Anthus trivialis*), meadow pipit (*Anthus pratensis*), woodlark (*Lullula arborea*), brambling (*Fringilla montifringilla*), common crossbill (*Loxia curvirostra*), Fieldfare (*Turdus pilaris*), redwing (*Turdus iliacus*), red kite (*Milvus milvus*), black restart (*Phoenicurus ochruros*) and hobby (*Falco subbuteo*).

3.2.8 Amphibians

No amphibians were recorded within 1km of the Site.

3.2.9 Reptiles

2 Common lizard records were returned within 1km of the Site, the most recent being recorded 643m from Site in 2019 and the second 981m from Site in 2005.

3.2.10 Invertebrates

No records of notable invertebrates were returned within 1km of the Site.

3.2.11 Invasive Species

No invasive species were recorded within 1km of the Site.

3.2.12 Plants

records of bluebells were returned within 1km of the Site all of which were recorded within 850m of the Site. The most recent record being from 2019.

3.2.13 White-clawed crayfish

No records returned within 1km of the Site.

3.3 Extended Phase 1 Habitat Survey

3.3.1 Weather

The weather conditions during the Site visit on 14/04/2021 were as shown in Table 1.

Table 1: Weather conditions during site visit

Parameter	Recorded Figure
Temperature	11°C
Cloud cover	30%
Precipitation	None
Wind speed (Beaufort scale)	2 - light breeze

3.4 Habitats

The Site consists of a domestic property with one detached dwelling, two outbuildings, large hard standing, amenity lawns and areas of disturbed ground around the property.

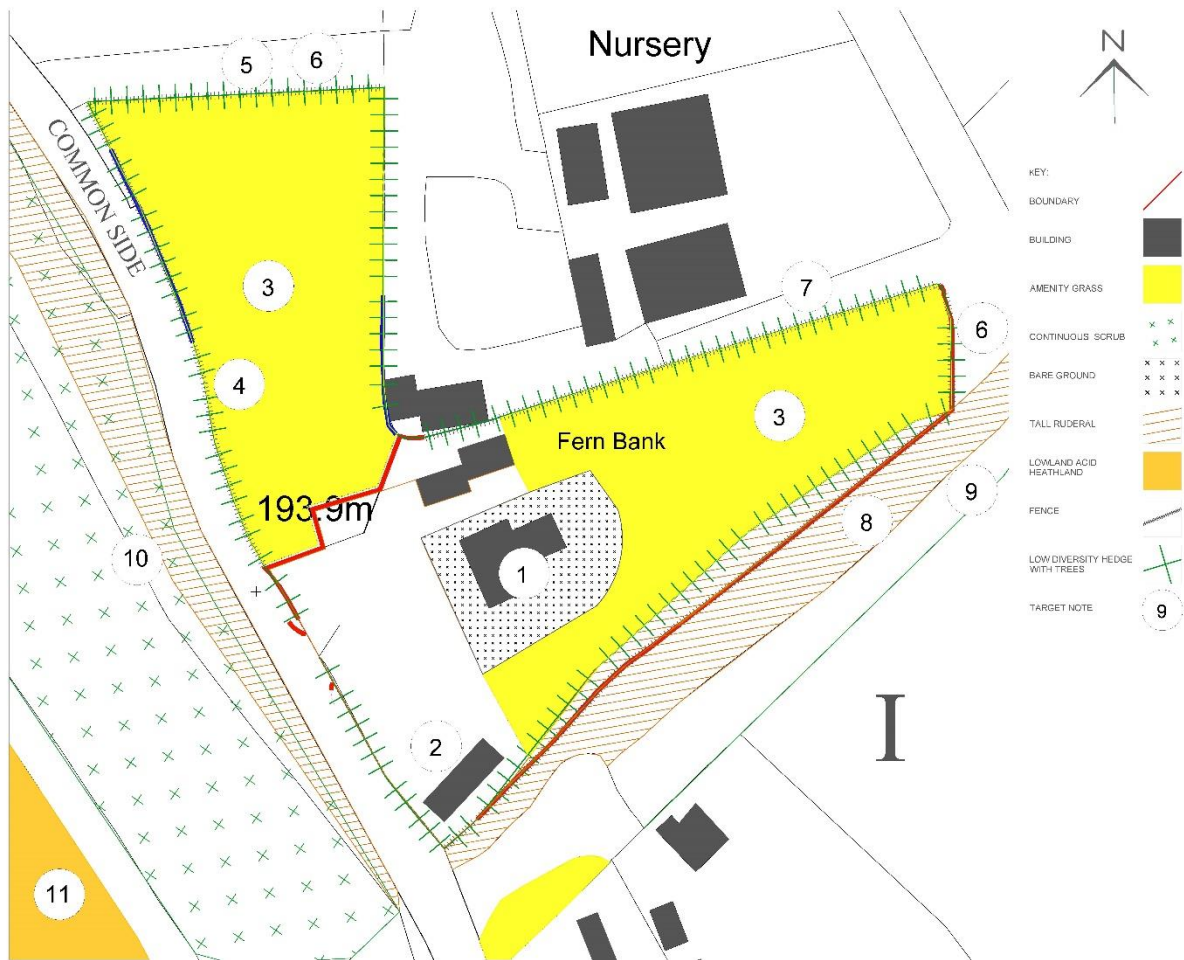
The boundaries are predominantly defunct holly and hawthorn with mature oak, ash and sycamore standards made stock proof using closed board fencing and wire stock fencing. Gaps have been planted up in places historically with cherry laurel and recently on the roadside boundary with cherry laurel and firethorn.

