



Preliminary Ecological Appraisal Report

Trinity Academy, Barnsley

July 2020

Waterman Infrastructure & Environment Limited

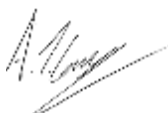
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Contents

1. Introduction	1
2. Methodology.....	3
Scope of the Assessment	3
Ecological Data Search	4
‘Extended’ Phase 1 Habitat Survey	4
Invasive Plant Species Assessment.....	5
Preliminary Bat Roost Assessment	5
IEF Assessment	6
Limitations	6
3. Results.....	7
Data Search	7
Statutory Designated Sites.....	7
Non-Statutory Designated Sites.....	7
Ancient Woodland	7
Protected, BAP and Other Notable Species	7
‘Extended’ Phase 1 Habitat Survey	8
Habitats	8
Protected, BAP and other Notable Fauna and Flora.....	10
4. Assessment.....	13
5. Ecological Constraints and Opportunities	15
Designated Sites	15
Habitats.....	15
Protected and Notable Fauna	16
6. Conclusions	20

Tables

Table 1: Geographical Scale of Important Ecological Feature Categories	3
Table 2: Legally protected and Invasive Species	4
Table 3: Adapted Building and Tree Assessment Guidelines	5
Table 4: Summary of Data Search records of flora and fauna within 1km of the Site	7
Table 5: Potential Important Ecological Features Anticipated to be Affected by the Development.....	13
Table 6: Ecological Features Scoped out of the Assessment	14
Table 7: Summary of Additional Ecological Assessments	20

Contents



Figures

Figure 1: Habitat Features Plan (WI117125-105: Keresforth Academy)

Contents

Preliminary Ecological Appraisal Report
WIE17125-100
WIE17125-100-R-1-1-3-AJC

1. Introduction

- 1.1. Waterman Infrastructure & Environment Ltd (Waterman) was commissioned by Waterman Building Services on behalf of the Department for Education to carry out a Preliminary Ecological Appraisal (PEA) at a site known as the Land at Keresforth Close, Barnsley (hereafter referred to as the 'Site').
- 1.2. The Site is approximately 7.2 hectares (ha) in area and centred on Ordnance Survey Grid Reference SE334055. The Site comprises the former Keresforth Centre NHS facility, and a playing field adjacent to the A6133 Broadway. The NHS site was a base that originally provided a range of services on behalf of South West Yorkshire Partnership NHS Foundation Trust. The Site is on split-levels, the buildings located at the back of the Site on the lower lying land and the open space on higher land fronting Broadway. The Site is bounded by Broadway to the south-west, residential properties and playing fields to the north, Joseph Locke Primary school to the east and a mixture of allotments and two-storey residential properties to the south-east. There are mature trees along the south-eastern boundary with some semi-mature trees along the Broadway frontage and along the slope between the open space and former NHS buildings.
- 1.3. The Site comprises large recreational field in the south western section of the Site which is bordered by trees, scrub and hedgerow with the north east section comprising a former NHS facility which supports buildings, landscape planting, hedgerow, scrub and woodland. The wider Site context comprises largely agricultural land and woodland further south and residential developments further north. Development proposals include the demolition of all structures within the Site boundary to facilitate the construction of Trinity Academy Barnsley which is to provide a 900 place secondary school on the Site. The development will include a new school building in the north-east, hard landscaping car park in the centre of the Site and both soft and hard landscaping sports fields in the surrounding area. New residential buildings with private gardens will be built in the north of the Site. This is hereafter referred to as the 'Development'. The Development is presented in the Edward Architecture Drawing Ref. 0632/EA/A/S001, included in **Appendix C**.
- 1.4. This Preliminary Ecological Appraisal Report (PEAR) includes an ecological data search and an 'Extended' Phase 1 Habitat Survey, preliminary bat roost assessment at buildings (external only) and at trees (ground based only) and a survey for common invasive weeds.
- 1.5. As detailed within industry guidance (CIEEM, 2016)¹, a PEA can be used to support a planning application provided that no 'Important Ecological Features' (IEFs) are identified and no significant ecological effects are anticipated. If this is not the case, an Ecological Impact Assessment (EclA) is normally required by the Local Planning Authority (LPA).
- 1.6. The purpose of this report is to:
 - Identify the potential for IEFs to be present within the identified Zone of Influence (Zol) of the Development and any resulting constraints or significant ecological effects to the Development;
 - Inform master-planning to allow significant ecological effects to be avoided or minimised wherever possible;
 - Allow any further ecological assessments needed to inform an EclA to be identified and appropriately designed, if required;
 - Allow likely mitigation measures (in line with the Mitigation Hierarchy²) to be developed, to ensure compliance with nature conservation legislation and planning policy (**Appendix A**);

¹ CIEEM (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

² BS 42020:2013 Clause 5.2

- Allow ecological enhancement measures to be developed to ensure compliance with nature conservation legislation and planning policy, where necessary; and
- Form the basis for agreeing the scope of any EclA with relevant consultees, if required.

2. Methodology

Scope of the Assessment

- 2.1. This section summarises the methodologies used for undertaking the PEA based on current guidelines^{3, 4}. The ZoI is the area(s) over which ecological features may be impacted by the biophysical changes caused by the proposed Development. Based on the scale and nature of the Development, it has been assessed that the ZoI arising from these works is unlikely to be greater than 1km from the Site. Therefore, this distance has been used to collect the ecological data search information. The 'Extended' Phase 1 Habitat survey area comprised primarily the Site, as access was restricted to adjacent land (which comprises a major A road to the south and west, residential properties to the east and educational sites to the north). However, adjacent land was viewed where possible from the Site and from aerial photography.
- 2.2. As referenced in industry guidance (CIEEM, 2016), IEFs that are anticipated to be affected by the Development have been identified and subject to assessment. In this report, designated sites, habitats and species that fall into the categories in **Table 1** and **Table 2** have been identified as being ecologically important and/or legally protected/controlled and form the scope of data gathering during the data search and Site surveys.

Table 1: Geographical Scale of Important Ecological Feature Categories

Geographical Level of Importance	Category
International	Statutory designated sites: Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites (including candidate SACs and proposed SACs, SPAs and Ramsar sites)
National	Statutory designated sites: Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) ⁵ ; Ancient Woodland; Habitats and species of principal importance for the conservation of biodiversity as listed on Schedule 41 of the NERC Act, 2006, including ecologically important hedgerows under the Hedgerow Regulations; and Red List (using IUNC criteria ⁶) and nationally rare or scarce species and Birds of Conservation Concern (Red List ⁷)
County	Local Nature Reserves (LNR) Non-statutory designated wildlife sites: known as Local Wildlife Sites (LWS) in Barnsley ; and Local Biodiversity Action Plan (LBAP) habitats and species.

³ Chartered Institute of Ecology and Environmental Management (2015). *Guidelines for Preliminary Ecological Assessment*. Technical Guidance Series.

⁴ BSI (2013) BS 42020:2013. Biodiversity - Code of Practice for Planning and Development.

⁵ DCLG (2012). *National Planning Policy Framework*, paragraph 118.

⁶ <http://www.iucnredlist.org/technical-documents/categories-and-criteria>

⁷ https://www.rspb.org.uk/birds-and-wildlife/bird-and-wildlife-guides/bird-guide/status_explained.aspx

Table 2: Legally protected and Invasive Species

Legislation (Summarised in Appendix A)
Species included on Schedules II2 and V of The Conservation of Habitat and Species Regulations 2017 (as amended);
Species included on Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended), excluding species that are only protected in relation to their sale (Section 9[5] and 13[2]);
and
Badgers, which are protected under the Protection of Badgers Act 1992.