A bridleway bounded by earth banks, mature trees and hawthorn hedges runs along the south boundary from Commonsides eastwards towards Maple Brook.

The north boundary is occupied by a plant nursery with polytunnels, glasshouses and associated built structures and landforms. It is separated from the site by fencing and hedges

Commonsides runs along the west boundary separating it from Gentleshaw Common immediately to the west. The edge of the common is scrubbing over with birch and osiers however beyond this edge it consists of *Calluna/festuca ovina* lowland heath habitat crossed by a network of bare earth tracks and paths.

Please see the Phase 1 Habitat Map (figure 3) overleaf:



TARGET NOTES

- 1 - DWELLING HOUSE MODERN AND WELL MAINTAINED WITH NO OBVIOUS ENTRY POINTS FOR BATS OR BIRDS
- 2 - HARDSTANDING INCLUDING TEMPORARY DWELLING (CARAVAN NEAR SOUTH BOUNDARY)
- 3 - LOW DIVERSITY PERENNIAL RYE GRASS AMENITY GRASSLAND
- 4 - DEFUNCY LOW DIVERSITY NATIVE HEDGE OF HOLLY WITH HAWTHORN. TALL AND GAPPY WITH NEW INFILL PLANTING OF PYRACANTHA AND CHERRY LAUREL
- 5 - HOLLY/HAWTHORN HEDGE WITH MATURE OAK STANDARDS
- 6 - MATURE TREE WITH GREEN WOODPECKER NEST HOLES AND POTENTIAL FOR BAT ROOSTING
- 7 - BOUNDARY WITH NURSERY HOLLY AND LAUREL HEDGE WITH YOUNG TO ALDER, ASH AND LIME STANDARDS (NURSERY NOT SURVEYED)
- 8 - TALL RUDERAL COMMUNITY OF STINGING NETTLE, HEDGE GARLIC, BROAD LEAVED DOCK, CLEAVERS AND FORGET-ME-NOT
- 9 - BRIDLEWAY WITH MATURE TREE AND BANK EDGE LEADING DOWN AND EAST TOWARDS MAPLE BROOK VALLEY
- 10 - GENTLESHAW COMMON WESTERN EDGE BORDERING ROAD WITH SOIL COMPOSITION AFFECTED BY ROAD INDICATED BY TALL RUDERAL (PREDOMINATLY STINGING NETTLE) ON ROADSIDE GRADING INTO BRACKEN THEN BIRCH AND WILLOW SCRUB.
- 11 - GOOD QUALITY CALLUNA VULGARIS/FESTUCA OVINA LOWLAND ACID HEATH CROSSED BY NETWORK OF BARE EARTH PATHS AND TRACKS

Figure 3: Phase 1 Habitat Plan

3.4.1 Habitat - Built Environment

The site is a domestic property with one main dwelling house, a kennel building and a caravan. The dwelling has been subject to a separate bat survey. The house is a 1980's construction with no obvious points of entry for nesting birds or bats. The kennel is a low, brick built shed with post and wire external area. There are a number of potential points of entry for birds and bats through the eaves of the building. The caravan is modern and without any biodiversity value. There is a large loose gravel hardstanding within the front of the property

Previous bat survey (S Christopher Smith) found no evidence of bat roosting within the buildings.



Main dwelling House (left) and kennel building (right) showing gap within eaves as potential entry points

3.4.2 Habitat - Trees

The site has numerous mature and young mature trees along its boundaries predominantly oak with sycamore, ash and alder. Most of the trees have been high pollarded probably within the last two years. Two of the trees (one on north boundary and one on the east south east boundary) were recorded with green woodpecker holes and potential for bat roosting (see phase one drawing for position)



The site is bounded by mature trees many of which have been high pollarded (left) Two trees including an oak on the far north boundary have woodpecker holes and potential for bat roosting (right)

3.4.3 Habitat – Tall Ruderal/Hedgerow Plant Communities

There are areas of tall ruderal, predominantly stinging nettle with broadleaved dock, cleavers, foxglove, forget-me-not and hedge garlic notably behind the hedge along the southern boundary. This provides good ground cover for small mammals, herpetile and invertebrates as well as flowers for pollinators and larval food plants for common lepidoptera. The cover is currently sparse but due to the herbaceous nature of the plant species



The southern boundary has tall ruderal plant communities either side of the fence.