Ecological Data Search

- 2.3. The aim of the ecological data search is to collate existing ecological records for the Site and adjacent areas. Obtaining existing records is an important part of the evaluation process, as it provides additional information that may not be apparent during a site survey.
- 2.4. An ecological data search was undertaken in July 2020, during which all records of protected species, and/or other notable fauna and flora within 1km of the Site, were requested from Barnsley Biological Records Centre (BBRC). Only those since the year 2000 have been considered within the report.
- 2.5. Records of important statutory and non-statutory sites designated as referred to in **Table 1** for their nature conservation value within 1km of the Site were also requested from BBRC and searched for on the Multi-Agency Geographic Information for the Countryside (MAGIC)⁸. Granted European Protected Species Mitigation (EPSM) licences were also searched for on MAGIC.
- 2.6. In addition, Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) listed under Section 41 (S41) of the NERC Act, as well as Habitat Action Plans (HAPs) and Species Action Plans (SAPs), were consulted to assign an ecological context to the Site.

'Extended' Phase 1 Habitat Survey

- 2.7. An 'Extended' Phase 1 Habitat Survey of the Site was undertaken on the 22nd and 23rd of June 2020 using the Joint Nature Conservancy Council (JNCC, 2010)⁹ standard 'Phase 1' survey technique. The Phase 1 Habitat Survey methodology was 'Extended' by undertaking an assessment of the Site to support protected and notable faunal species. All habitat types within the Site were mapped (**Figure 1**) with target notes where appropriate. The survey of the Site was conducted under conditions deemed appropriate for survey, being dry and warm with a starting temperature of 22°C.
- 2.8. Where access allowed, adjacent habitats were also considered to assess the Site within the wider landscape, and to provide information with which to assess possible impacts of the proposed Development.
- 2.9. A detailed floral species list was collated for the Site during the 'Extended' Phase 1 Habitat Survey. As such, the species list detailed within the results section of this report can be used to inform any future BREEAM reports (specific assessment guidelines dependant).

⁸ Magic.defra.gov.uk. (2014). *Magic*. [online] Available at: <http://magic.defra.gov.uk/> [Accessed June 2020].

⁹ JNCC. (2010). *Handbook for Phase 1 Habitat Survey*. Nature Conservancy Council

Invasive Plant Species Assessment

- 2.10. The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats, including aquatic habitats. The 'Extended' Phase 1 Habitat Survey searched for the presence of common invasive species including; Japanese knotweed *Reynoutria japonica*, giant knotweed *Fallopia sachalinensis*, hybrid knotweed *Fallopia baldschuanica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*.

Preliminary Bat Roost Assessment

- 2.11. As part of the preliminary roost assessment an external building/structure and ground based tree assessment (see limitations section) for bats was undertaken at the Site on 22nd and 23rd of June 2020. The survey was led by an experienced ecologist.
- 2.12. This assessment consisted of a visual inspection (including the use of binoculars and torches where required) of buildings and trees for evidence of bat use (for example, bat droppings). A number of factors were considered, including internal conditions, presence of features suitable for use by roosting bats, proximity to foraging habitats or cover and potential for disturbance. Notes were made relating to relevant characteristics of features providing potential access points and roosting opportunities for bats.
- 2.13. The overall suitability of buildings and trees was categorised in accordance with the criteria in Table 3, adapted from best practice guidance¹⁰.

Table 3: Adapted Building and Tree Assessment Guidelines

Assigned Bat Roosting Potential	Description
Known or confirmed roost	Evidence of roosting bats identified.
High	A building/tree with one or more Potential Roost Features (PRFs) that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Moderate	A building/tree with one or more PRFs that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
Low	A building/tree with one or more PRF that could be used by individual bats opportunistically. However, these PRFs do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
	A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Negligible	No features present that are suitable for roosting bats.

¹⁰ 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

IEF Assessment

- 2.14. Data gathered as part of this PEA has been used to identify IEFs (see **Tables 1 and 2**) within the Zol (up to 1km from the Site) that could be affected by the Development.
- 2.15. It should be noted that not all the IEFs within the Zol have the potential to be significantly affected by the Development, or the legislation pertaining to them to be contravened. Therefore, where features are unlikely to be affected by the Development, or where any impacts that affect IEFs are unlikely to be significant¹¹ for the following reasons, such features have been scoped out of the assessment:
- No pathway of effect has been identified, for example the feature is sufficient distance from the Site or there is the presence of a barrier between its location and the Site¹²; or
 - The feature is of insufficient biodiversity conservation value within the Zol, due to its quality, extent or population size¹³.
- 2.16. For all remaining features scoped into the assessment, the impact pathways (such as habitat loss, lighting and noise) and potential effects on the feature have been identified.

Limitations

- 2.17. The majority of habitats within the Site could be fully accessed and inspected. However, access was limited in places within areas of particularly dense vegetation, and it is possible that instances of invasive non-native plants could have been missed in such areas.
- 2.18. The majority of habitats within the Site could be inspected for signs of badger activity. However, access was limited in places within areas of particularly dense vegetation, and it is possible that signs of badger activity could have been missed in such areas. The limitation has been addressed in the Ecological Constraints and Opportunities section.
- 2.19. An internal inspection of buildings at the Site for bat roost potential was not undertaken due to health and safety constraints as a result of the requirements for social distancing. Buildings at the Site are considered to be suitable for roosting bats and the limitation has been addressed as detailed in the Results section.
- 2.20. During the external inspection of buildings at the Site, courtyard areas within building **B5** and **B6** were inaccessible, and it is possible that further PRFs could have been missed in such areas.

¹¹ Positive or negative effects on ecological features that have the potential to influence a planning decision are considered to be significant

¹² Whilst the Zol of potential effects arising from the development is up to 1km from the Site, the ecological Zol (within which the feature could be affected) for each feature may vary and for some features may be much less, e.g. great crested newts generally move up to a maximum of 500m from a breeding pond and movement can be restricted by barriers such as busy roads and fast flowing rivers

¹³ E.g. whilst a Priority Species such as skylark *Alauda arvensis* or house sparrow *Passer domesticus* is of National importance (**Table 2**), the impact of development on individual or a small population of such a species, which are generally commonly found, is unlikely to be assessed as significant

3. Results

Data Search

Statutory Designated Sites

- 3.1. The Site is not located within 1km of any statutory designated sites.

Non-Statutory Designated Sites

- 3.2. The Site is not located within 1km of any non-statutory designated sites.

Ancient Woodland

- 3.3. There is no ancient woodland within 1km of the Site.

Protected, BAP and Other Notable Species

- 3.4. Records of legally protected or otherwise notable species of flora and fauna within 1km of the Site were provided by Barnsley Biological Record Centre. A summary of the most significant results of relevance to the Site and only those since the year 2000 are provided in **Table 4** below. Full results can be obtained from the data providers but cannot be presented in this report as a result of copyright. For some records only a four-figure grid reference has been provided by and therefore 'within 1km' has been stated in **Table 4**. It should be noted that the distances provided in **Table 4** below are taken from the central grid reference of the Site and therefore are approximate.

Table 4: Summary of Data Search records of flora and fauna within 1km of the Site

Species	Category of Importance*	Number of Records	Date Range of Records	Location of records relevant to the study area (km)
Great Crested Newt <i>Triturus cristatus</i>	Hab Regs WCA S41	3	2002-2019	0.6km south east
Bats common pipistrelle (<i>Pipistrellus pipistrellus</i>)	Hab Regs WCA	3	2008-2014	Common pipistrelle 0.2km south
Birds Range of bird species within 1 km of the Site, Schedule 1 species ¹⁴ of relevance to the Site ¹⁵ included: barn owl (<i>Tyto alba</i>)	WCA S41	1090	2000-2020	Within 1km

¹⁴ Birds listed on Schedule 1 Part 1 of the Wildlife and Countryside Act 1981 (as amended) which are afforded protection from disturbance whilst breeding

¹⁵ Range of data records with a limited grid reference.

Species	Category of Importance*	Number of Records	Date Range of Records	Location of records relevant to the study area (km)
brambling (<i>Fringilla montifringilla</i>)				
fieldfare (<i>Turdus pilaris</i>)				
merlin (<i>Falco columbarius</i>)				
Peregrine (<i>Falco peregrinus</i>)				

Hab Regs - Conservation of Species and Habitats Regulations 2017 (as amended)

WCA - The Wildlife and Countryside Act 1981 (as amended)

S41 – Species of Principal Importance under The Natural Environment and Rural Communities Act 2006

Red – Red list criteria (Bird of Conservation Concern)

‘Extended’ Phase 1 Habitat Survey

Habitats

- 3.5. The habitats identified within the Site are described below and illustrated on the Phase 1 Habitat Plan (**Figure 1**). Selected photographs are included in **Appendix B**.

Semi-natural broad-leaved woodland

- 3.6. A band of young to semi-mature broad-leaved woodland is present along part of the northern boundary of the Site (**Photograph 1; Appendix B**). Species in the canopy include: Swedish whitebeam (*Sorbus × Intermedia*), crack willow (*Salix fragilis*), sycamore (*Acer pseudoplatanus*), alder (*Alnus glutinosa*), ash (*Fraxinus excelsior*), silver birch (*Betula pendula*), wild cherry (*Prunus avium*) and Scots pine (*Pinus sylvestris*); species in the understorey include; hawthorn (*Crataegus monogyna*), rowan (*Sorbus aucuparia*), dogwood (*Cornus sanguinea*), holly (*Ilex aquifolium*), elder (*Sambucus nigra*), field rose (*Rosa arvensis*), late cotoneaster (*Cotoneaster lacteus*) and hedge bindweed (*Calystegia sepium*); the ground flora was impoverished, sparse and included; common nettle (*Urtica dioica*), bramble (*Rubus fruticosus*), cleavers (*Galium aparine*) and ivy (*Hedra helix*).

Broad-leaved scattered trees

- 3.7. A large number of broad-leaved scattered trees are present within Site associated with the boundaries of the semi-improved grassland field and as amenity planted trees associated with the former NHS facility (**Photograph 2; Appendix B**). Species include silver birch, oak (*Quercus robur*), sycamore, Swedish whitebeam, common lime (*Tilia x europaea*), wild cherry, rowan and Scots pine. The trees range in age from young to mature.

Dense scrub

- 3.8. Several areas of dense scrub habitat are present across the Site. The habitat is dominated by bramble with field rose, elder, late cotoneaster, sapling wild cherry and sapling ash also present.

Scattered scrub

- 3.9. Several areas of scattered scrub habitat are present, most notably associated with the former NHS facility, colonising grassland and hardstanding. Species include bramble, field rose, elder, buddleia (*Buddleja davidii*), sapling rowan and sapling wild cherry.

Species-poor semi-improved grassland

- 3.10. The Site supports several areas of semi-improved grassland across the Site including a large recreational field located in the south west of the Site and several instances within the NHS facility where former amenity grassland, in the absence of management, has undergone natural succession (**Photographs 1-3; Appendix B**). The recreational field is used regularly by dogwalkers and appears to be subject to some levels of management and rabbit grazing. Grass verges along the boundaries of the field, which are not subject to management, supported a greater sward length and a richer species diversity. Grass species include cocks-foot (*Dactylis glomerata*), annual meadow-grass (*Poa annua*), false oat grass (*Arrhenatherum elatius*), Yorkshire fog (*Holcus Lanatus*) and perennial rye grass (*Lolium perenne*). Forb species include ragwort (*Jacobaea vulgaris*), creeping thistle (*Cirsium arvense*), hogweed (*Heracleum sphondylium*), cleavers (*Galium aparine*), white clover (*Trifolium repens*), creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum officinale*), common vetch (*Vicia sativa*), selfheal (*Prunella vulgaris*), ribwort plantain (*Plantago lanceolata*), broad-leaved dock (*Rumex obtusifolius*), creeping buttercup (*Ranunculus repens*) and greater plantain (*Plantago major*). The habitat often forms a mosaic with scattered and dense scrub.

Amenity grassland

- 3.11. Amenity grassland verges are present in the north west of the Site within the NHS facility as part of amenity landscape planting. Species include cocks-foot, annual meadow-grass, perennial rye grass, creeping buttercup, selfheal, white clover, ribwort plantain and dandelion. The grassland is regularly mown.

Defunct hedge species poor

- 3.12. Two defunct hedgerows are present at the Site; one is present along the eastern boundary of the semi-improved grassland field (**Photograph 4; Appendix B**) and a second present along the southern and eastern boundary of the NHS facility (**Photograph 5; Appendix B**). Both hedgerows supported a similar species composition and are subject to some management. Species present include hawthorn, bramble, late cotoneaster, elder, sapling ash, willow (*Salix Sp*), wild cherry, cotoneaster and field rose.
- 3.13. Neither of these hedges were classified as 'ecologically important' under the Hedgerow Regulations (1997).

Ornamental planting

- 3.14. Small areas of ornamental planting are sporadically distributed in the north east section of the Site mainly within the NHS facility as amenity landscape planting. Species recorded include English rose (*Rosa spp.*), ivy (*Hedera spp.*), mahonia (*Mahonia spp.*), pampas grass (*Cortaderia selloana*), snowberry (*Symphoricarpos spp.*), geranium (*Geranium spp.*), spurge (*Euphorbia spp.*) and Leyland cypress *Cupressus leylandii*.

Hardstanding

- 3.15. The former NHS facility supports areas of hardstanding adjacent to buildings, as car parking areas, access roads and walkways. Very small areas of hardstanding adjacent to disused buildings are undergoing colonisation by scattered scrub.

Buildings

- 3.16. Eight buildings are present at the Site. Further details are provided in the Preliminary Bat Roost Assessment in **Appendix D**.

Protected, BAP and other Notable Fauna and Flora

- 3.17. An assessment of the potential presence of protected/notable species relevant to the habitats at the Site is provided below. The descriptions provided below should be read in conjunction with **Figure 1** and the photographs presented in **Appendix B**.

Badger

- 3.18. The BBRC data contained no records of badger within 1 km of the Site.
- 3.19. The Site is considered to offer foraging and sett building opportunities for badger in the form of semi-natural broad-leaved woodland and dense scrub. Although no badger setts were recorded during the 'Extended' Phase 1 Habitat Survey, areas of dense scrub at the Site could not be searched thoroughly for badger setts due to the restrictive nature of dense vegetation. As such, it cannot yet be ruled out that badger setts are present at the Site. However, no evidence of badger activity, such as those typically surrounding badger sett territories were recorded at the Site including latrines, foraging evidence or pathways. Some signs of digging and mammal pathways were recorded at the Site but are considered to be due to the presence of rabbit at the Site.