3.4.4 *Habitat – Lowland Acid Heath*

To the west of the site and adjacent to Commonside Gentleshaw Common is a good quality lowland acid heath dominated by Ling and Sheep's Fescue. Near to the boundary along Commonside the heath is degraded by birch/osier scrub ingress with eutrophication evidenced by tall ruderal plant communities (stinging nettle dominant) along the road verge. The scrub becomes more dense near the road with bracken dominant within the ground flora



Gentleshaw common with scrub dominant as seen from bridle way entrance south of the site (left) and 20m from the roadside showing dominant ling/sheep's fescue heathland community

3.4.5 *Linear feature - Hedgerows*

The site and property are bounded by near continuous hedge. This is predominantly holly with hawthorn, species poor native hedge infilled in places with mature laurel and recently planted firethorn. The hedges are tall and gappy due to lack of appropriate management over an extended period. There are numerous mature trees associated with the hedges (see above). The hedges provide moderate wildlife value to foraging and nesting birds, small mammals and invertebrates including pollinators. Native hedgerows are UK and Staffordshire BAP priority habitats



Hedge along nursery boundary is holly with significant laurel infilling (left) the road boundary has been recently infilled with firethorn and laurel

3.4.6 Linear Features – Fencing

The property is fenced on all boundaries with a mix of closed board fencing with wooden gravel boards and wire stock fencing. The CBF fencing provides a significant barrier to movement of ground living fauna into and out of the site. The remainder of the site is secured with wire stock fencing preventing the movement of larger mammals e.g. badger, fox and deer through the site.

3.5 Protected & Priority Species

3.5.1 Badger

***** All badger information should be kept confidential and remain out of the public domain*****

There was no evidence of badger was recorded at the Site or within 100m in the form of latrines, foraging signs or setts. There is a lack of access to the site for large mammals including badgers due to the boundary fencing

3.5.2 Bats

Two trees on the Site offer suitable rot holes, for roosting bats due to the presence of woodpecker nest holes and decayed heartwood. In addition the hedgerows could offer connectivity through the habitat. The gardens offer poor foraging habitat due to the dominance of amenity grassland other than the boundaries where hedges and trees offer potential

3.5.3 Hazel dormouse

There is no records for hazel dormouse within 1km of the site and the site lacks suitable habitat for this species

3.5.4 Otter

There is no suitable habitat for otter within or near the site

3.5.5 Water vole

There is no suitable habitat for water vole within or near the site

3.5.6 Notable mammals

The Site was considered to offer suitable habitat to support hedgehog, with the gardens offering limited foraging opportunities and the hedgerows representing commuting and sheltering habitat for this species. The adjacent plant nursery, bridleway and farmland habitats provide an extended network of habitats for this species. The farmland habitat to the south and east were considered suitable to support brown hare polecats (*Mustela putorius*), both associated with open farmland, sheltering in boundary hedgerows. However, it was considered unlikely that the Site represented significant habitat for either of these species due to the disturbance associated with the domestic setting and the lack of evidence of rabbits on Site, the polecat's main prey item. Movement in and out of the Site is also restricted where closed board fencing has been installed. Harvest mice (*Micromys minutus*) were not considered likely to be present on Site or in the adjunct field due to the low height and limited complexity of the grassland sward.

3.5.7 Birds

Trees, buildings and hedgerows within the site provide potential to support nesting birds. Two mature oak within the boundary hedge contain a number of green woodpecker holes. The site has no other features suitable for nesting birds. The surrounding landscape has a range of habitats including the trees and shrubs along the bridleway to the south and the heathland to the west suitable for a range of tree, shrub and heathland breeding birds including protected and priority species e.g. nightjar, skylark and cuckoo).

Incidental sightings of birds during the site visit in April included green woodpecker (*Picus viridis*), nuthatch (*Sitta europaea*), robin (*Erithacus rubecula*), wren (*Troglodytes troglodytes*), willow warbler (*Phylloscopus trochilus*), goldcrest (*Regulus regulus*), blackcap (*Sylvia atricapilla*), coal tit (*Parus ater*), blue tit (*Cyanistes caeruleus*) and great tit (*Parus major*),

3.5.8 Amphibians

No ponds were found either through desktop or onsite survey within 250m radius of the Site.

The Habitat Suitability Index (HSI) for great crested newts was developed by Oldham *et al.* in 2000 as a measure of habitat suitability in order to estimate presence/absence. A waterbody is assessed based on a geometric mean of ten features, each given a score relating to the current condition of the ponds characteristics and surroundings. Where the overall result is closer to 0 this indicates a more unsuitable habitat and a score closer to 1 represents more optimal habitats.