Bats

- 3.20. The BBRC data contained one record of bat roosts within 1 km of the Site). The roost record is a common pipistrelle roost located 1 km to the north east of the Site (2014). Bat activity by the common pipistrelle have also been recorded within 1 km of the Site. No EPSM licences for bats have been granted within 1km of the Site.
- 3.21. There are eight buildings at the Site, all are located in the north west section of the Site within the former NHS facility. All structures are of brick construction with pitched pan-tiled roofs. All buildings are disused and in a deteriorating condition, with the exception of building **B2** and **B6**. In summary, four buildings at the Site (**B1, B4, B5, B6; Figure 1**) are considered to provide moderate potential to support roosting bats with an additional two buildings (**B3, B7; Figure 1**) considered to provide low potential to support roosting bats. Building **B2** and **B8** are considered to provide negligible bat roost potential. Further details are provided in the Preliminary Bat Roost Assessment in **Appendix D**.
- 3.22. One mature sycamore tree within the Site was assessed as supporting moderate suitability for roosting bats, due to the presence of a branch tear wound and access to a potential cavity (**T1; Figure 1**). A further two mature trees (one mature wild cherry (**T2; Figure 1**) and one mature sycamore (**T3; Figure 1**)) were assessed as supporting low suitability for roosting bats due to the presence of dense ivy and the trees being of sufficient size and age to contain PRFs. Further details are provided in the Preliminary Bat Roost Assessment in **Appendix D**.

- 3.23. Habitats at the Site provide an abundance of foraging and commuting features given the presence of woodland, trees, dense scrub, hedgerow and semi-improved grassland. These habitats are likely to attract a significant number of common invertebrates that will provide an ample food resource for bats. Furthermore, habitat distributions at the Site provide linear features, which are known to be utilised by commuting bats to navigate between feeding sites. A review of aerial photography and Defra's MAGIC map shows that the Site is not connected to any notable potential feeding sites. Notwithstanding, the extent of suitable commuting and foraging features on Site in combination with a number of suitable roosting locations, the Site is considered to provide notable commuting and foraging potential to local bat populations. Linear habitats associated with the Site are considered to have moderate suitability for foraging and commuting bats in accordance with criteria set out in best practice guidance.

Breeding birds

- 3.24. The BBRC data contained records of a wide range of bird species within 1 km of the Site, reflecting the variety of habitats and designated sites present. These included the following Schedule 1 species of relevance to the Site: barn owl, brambling, fieldfare, merlin and peregrine within 1km of the Site.
- 3.25. Woodland, trees, scrub and ornamental shrub habitat within the Site provide nesting opportunities for common species of birds. The presence of breeding Schedule 1 bird species or notable assemblages of breeding birds is considered unlikely given the extent and age of habitats within the Site, and the high level of disturbance within the semi improved grassland field from dog walkers and runners. Habitats within the Site are unsuitable for any significant populations of wintering birds.

Great crested newt

- 3.26. The BBRC data contained three records of GCN from one location within 1 km of the Site. Records are located 0.6 km to the south east of the Site (2019). No EPSM licences for GCN have been granted within 1km of the Site.
- 3.27. No ponds were present at the Site. A single waterbody is visible on aerial photography from within the Site located in the north east section. During the Phase 1 Habitat Survey, the waterbody was dry and no longer present (**TN1; Figure 1** and **Photograph 6; Appendix B**). A second waterbody, outside the Site boundary, is visible on aerial photography approximately 18m north east of the Site within Joseph Locke School (**TN11; Figure 1**). No access to the waterbody was possible during the Phase 1 Habitat Survey and its value for GCN cannot be ruled out. No other waterbodies were identified within 500m of the Site, however the presence of ponds within nearby residential gardens cannot be ruled out, notably those to the south east of the Site.
- 3.28. Alongside the potential for the off-Site pond to support GCN, areas of semi-improved grassland and scrub mosaics in the north east of the Site provide potential foraging and sheltering opportunities for GCN during the terrestrial phase of their life cycle.

Reptiles

- 3.29. The BBRC data contained no records of reptile within 1 km of the Site.

- 3.30. The Site offers suitable foraging, basking and hibernation habitat for reptiles due to the presence of semi-improved grassland, dense and scattered scrub and hedgerow forming a mosaic of habitats suitable for common species of reptile such as common lizard (*Zootoca vivipara*) and grass snake (*Natrix natrix*). Additional suitable reptile habitat is located to the immediate south west within allotment gardens.

Invertebrates

- 3.31. The BBRC data contained no records of invertebrate within 1 km of the Site.
- 3.32. Habitats at the Site provide opportunities for common species of invertebrates given the presence of woodland, trees, scrub habitat, semi-improved grassland and ornamental shrub habitat. Common invertebrate species may provide a food resource for other protected and/notable species that may be present at the Site such as bats. Due to the habitat structure associated with the largely young woodland, the area lacks a significant distribution of both standing and fallen deadwood, significantly limiting the woodland's value for protected and/or notable invertebrate species.

Invasive Plant Species

- 3.33. The BBRC data contained no records of invasive plant species listed under Schedule 9 of the WCA 1981 (as amended).
- 3.34. Small leaved cotoneaster (*Cotoneaster horizontalis*) was recorded in several locations within the Site (**TN2; Figure 1 and Photograph 7; Appendix B**). This species is listed under Schedule 9 of the WCA 1981 (as amended).

4. Assessment

- 4.1. The potential IEFs that are anticipated to be affected by the Development (based on the results of the PEA and the Development plans received to date **Appendix C**) are listed in **Table 5** below. This table details the rationale for the inclusion of each potential IEF and also details the potential effect pathways and any requirement for further ecological assessments.

Table 5: Potential Important Ecological Features Anticipated to be Affected by the Development

Potential Important Ecological Feature	Category of Importance	Rationale	Potential Effect Pathway	Requirement for Further Ecological Assessment
Great crested newt	Hab Regs, WCA, S41	Presence of a waterbody within 20m of the Site with connecting terrestrial habitat.	Loss of terrestrial habitat resulting from the Development. Killing or injury of individuals during site clearance.	Yes. Further assessment in the form of a HSI assessment in the first instance.
Bats Hab Regs, WCA, S41		Buildings assessed to have potential to support roosting bats.	Destruction of bat roosts. Killing or injury of bats present in the roosts during building demolition.	Yes. Further assessment in the form of evening emergence / re-entry surveys/internal building inspections.
		Trees assessed to have potential to support roosting bats.	Destruction of bat roosts. Killing or injury of bats present in the roosts during tree felling.	Yes, if Tree T1 requires felling. Further assessment in the form of internal tree inspection/ evening emergence / re-entry surveys.
		Habitats assessed to have notable commuting and foraging potential for bats	Loss of commuting and foraging habitat resulting from Development. Severance of roost connectivity to feeding grounds.	Yes. Further assessment in the form of bat activity surveys.
Reptiles	WCA, S41	Presence of suitable habits at the Site including semi-improved grassland, scattered and dense scrub and hedgerow.	Loss of habitat resulting from Development. Killing or injury of individuals during site clearance.	Yes. Further assessment in the form of presence / likely absence survey.