HSI can be useful in:

- Evaluating the general suitability of a sample of ponds for great crested newt
- Comparing general suitability of ponds across different areas
- Evaluating the suitability of receptor ponds in a proposed mitigation scheme

HSI is limited by being insufficiently precise to allow one to draw conclusions that a pond with a high score will support great crested newts or that a pond with a low score will not do so. The results do not allow conclusions on newt populations to be reached. Therefore a HSI assessment is not a substitute for further great crested newt surveys.

Due to the lack of water bodies a Habitat Suitability Index (HSI) assessment has not been provided with this report

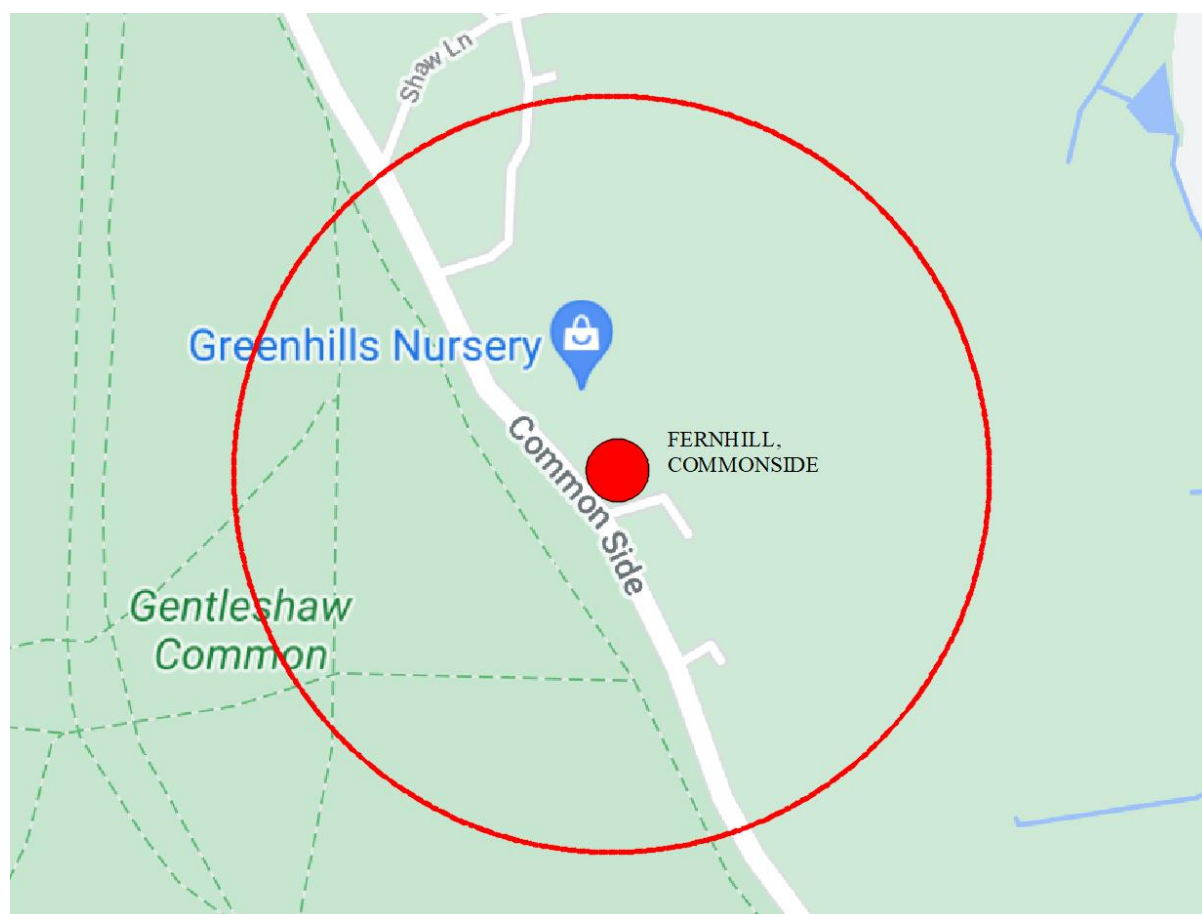


Figure No: Ponds within a 250m radius of the Site

The hedgerows around the Site offered potential shelter and commuting routes for amphibians. Other than the boundary areas and associated tall ruderal The gardens offer negligible potential as terrestrial habitat for amphibians. Overall, the habitats on the Site were considered to offer marginal terrestrial habitat for great crested newts. Therefore the potential presence of amphibians, including great crested newts, could not be ruled out at this stage.

3.5.9 Reptiles

The site offered negligible habitat for reptiles. The heathland to the west is suitable for adder (*Vipera berus*) and common lizard (*Zootoca vivipara*). Common lizard is recorded within 1km of the site. There is negligible potential for reptiles within the development area and high within nearby heathland habitat

3.5.10 Invertebrates

The property boundary trees, hedges and ground flora have potential for common invertebrates including pollinators, butterflies and moths and saprophytic beetles. The gardens have negligible potential

3.5.11 White clawed crayfish

There is nil potential for white clawed crayfish within or near the site due to lack of suitable habitat

3.5.12 *Invasive Species*

One *Rhododendron ponticum* specimen was recorded within the south-west corner of the property. No other invasive non-natives were recorded during the survey

4 Assessment of Ecological Impacts

Site	Description	Distance from site	Assessed Impact	Mitigation Required?
Cannock Chase SAC	The area of lowland heathland at Cannock Chase is the most extensive in the Midlands, although there have been losses due to fragmentation and scrub/woodland encroachment. The character of the vegetation is intermediate between the upland or northern heaths of England and Wales and those of southern counties. Dry heathland communities belong to NVC types H8 <i>Calluna vulgaris</i> – <i>Ulex gallii</i> and H9 <i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i> heaths. Within the heathland, species of northern latitudes occur, such as cowberry <i>Vaccinium vitis-idaea</i> and crowberry <i>Empetrum nigrum</i> . Cannock Chase has the main British population of the hybrid bilberry <i>Vaccinium intermedium</i> , a plant of restricted occurrence. There are important populations of butterflies and beetles, as well as European nightjar <i>Caprimulgus europaeus</i> and five species of bats	5.3km to NW	Nil impact	None
Gentleshaw Common SSSI	lowland heathland vegetation	20m to west	Construction traffic passing	None
Chasewater and The Southern Staffordshire Coalfield Heaths SSSI	nationally important wet and dry lowland heath, fens and oligotrophic (nutrient-poor) standing open water habitats and for its populations of two nationally scarce vascular plant species: floating water-plantain <i>Luronium natans</i>	1.9km to west	Nil impact	None
Commonside (east of), Gentleshaw retained BAS	planted oak woodland, wooded bridal path, damp ditch and two fields of semi-improved neutral grassland	0.2km NE of site	Woodland and garden birds and bats commuting between sites. Boundary habitat only negligible impact due to scale and position of development	None
Hayfield Hill (near Redmoor) retained BAS	species rich semi-improved neutral grassland	0.8km north-west of the Site	Nil impact	None

Gentleshaw Grassland BAS	Semi-improved neutral grassland areas of marshy grassland and scattered trees	0.8km north-west of the Site	Nil impact	None
Courtbanks Covert, Redmoor Wood LWS	for Ancient semi-natural woodland remnant containing a site of archaeological interest	0.9km north west of the Site	Woodland and garden birds and bats commuting between sites. Boundary habitat only negligible impact due to scale and position of development	None
Native hedgerows	UK and Staffordshire priority habitats	Boundary features	Proposed development potential impact on hedgerows and associated trees	Protection to BS5837 (2012) during construction restoration and diversification as part of development giving net gain
Protected Species	Description	Distance from site	Assessed Impact	Mitigation Required?
Nesting Birds	Nest sites protected under W&C Act (1981)	Within boundary vegetation	Potential for disturbance during construction	Clearance outside of nesting season or vegetation checked prior to removal by ecologist
Badger	Badger and their setts protected by The Protection of Badger Act (1992)	<1km	nil	none
Bats	EPS species	4 species recorded within 1km. potential roost sites within boundary trees. PRA found no evidence of bats within building	Potential for disturbance during demolition Potential for disturbance by noise and light during work after dusk or before dawn Potential for external light disturbance	Pre demolition check of buildings Daylight working Use of BCT/ILP guidance compliant LED lighting

Notable mammals inc hedgehog and polecat	priority species	Polecat and hedgehog recorded <1km	Potential for injury or disturbance during works	Remove ACOs by hand. Cover excavations overnight. Store materials off the ground e.g. on pallets
Reptiles common lizard and adder	priority species protected by W&C act (1981)	Common lizard <1km from site	No suitable habitat on site Nil potential for disturbance	none
Amphibians	GCN EPS species, common amphibians protected by W&Cact (1981)	No records within 1km	Very limited habitat within site. No pools within 250m	Precautions as for notable mammals. If GCN found work to stop and LDC ecologist notified

The proposed development will not impact on any designated or non-designated ecological site due to its scale, type and lack of connectivity with the sites.

There is potential for disturbance to bat species and nesting birds during construction phase and to bats during the occupational phase. This can be avoided by standard good practice including working during daylight hours only, removal of vegetation outside of nesting season and the provision of external lighting which conforms to the latest BCT/ILP guidance. The proposed construction will not significantly impact on the boundary vegetation where the potential for nesting birds and roosting bats is concentrated.

All other habitats within the site are of nil or negligible value to wildlife. The proposed development provides opportunity for the sympathetic restoration of the hedgerows and diversification using locally characteristic native species

4.1 Areas not impacted

All designated and non-designated sites identified within 3.1.1 will not be impacted by the proposed development. Habitats within the property are outside of the main development and can be retained and restored during the development.