- 4.2. All other ecological features identified through the PEA have been scoped out of further assessment because the population or area likely to be affected by the Development is of insufficient size or diversity to be of ecological value, no potential effect pathway between the

Development and these features has been identified; and/or contravention of the legislation relating to the feature is unlikely to occur. The rationale for scoping out features is provided in **Table 6**.

Table 6: Ecological Features Scoped out of the Assessment

Ecological Feature	Rationale
Designated Sites	No direct impacts. Potential indirect impacts (such as pollution of air/water, dust generation, disturbance) are not expected to be significant with the implementation of standard environmental control measures.
At the Site habitats (all)	Habitat types are both nationally and locally common. As such no significant impacts are anticipated as a result of the Development.
Badger	No evidence of badger activity recorded at the Site. However, dense scrub present at the Site could not be fully surveyed during the 'Extended' Phase 1 Habitat Survey. The presence of a badger sett is considered unlikely based on the results of the survey and the absence of activity typically surrounding badger sett territories. The large semi-improved grassland field may be used for foraging but suitable foraging habitat is locally abundant. No significant impacts are anticipated as a result of Development.
Breeding Birds	The Site is likely to offer nesting and foraging opportunities for common bird species. No notable or large bird populations are anticipated to be present owing to the extent of habitats of notable value for birds (woodland and hedgerow) and the location of the Site. As such, it is likely that any resulting impacts would not be significant.
Bats (foraging and commuting)	Although the Site provides suitable commuting and foraging habitat, this habitat is considered common and widespread in the wider area. Based on aerial photography the linear features on Site do not provide robust connectivity to notable feeding areas. Moreover, based on Development plans there is significant scope for habitats providing commuting and foraging potential to be retained and enhanced at the Site. No significant impacts are anticipated as a result of the Development.
Terrestrial Invertebrates	Any population(s) present at the Site is likely to be of insufficient size or diversity to be of significant ecological value. No significant impacts are anticipated as a result of Development.

5. Ecological Constraints and Opportunities

- 5.1. The PEA has identified potential IEFs anticipated to be affected by the Development (based on plans received to date) that could result in significant ecological effects. The requirement for further ecological assessments to fully define any IEFs present has been highlighted within **Table 5** and a detailed scope is provided below. To minimise or avoid any significant ecological effects and inform the emerging scheme design, ecological mitigation and compensation measures have been provided. In addition, ecological enhancement measures are also recommended.
- 5.2. Upon scheme fix and based on the results of the further assessments recommended below, the mitigation, compensation and enhancement measures will need to be confirmed/finalised in the EclA and any other reports as required.
- 5.3. Although ecological features have been scoped out of the assessment (**Table 6**) mitigation measures to ensure the Development meets legal compliance are still required. These measures are also set out below.

Designated Sites

- 5.4. No designated sites are located within 1km of the Site. In view of this, the proposed works are not anticipated to result in any adverse effects on any designated sites and are therefore not assessed to be an IEF. It is however recommended that during construction, mitigation measures are taken to minimise any indirect impacts such as pollution of air/water, dust generation, noise/light disturbance to adjacent habitats. Good practice measures should be documented within a Construction Environmental Management Plan (CEMP).

Habitats

- 5.5. The proposed works will result in the permanent loss of habitat as follows:
 - Construction of new school buildings and associated parking – loss of approximately 0.1ha of semi-improved grassland, several broad-leaved scattered trees, 0.05ha of ornamental planting, < 0.01ha of amenity grassland;
 - Construction of residential area – loss of approximately 0.4ha of semi-natural broad-leaved woodland, 0.17ha of semi-improved grassland, < 0.01ha of scattered and dense scrub;
 - Construction of hard outdoor PE – loss of approximately 0.04ha of semi-improved grassland, <0.01ha of scattered scrub;
 - Construction of soft outdoor PE – loss/significant degradation of 3.2ha of semi-improved grassland, < 0.01ha of scattered and dense scrub, several broad-leaved scattered trees;
- 5.6. No habitats within the Site are considered to be an IEF. Notwithstanding, it is recommended that mitigation in the form of protection measures are adhered to during the construction phase of the Development. These measures could be documented within a Construction Environmental Management Plan (CEMP) to ensure legal compliance and that good practice is adopted. The measures include:
 - The protection of retained trees, particularly those that will retain linear tree lines and those within the area of woodland. Any trees to be retained should be appropriately protected in accordance with BS 5837:2012 - *"Trees in relation to design, demolition and construction – Recommendations"* in line with Local Planning Policy BIO1 Biodiversity and Geodiversity and Policy GI1 Green Infrastructure; and

- Timing constraints associated with Site clearance works, particularly the clearance of those habitats considered to provide nesting habitat for breeding birds.
- 5.7. To conserve and increase the ecological value of habitats at the Site in line with local planning policy requirements (Policy BIO1 Biodiversity and Geodiversity and Policy GI1 Green Infrastructure), the following compensation and enhancements measures should be considered as part of the Development:
- The use of native species or species of benefit to wildlife within any proposed landscape scheme to provide foraging opportunities for birds, bats, invertebrates and other fauna to enhance the Site for wildlife;
 - Where practicable, every effort should be made to retain and protect hedgerow habitat at the Site. Where hedgerow habitat loss is unavoidable, it is recommended that replacement hedgerows are provided within new landscape planting plans;
 - In many areas former amenity grassland has undergone natural succession and now supports a greater species diversity. To maintain this feature of the Site, botanical enhancement of future amenity grassland areas should be encouraged by implementing a less intensive mowing regime and encouraging greater species diversity through seeding and wildflower grassland management. In addition to the benefits to biodiversity, the creation of wildflower grassland can also have other benefits, including reduced maintenance costs as a result of the need for less regular cutting, and improving the aesthetic appeal of soft landscaped areas for the benefit of site staff; and
 - The provision of artificial habitats for bats and birds (see fauna section below) to enhance the Site for these species groups.

Protected and Notable Fauna

- 5.8. Protected and notable fauna at the Site and within the ZOI that could be significantly affected by the Development potentially include GCN, roosting bats (trees and buildings) and reptiles pending the results of the recommended further assessments. No other protected and notable fauna are assessed to be IEFs.
- 5.9. In addition, it is recommended that mitigation in the form of protection measures is adhered to during the construction phase of the Development for IEFs and other protected and notable fauna, as detailed below.

Badger

- 5.10. No evidence of badger was found at the Site during the survey, however some areas of dense vegetation could not be comprehensively searched for the presence of badger. As such, a pre-construction badger survey should be undertaken prior to Development to ascertain the presence or likely absence of badger setts on Site. Ideally, a pre-construction survey would be undertaken in late Autumn or Winter when areas of dense vegetation have died back. If active setts are identified within the Site, work activities should cease, and further survey work and the design of a mitigation strategy would be required. A Natural England (NE) badger licence may be required under these circumstances with works constrained to certain times of the year should the sett need to be closed.