4.2 Affected areas

Without mitigation there is potential for some protected and priority species (nesting birds and bats) to be impacted during the construction phase and for bats to be impacted during the occupancy phase (no greater than existing conditions). There is also low to negligible potential for disturbance to hedgehog, polecat and common amphibians. The provision of standard good working practice can ensure the disturbance to these protected and priority species is avoided

5 Avoidance, Mitigation and Compensation

The National Planning Policy Framework paragraph 174 states that "To protect and enhance biodiversity and geodiversity, planning policies should: ...promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species populations". In order to ensure no net loss of biodiversity in accordance with NPPF & Circular 06/2005 recommendations are made below.

5.1 Avoidance & Protection of High Value Features

- **The hedgerows and associated trees should be retained, where practicable and protected during works in accordance with BS5837:2012** 'Trees in relation to construction' for the purposes of ensuring that potential bird nesting habitat and sheltering habitat for other notable species such as badger and hedgehog, as well as potentially valuable connective corridors through the landscape are maintained.
- All clearance of vegetation to be conducted outside of nesting season or under the close supervision of a qualified and experienced ecologist. No nests to be disturbed during the works
- No floodlighting to be used during construction unless fully compliant with relevant BCT/ILP guidance
- Working practices to take precautionary approach to wildlife including covering excavations overnight, provision of escape ramps within excavations, storing all materials off the ground and away from hedgerows. Toolbox talks to include protected species identification and procedures. Discovery of EPS species LDC and project ecologists to be notified immediately and work to cease until resolved
- A sensitive lighting strategy to inform how lighting will be managed through the construction phase and post development should be in place prior to the development commencing, detailing lighting cowed to the ground and directed away from ecologically valuable features such as the retained boundary vegetation to the north-west and the biodiversity and enhancement area in order to maintain these areas as dark-zones suitable for bat and badger foraging.

5.2 Further Survey Work

- Internal bat inspection of dwelling prior to demolition

5.3 Mitigation

All recommendations and mitigation measures set out as a result of species-specific surveys on Site to be followed in full.

5.4 Mitigation

5.4.1 *Nesting Birds*

- The removal of woody vegetation to be carried out outside of the nesting bird season (March to September inclusive) or alternatively these areas should be checked by a suitably qualified ecologist immediately prior to commencement of these works.
 - If nesting birds are found to be present during works a 5m buffer of no disturbance must be maintained around the nest(s) until all of the young have naturally fledged.

5.4.2 *Reptiles and Amphibians*

The Site has negligible potential to support herpetofauna, the proposed works are considered unlikely to significantly impact upon herpetofauna within the Site, especially as the majority of the suitable terrestrial habitat for herpetofauna within the Site will be retained. However, low numbers of reptiles and amphibians may occasionally shelter within the boundary vegetation of the Site. As a result, there is a small risk of disturbance to

these species groups during construction and therefore the following best sensitive working methodology is recommended for clearance of the development area

- Prior to the start of works and following an appropriate pre-works check for nesting birds (or outside of nesting bird season), the grassland within the proposed access track route should be strimmed to a short sward length (50mm high). This sward height should be maintained at this length to ensure it remains unsuitable for reptiles and common amphibians in order to deter animals from entering this area and becoming harmed through the works.
- It is recommended that clearance of vegetation should be undertaken under the supervision of a suitably qualified ecologist;
- Works should be carried out during the active season (April – October in prolonged temperatures over 5°C);
- Clearance works must be carried out in a phased and directional manner towards retained vegetation to enable reptiles and amphibians within the works area to escape;
- Any herpetofauna or other protected species found during the clearance works should be moved carefully by hand to an area to be left undisturbed by the works in a similar habitat.

5.4.3 *Other protected and notable species*

- Bats are expected to be present within the surrounding area of the Site, however the roosting opportunities all fall within the boundary trees which will remain unaffected by the proposed works. A survey of the dwelling house to be demolished for presence/use by bat species was negative however due to the nature of these species a predemolition check is to be undertaken by a licenced bat ecologist. It is not considered that the small-scale scope of the works will pose a risk to bats, provided sensitive lighting is used during and post-works as per Section 5.2.
- Although it is not considered likely that the proposed works will impact additional notable mammals, nevertheless, as a precautionary measure, any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120mm must be covered at the end of each workday to prevent animals entering or becoming trapped.
- Should non-protected animals such as hedgehog, frog, smooth newt or toad be found during works these should be moved carefully by hand to an area to be left undisturbed by works.
- All tree and scrub vegetation removal should be carried out outside of the nesting bird season (March to September inclusive) or, alternatively, the Site should be checked by a suitably qualified ecologist immediately prior to commencement of these works (within 48 hours). If nesting birds are found to be present during works a 5m buffer of no disturbance must be maintained around the nest(s) until all of the young have naturally fledged.
- Features such as the compost heaps and piled items should be dismantled carefully by hand in order to avoid causing harm to any animals, such as hedgehog, reptiles or amphibians, which may be sheltering there.
- A **toolbox talk** shall be carried out by a suitably qualified ecologist prior to any works commencing on Site to ensure that all personnel working on Site are aware of the potential presence of protected and notable species and the procedure for if such species are found during works.
- **Invasive plant species** Rhododendron ponticum was identified, this can be removed as part of the development.
- All **excavations** and foundation trenches which must be left open overnight must have **sloping boards** installed to ensure that any animals that fall in are able to escape.

- **Lighting** during works and permanent lighting once the development has been completed should be cowled to direct light towards the ground and away from bat, badger or otter foraging, commuting and roosting areas such as trees, watercourses, woodland and hedgerow.
- **Pollution prevention** guidelines must be adhered to during works to ensure there are no adverse impacts to the nearby River Trent and water bodies in the surrounding area.
- Should non-protected animals such as hedgehog, frog, smooth newt or toad be found during works these should be moved carefully by hand to an area to be left undisturbed by works.
- Should evidence of protected species, such as nesting birds, great crested newts or reptiles, be discovered during works, works should temporarily stop while Ecolocation or the local office of Natural England are contacted for advice on the best way to proceed.

5.5 Compensation for Residual Biodiversity Loss

The National Planning Policy Framework paragraph 175 states that "Opportunities to incorporate biodiversity in and around developments should be encouraged". Therefore, additional recommendations for biodiversity enhancements across the Site are provided below:

- Any new landscaping proposed should make use of **native species**, preferably of local provenance, which are of higher value to local wildlife. The planting of native species which are appropriate to the landscape character may improve local species diversity as well as increase the potential for use of the Site by wildlife.
- Existing native hedges can be restored and diversified during the development to increase security, maintain the health of the existing native stock control/remove non-native species and infill using appropriate, locally characteristic native species e.g. hazel, dog rose, honeysuckle and gorse
- **2 Nest boxes** could be provided on Site to maintain and enhance the existing breeding possibilities. Such nesting facilities should be sited away from roads, erected on any suitable proposed buildings and facing away from prevailing wind and rain.
- A small number of **bat boxes** could be erected on retained or new trees or buildings, in order to provide additional opportunities for roosting bats. Boxes should be placed in a south-facing direction between 4 and 5m high. Ecolocation would be happy to offer further advice on this if necessary.
- Consideration could be given to creating **log piles** within areas of open green space, SUDS features or along hedgerows to provide suitable habitat for invertebrates and shelter for amphibians, reptiles and small mammals. These should be sited in shady places and the lowest logs should be buried a few centimetres into the soil to keep them damp.
- Hedgehogs are a UKBAP Priority Species and have suffered a significant decline in numbers in recent years. In order to preserve the opportunities for hedgehogs to move freely through any proposed development and take advantage of foraging in gardens it is recommended that a hole around 15cm in diameter is left at any point along each garden fence. The access hole can be achieved by digging a hole underneath a fence, leaving a brick or two out of the base of a wall or cutting a small hole in the base of the fence.