Bats

- 5.11. As a result of the external building inspections, four buildings at the Site (**B1, B4, B5, B6; Figure 1**) are considered to provide moderate potential to support roosting bats with an additional two buildings (**B3, B7; Figure 1**) considered to provide low potential to support roosting bats. As a result, and in line with best practice guidelines, further survey work is required in the form of evening emergence/dawn re-entry surveys within the optimum bat survey period (May to August-September inclusive). In line with guidance, buildings with moderate potential would be subject to two survey visits; an evening emergence and a dawn re-entry survey¹⁶. Buildings with low potential would be subject to a single survey; either evening emergence/dawn re-entry survey. In addition, internal building inspections should be undertaken, if this is not possible, additional roost surveys may be required. If bats are found to be roosting within a building, further survey effort may be required to provide sufficient information for a NE European Protected Species (EPS) Development Licence. During the internal building assessment, an assessment of the external courtyard areas within **B5** and **B6** should also be inspected for potential roosting features.
- 5.12. As a result of the ground-based tree inspections, a single tree at the Site (**T1; Figure 1**) is considered to provide moderate potential to support roosting bats. If the tree is to be impacted, in line with best practice guidelines, further survey work is required in the form of an additional internal assessment within the optimum bat survey period (May to August inclusive) to gain an understanding of the internal conditions of the tree and the opportunities for roosting bats. Further survey effort in the form of additional evening emergence/dawn re-entry surveys may be required to provide enough information for a NE European Protected Species (EPS) Development Licence.
- 5.13. Further to the above, two trees (**T2-T3; Figure 1**) at the Site were also assessed to offer low potential to support roosting bats. Although current guidelines do not mandate further survey work of trees with low potential, sensitive felling techniques should be adopted. Sensitive felling techniques typically involve a sectional felling technique where the tree is cut down in phases and each section of tree is lowered carefully to the ground. This felling method allows roosting bats, if present, to exit the tree section without harm.
- 5.14. It is not yet known if any of the trees considered to support bat roost potential will be lost to facilitate the Development. Based on the current Development plans (Drawing Ref. 0632/EA/A/S001, **Appendix C**), it would appear that there is scope for trees **T1-T3** to be retained and protected.
- 5.15. Based on the habitats recorded on Site and connectivity to the wider landscape, the value to the Site for foraging and commuting bats had been rated as moderate and bat activity surveys. As a result, and in line with best practice guidelines, further survey work is required in the form of activity surveys within the optimum bat survey. In line with guidance, moderate suitability habitat would be subject to one activity survey per month from April to October, with one of the surveys comprising a dusk and dawn activity survey (within the same 24-hour period). In addition to the above activity surveys, supplementary automated bat detectors would need to be deployed across the site. In total four automated detectors, would be set out on Site, with data collected on five consecutive nights per month (April to October) in appropriate weather conditions. Statistical analysis of bat call data will be used to further define bat activity by on Site. Specifically, data will be analysed to outline which on-Site habitats are most utilised by bats and by which species.
- 5.16. In line with NPPF, enhancement of the Site for bats could be provided. The provision of the habitat enhancements as detailed above and the provision of roosting habitat in the form of bat boxes could be included within the final design. Please note, should a bat roost be recorded at the Site, the below

¹⁶ Due to Covid -19 it is often impracticable to undertake dawn surveys due to hotel closures and may be replaced with a second evening emergence survey.

mitigation recommendations will need to be amended accordingly. The following bat boxes are recommended for the Site:

- A minimum of four 'Schwegler 1FF' bat boxes – These bat boxes are suitable for a range of species and can provide roosting opportunities all year round. The boxes open design negates any requirement for maintenance. The boxes should be installed facing a southern, south-eastern or south-western aspect at a minimum height of 4m onto a retained tree at the Site; and
- A minimum of four 'Schwegler 2F' bat boxes – A general purpose bat box designed specifically to enhance summer roosting opportunities. The boxes should be installed facing a southern, south-eastern or south-western aspect at a minimum height of 4m onto a retained tree at the Site.

5.17. In addition, a wildlife sensitive lighting strategy should look to be adopted across the Site to prevent any unnecessary spill on future roosting, foraging and commuting habitats.

Birds

5.18. Birds are not assessed to be an IEF as habitats on and directly adjacent to the Site are considered unlikely to support any large populations of notable or protected bird species. However, there are opportunities at the Site to support common species of breeding birds. As such, to minimise the risk of impacts, vegetation clearance should be undertaken outside the bird nesting season (March to August inclusive) where possible. If this is not possible, a nesting bird check should be completed prior to works. Any active nests found will need to be left undisturbed until dependent young have fledged.

5.19. Opportunities to enhance the Site for birds should be incorporated into the design of the Development to increase the value of the Site for bird species and comply with Planning Policy BIO1 Biodiversity and Geodiversity and Policy GI1 Green Infrastructure. It is recommended that artificial nest sites are targeted at SoPI species. The following bird boxes are recommended:

- A minimum of two 'Schwegler Starling Next Box 3S' – This nest box has been designed with a large, deep cavity and 45mm entrance hole to attract starlings. Can be installed on mature trees or buildings. As well as starlings, this nest box is suitable for woodpecker species. The bird boxes should be placed at least 3m above ground level to prevent vandalism and face east or west;
- A minimum of two 'Schwegler Sparrow Terrace 1SP' – Suitable for house sparrows and tree sparrows. The nest box contains three separate nesting cavities. They can be installed on buildings either affixed to the exterior wall or incorporated into the wall. The bird boxes should be placed at least 3m above ground level to prevent vandalism and face east or west; and
- A minimum of two 'Schwegler Nest Box 1B' – Available with a range of entrance hole sizes. Suitable for many bird species including tits, sparrows and redstarts. Can be installed on mature trees or buildings. The bird boxes should be placed at least 3m above ground level to prevent vandalism and face east or west.

5.20. The use of native plant species as recommended above would provide additional foraging habitat for local bird species. Retention of hedgerow, woodland and scattered trees should also be considered.

Great crested newt

- 5.21. A single pond approximately 18m to the north east of the Site is requires an assessment of its suitability to support GCN. In line with guidance¹⁷, further survey work would be in the form of a Habitat Suitability Index (HSI) assessment in the first instance. Based on the results of the HSI survey, should the pond be considered to offer potential to support GCN, further assessment may be necessary. This would be in the form of an environmental DNA survey (eDNA) of the waterbody to confirm the presence/likely absence of GCN. In line with best practice guidelines, eDNA surveys would be undertaken between (mid-April to mid-June inclusive). If the eDNA survey returns a positive sample, further survey effort in the form of a population size class assessment may be required to provide sufficient information for a NE European Protected Species (EPS) Development Licence undertaken between (mid-March and mid-June).
- 5.22. The use of native plant species as recommended above would provide additional foraging habitat for great crested newt and other amphibian species. Retention of hedgerow, woodland and scrub habitat should also be considered.

Reptiles

- 5.23. The Site provides an abundance of suitable reptile habitat. In line with guidance¹⁸, further survey work would be in the form of a reptile presence/likely absence survey. In line with best practice guidelines, reptile presence/likely absence survey would be undertaken between April-May or in September and require the systematic check of artificial reptile refugia over seven repeat visits. If reptiles are found at the Site, based on the population composition, translocation of reptiles may be required off Site and/or timed directional clearance of suitable reptile habitat may be required. Please note, recommendations will need to be amended accordingly pending on the results of the recommended further assessment.
- 5.24. The use of native plant species as recommended above would provide additional foraging habitat for reptiles. Retention of hedgerow, woodland and scrub habitat should also be considered.

Invasive Species

- 5.25. Given the presence of small leaved cotoneaster at the Site, an eradication programme should be undertaken by a specialist contractor, with works conducted in line with current guidance. Causing small leaved cotoneaster to spread is an offence under the Wildlife and Countryside Act (1981, as amended).

¹⁷ English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature, Peterborough

¹⁸ Froglife (1999) *Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

6. Conclusions

- 6.1. As a result of the PEA and based on the Development plans received to date, potential IEFs within the Zol that are anticipated to be affected by the Development include roosting bats (trees and buildings), great crested newt, badger and reptiles. All other ecological features within the Zol have been scoped out of the assessment due to insufficient biodiversity conservation value or a lack of an identified pathway for potential effects to occur.
- 6.2. It is determined that further ecological assessments as detailed in **Table 7** below would be required to inform the emerging scheme design and when finalised support the production of an EcIA.

Table 7: Summary of Additional Ecological Assessments

Habitats/Species	Survey	Timing
Great crested newt	HSI assessment to establish the suitability of a pond to support great crested newt.	No timing constraints
Badger	Pre-construction survey	Optimal late Autumn/winter
Bats	Tree internal inspections	No timing constraints
	Internal building inspections	No timing constraints
	Dusk emergence/pre-dawn re-entry surveys	May to August-September inclusive
Reptiles	Presence / likely absence survey followed by population assessment if present.	April-May or September

- 6.3. To ensure legal compliance and ensure good practice measures are adopted during the construction phase of the Development, recommendations have been made within this report with regards to the Site preparation and construction phases of the Development.
- 6.4. To inform the emerging scheme design, ecological mitigation and compensation measures have been provided. In addition, ecological enhancement measures are also recommended.
- 6.5. Upon scheme fix and based on the results of the further assessments recommended below the mitigation, compensation and enhancement measures will need to be confirmed/finalised in the EcIA and any other reports as required.
- 6.6. It should be noted that this PEA is relevant to the legislation detailed in Section 2 and **Appendix A** at the time of writing. If there are any changes to legislation prior to the Development being completed, the advice within this PEA may require amending / updating in line with any legislative updates.
- 6.7. If there is a significant period (most LPAs consider this period to be to 18 months) between this PEA and the Development commencing, the ecological value of the Site may change, and should therefore be subject to an update survey.

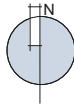
FIGURES

Figure 1: Habitat Features Plan (WI117125-105: Keresforth Academy)

Figures



- Site Boundary
- Building
- Hardstanding
- Ornamental Planting
- Amenity Grassland
- Poor Semi-improved Grassland
- Dense Scrub
- Semi Natural Broadleaved Woodland
- Defunct Hedge Species Poor
- Hedge
- Scattered Scrub
- Broadleaved Scattered Trees

Remnant pondLocation of Small Leaved CotoneasterGaps Under Tiles Along Roof VergeMissing Roof TilesLifted and Damaged Fascia BoardingMissing Mortar at the Confluence of Adjoining Brick WorkRaised and Damaged Ridge TilesVent in Roof Providing Internal Access/CreviseHole and Access into Wooden Roof VoidRaised/Damaged Roof Tiles and lead flashingPond Off Site

Project Details	WIE17125-105: Keresforth Academy
Figure Title	Figure 1: Habitat Features Plan
Figure Ref	WIE17125-105_GR_EC_1A
Date	July 2020
File Location	\\s-Incs\wiel\projects\wie17125\105\graphics\ec\issued figures



APPENDICES

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

A. PLANNING POLICY AND SUMMARISED FLORA AND FAUNA LEGISLATION

National Planning Policy

National Planning Policy Framework, 2012

The National Planning Policy Framework¹⁹ (NPPF) was published in March 2012. Section 11 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', effectively replaces former Planning Policy Statement 9: Biodiversity and Geological Conservation. However, Government Circular 06/2005²⁰ - Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System, remains valid and is referenced within the NPPF.

The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:

“Protecting and enhancing valued landscapes, geological conservation interests and soils;

Recognising the wider benefits of ecosystem services;

Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the government’s commitment to halt the overall decline in biodiversity, including by establishing ecological networks that are more resilient to current and future pressures;

Preventing both new and existing development from contributing to or being put at an unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and

Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate”.

The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, should seek to conserve and enhance biodiversity, by applying the following principles:

“Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted; and

Opportunities to incorporate biodiversity in and around developments should be encouraged”.

If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful effects) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

National Planning Practice Guidance, 2014

The Government’s National Planning Practice Guidance²¹ (NPPG) is intended to provide guidance to local planning authorities and developers on the implementation of the planning policies set out within the NPPF. The guidance of most relevance to ecology and biodiversity is the Natural Environment Chapter, which explains key issues in implementing policy to protect biodiversity, including local requirements.

¹⁹ Department of Communities and Local Government. (2012). *National Planning Policy Framework*.

²⁰ Department of Communities and Local Government. (2005). *Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

²¹ Department for Communities and Local Government. (2014). *National Planning Practice Guidance*. DCLG, London.

Local Planning Policy

Barnsley's Local Plan 2019

The Local Plan sets out how the Council will manage physical development of the borough on behalf of residents and businesses. This includes providing sufficient land in the right places to attract more businesses into the borough and to allow existing businesses to grow. The aim of this is to create more and better jobs to improve earnings and increase opportunities for local residents. It also aims to provide improved housing to meet existing need and the needs of future generations whilst at the same time protecting what is special about the borough. The document contains policies related to biodiversity and are thus of relevance to this report. Specifically, the following policies are considered relevant:

Policy GI1 Green Infrastructure - *We will protect, maintain, enhance and create an integrated network of connected and multi-functional Green Infrastructure assets that: Enhances biodiversity and landscape character.*

Policy BIO1 Biodiversity and Geodiversity - *Development will be expected to conserve and enhance the biodiversity and geological features of the borough by: Protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and habitats of principal importance identified via Section 41 of the Natural Environment & Rural Communities Act 2006 (for list of the species and habitats of principal importance) and in the Barnsley Biodiversity Action Plan. Maximising biodiversity and geodiversity opportunities in and around new developments. Conserving and enhancing the form, local character and distinctiveness of the boroughs natural assets such as the river corridors of the Don, the Dearne and Dove as natural floodplains and important strategic wildlife corridors. Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest. Protecting ancient and veteran trees where identified. Encouraging provision of biodiversity enhancements. Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured. Development which adversely effects a European Site will not be permitted unless there is no alternative option and there are imperative reasons of overriding public interest (IROPI).*

Biodiversity Action Plans

UK Post-2010 Biodiversity Framework

The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework'²² covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)²³. However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) in England

²² JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). (2012). *UK Post-2010 Biodiversity Framework*.

²³ HMSO. (1994) *Biodiversity The UK Action Plan*.

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

listed under Section 41 (S41) of the NERC Act 2006. For the purpose of this report, habitats and species listed under S41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under S41.

Based on the results of the PEA the following SoPIs listed under S41 are considered to be of potential value on and/or immediately adjacent to the Site:

- Bats (all species; SoPI);
- Great crested newt (SoPI);
- Grass snake (SoPI);
- Common lizard (SoPI); and
- Slow-worm (SoPI).

Local Biodiversity Action Plan

At a local level, the Site is covered by the Barnsley Biodiversity Trust²⁴ (LBAP). This document identifies habitats and species of importance locally and contains local targets relevant for planning and mitigation.

Based on the results of the PEA a number of LBAP priority species (SAPs) and habitats (HAPs) are considered to be of potential value on and/or immediately adjacent to the Site, including:

- Bats (all species²⁵; SAPs);
- Great crested newt (SAPs);
- Reptiles (all species; SAPs); and
- Ameninty grassland (HAPs);

Guidance

Biodiversity 2020: A strategy for England's wildlife and ecosystem services

In October 2010, over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity. This agreement recognised just how important it is to look after the natural world. It established a new global vision for biodiversity, including a set of strategic goals and targets to drive action. England's response to this agreement was the publication of '*Biodiversity 2020: A strategy for England's wildlife and ecosystem services*'²⁶. The mission for this strategy is:

"to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people."