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Appendix 1 – Proposed Plans



Appendix 2- Species List 14/04/2021

Flora

Species	Common Name	DAFOR score	Notes
<i>Agrostis</i> sp	Bent	F	lawn
<i>Alliaria petiolate</i>	Garlic mustard	O	south boundary tall ruderal community
<i>Alnus glutinosa</i>	Alder	R	nursery hedge tree
<i>Aquilegia</i>	Granny's bonnet	R	disturbed ground
<i>Bellis perennis</i>	Lawn daisy	A	lawn
<i>Betula pendula</i>	Silver Birch	A	heathland scrub
Bryophytes	mosses	F	lawn
<i>Calluna vulgaris</i>	Ling	D	heathland
<i>Cardamine hirsute</i>	Hairy bittercress	O	Disturbed ground
<i>Carex caryophylla</i>	Spring sedge	R	Disturbed ground
<i>Centaurea montana</i>	Perennial cornflower	R	disturbed ground
<i>Chamaenerion angustifolium</i>	Rosebay willowherb	O	garden edges
<i>Cirsium vulgare</i>	Spear thistle	R	Disturbed ground
<i>Corylus avellana</i>	Hazel	R	hedge
<i>Crataegus monogyna</i>	Hawthorn	A	sub-dominant hedge trees
<i>Cytisus scoparius</i>	Broom	R	south boundary scrubby edge
<i>Dactylis glomerata</i>	Cock'sfoot	O	Rough grass and scrub edge areas
<i>Digitalis purpurea</i>	Foxglove	F	hedge ground flora
<i>Dipsacus fullonum</i>	Teasel	R	Disturbed ground
<i>Elymus repens</i>	couch	F	disturbed areas
<i>Euonymus fortunei</i>	Fortune's spindle	R	disturbed ground
<i>Festuca ovina</i>	Sheep's fescue	A	gentleshaw common heathland
<i>Festuca rubra</i>	Red Fescue	F	lawn
<i>Galium aparine</i>	Cleavers	O	ruderal area south boundary
<i>Geranium robertianum</i>	Herb Robert	O	Disturbed ground
<i>Hedera helix</i>	Ivy	A	On some trees near boundary
<i>Heracleum sphondylium</i>	Hogweed	R	bridleway
<i>Hieracium</i> sp	Hawkweed	F	lawn
<i>Holcus lanatus</i>	Yorkshire Fog	A	under hedges
<i>Hyacinthoides hispanica</i>	Spanish bluebell	O	garden edges
<i>Ilex aquifolium</i>	Holly	A	main hedge plant
<i>Lamium purpureum</i>	Red dead-nettle	O	hedge bottoms
<i>Leucanthemum vulgare</i>	Oxeye daisy	R	under hedges
<i>Lolium pratense</i>	Perennial rye-grass	D	Lawn
<i>Melissa officinalis</i>	Lemonbalm	R	Disturbed ground
<i>Plantago lanceolata</i>	Ribwort Plantain	F	Disturbed ground
<i>Poa annua</i>	Annual meadowgrass	F	bare ground
<i>Poa pratense</i>	Meadowgrass	O	Lawn
<i>Polygonatum multiflorum</i>	Solomon's seal	R	Disturbed ground
<i>Prunella vulgaris</i>	Self heal	R	lawn
<i>Prunus avium</i>	Wild cherry	O	scrub
<i>Quercu robur</i>	Common oak	F	main hedge standard
<i>Ranunculus repens</i>	Creeping Buttercup	F	Disturbed ground
<i>Rhododendron ponticum</i>	Tree rose	R	single specimen SW corner of site
<i>Rubus fruticosus</i>	Bramble	D to F	under hedges
<i>Rumex obtusifolia</i>	Broad-leaved Dock	O	Scrubby areas
<i>Salix caprea</i>	Goat willow	F	heathland scrub
<i>Sambucus nigra</i>	Elder	O	Bridle way
<i>Senecio vulgare</i>	Groundsel	O	disturbed ground
<i>Taraxacum officinale</i>	Dandelion	F	Sward and scrubby areas
<i>Urtica dioica</i>	Stinging Nettle	F	Hedge bottoms and scrub
<i>Veronica longifolia</i>	Garden speedwell	O	garden edges

<i>Vicia sativa</i>	common vetch	F	hedgerow bottom
<i>Viola tricolor</i>	Wild pansy	R	disturbed ground
Fauna			
<i>Aegithalos caudatus</i>	Long-tailed tit	1	hedgerow
<i>Aglais io</i>	Peacock butterfly	1	garden
<i>Aglais urticae</i>	Small tortoiseshell	1	garden
<i>Alauda arvensis</i>	Skylark	>1	gentleshaw common heathland
<i>Bombus terrestris</i>	Buff-tailed bumblebee	1	under hedge
<i>Buteo buteo</i>	buzzard	1	overhead
<i>Chloris chloris</i>	Greenfinch	5	conifers
<i>Columba oenas</i>	stock dove	1	calling offsite
<i>Columba palumbus</i>	Wood pigeon	>5	trees
<i>Corvus corone</i>	Carriion crow	1	overhead
<i>Cyanistes caeruleus</i>	Blue Tit	1	Garden heard and seen
<i>Erithacus rubecula</i>	Robin	2	Heard and seen
<i>Garrulus glandarius</i>	Jay	6	scold of 6 passing through using site trees
<i>Motacilla alba</i>	Pied wagtail	2	south lawn
<i>Parus major</i>	Great tit	5	hedgerow and trees
<i>Pariparus ater</i>	Coal tit	2	calling
<i>Picus viridis</i>	Green woodpecker	1	flying through bridleway
<i>Phasianus colchicus</i>	common pheasant	>1	calling from east
<i>Phylloscopus trochilus</i>	Willow warbler	1	Scrub (heard)
<i>Prunella modularis</i>	Dunnock	>2	Garden hedgerow
<i>Regulus regulus</i>	Goldcrest	1	calling
<i>Sitta europaea</i>	Nuthatch	1	Heard off site
<i>Sitta Europaea</i>	nuthatch	1	Scrub (heard)
<i>Sturnus vulgaris</i>	starling	>10	Over arable field
<i>Sylvia atricapilla</i>	Blackcap	1	south east boundary
<i>Troglodytes troglodytes</i>	wren	1	song
<i>Turdus merula</i>	Blackbird	1	Scrub (heard)
<i>Turdus philomelos</i>	Song thrush	1	song offsite