BS 42020: 2013 Biodiversity: Code of Practice for Planning and Development

The UK commitment to halt overall loss of biodiversity by 2020 in line with the European Biodiversity Strategy and UN Aichi targets²⁷, is passed down to local authorities to implement, mainly through planning

²⁴ Barnsley Biodiversity Trust .[online] [Accessed June 2020]. Available at barnsleybiodiversity.org.uk

²⁵ All species that occur within Barnsley

²⁶ Defra. (2011) *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

²⁷ <https://www.cbd.int/sp/targets/>

Appendices

policy. To assist organizations affected by these commitments, BSI has published BS 42020 which offers a coherent methodology for biodiversity management.

This British Standard sets out to assist those concerned with ecological issues as they arise through the planning process in matters relating to permitted development and activities involved in the management of land outside the scope of land use planning, which could have site-specific ecological implications.

The standard has been produced with input from a number of organisations including the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Association of Local Government Ecologists (ALGE) and provides:

- Guidance on how to produce clear and concise ecological information to accompany planning applications;
- recommendations on professional ethics, conduct, competence and judgement to give confidence that proposals for biodiversity conservation, and consequent decisions/actions taken, are sound and appropriate; and
- direction on effective decision-making in biodiversity management a framework to demonstrate how biodiversity has been managed during the development process to minimize impact.

Legislation

Specific habitats and species receive legal protection in England under various pieces of legislation, including:

- The Conservation of Habitats and Species Regulations 2017²⁸;
- The Wildlife and Countryside Act (WCA) 1981 (as amended)²⁹;
- The Natural Environment and Rural Communities Act 2006³⁰;
- The Hedgerow Regulations 1997³¹;
- The Protection of Badgers Act 1992³²; and
- Wild Mammals (Protection) Act 1996³³

Further details of legislation in respect of legally protected and notable flora and fauna of relevance to the Site are provided below;

Amphibians

Common species of amphibian (smooth newt *Lissotriton vulgaris*, palmate newt *L. helveticus*, common frog *Rana temporaria* and common toad *Bufo bufo*) are partially protected by the WCA 1981. This

²⁸ HMSO (2017) The Conservation of Habitats and Species Regulations 2017

²⁹ HMSO (1981) 'Wildlife and Countryside Act 1981 (as amended)'

³⁰ ODPM (2006) 'Natural Environment and Rural Communities Act (2006)'

³¹ ODPM (1997) 'The Hedgerow Regulations'

³² ODPM (1992) 'The Protection of Badgers Act'

³³ HMSO. (1996). *Wild Mammals (Protection) Act*.

Appendices

prohibits the trade (i.e. sale, barter, exchange, transporting for sale and advertising to sell or to buy) of these species.

Great crested newts *Triturus cristatus* are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the WCA 1981 (as amended). In summary, taken together, it is an offence to deliberately, intentionally or recklessly:

- Kill, injure or capture a great crested newt;
- Disturb great crested newts in such a way as to be likely significant to affect:

(i) the ability of any significant group of great crested newts to survive, breed, or rear / nurture their young;
or

(ii) the local distribution of great crested newts;

- Damage or destroy any breeding or resting place used by great crested newts; or
- Obstruct access to any place used by great crested newts for shelter or protection and disturbing great crested newts while occupying such as place.

Badger

The Protection of Badgers Act, 1992 aims to protect badgers *Meles meles* from persecution, rather than being a response to an unfavourable conservation status. As well as protecting the animal itself, the 1992 Act makes the intentional or reckless destruction, damage or obstruction of a badger sett an offence. A sett is defined as “*any structure or place which displays signs indicating current use by a badger*”. In accordance with Natural England guidance, ‘current use’ is not synonymous with current occupation³⁴. In addition, the intentional elimination of sufficient foraging area to support a known social group of badgers may, in certain circumstances, be construed as an offence by constituting ‘cruel ill treatment’. Badgers are also protected under the WCA 1981 (as amended).

Bats

In summary, all UK bat species are protected by the Conservation of Habitats and Species Regulations 2017 and by the WCA 1981 (as amended). Taken together it is an offence to deliberately, intentionally or recklessly:

- Kill, injure or capture a bat;
- Disturb bats in such a way as to be likely significant to affect

(i) the ability of any significant group of bats to survive, breed, or rear / nurture their young; or

(ii) the local distribution of that species;

- Damage or destroy any breeding or resting place used by bats; or
- Obstruct access to any place used by bats for shelter or protection and disturbing bats while occupying such as place.

Birds

The level of protection afforded to birds under the law varies from species to species. A few game and pest species may lawfully be hunted and killed, usually under licence, whilst the rarest species are listed on Schedule 1 of the WCA 1981 and are protected by special penalties for offences.

³⁴ Natural England (2009): ‘Guidance on ‘Current Use’ in the definition of a Badger Sett’. Natural England

Appendices

All of the native bird species of Britain are additionally covered by the European Union (EU) Directive on the Conservation of Wild Birds 2009³⁵ ('The Birds Directive'). The Birds Directive applies to all wild birds, their eggs, nests and habitats, and provides for the protection, management and control of all species of birds naturally occurring within each member state of the European Union. It requires the UK to take measures to ensure the preservation of sufficient diversity of habitats to maintain populations of all wild birds at ecologically and scientifically sustainable levels. The requirements of the Birds Directive are implemented in the UK primarily through the WCA 1981 (as amended) and Conservation of Habitats and Species Regulations 2017.

Statutory protection is given to all nesting birds in the UK under the WCA 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for species listed on Schedule 1 of the WCA 1981 (as amended), it is an offence to intentionally or recklessly disturb birds while they are nest building, or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

In addition to statutory protection, the bird species of Britain are also subject to various conservation designations intended to indicate their rarity, population status and conservation priority. These do not have statutory force but may be instrumental in determining local, regional and national planning and development policy. The main categories of designation comprise the British Trust for Ornithology (BTO) 'Species Alert' lists, the Royal Society for the Protection of Birds (RSPB) 'Birds of Conservation Concern' lists and species listed under Section 41 of the NERC Act 2006 and local Biodiversity Action Plans (BAPs).

The BTO Conservation Alert System lists of 'Birds of Conservation Concern' include a 'Red List' for birds of high conservation concern and an 'Amber List' for birds of medium conservation concern. Red List species are those that are globally threatened and Amber List species are those with an unfavourable conservation status in Europe, according to the International Union for Conservation of Nature (IUCN) criteria³⁶. An updated list of 'Red' and 'Amber List' species was published in 2009 (Eaton et al., 2009)³⁷.

Invertebrates

The majority of invertebrate species are not legally protected. However, a total of seventy-two terrestrial and aquatic invertebrate species are protected under the WCA 1981 (as amended). Certain species of invertebrate are also protected under the Conservation of Species and Habitats Regulations 2017.

Reptiles

All native British reptiles are protected in accordance with the WCA 1981 (as amended). There are two levels of protection afforded to reptiles through the WCA 1981 (as amended); these result from different parts of the Act applying to the different species.

In summary, common species of reptile such as common lizard *Zootoca vivipara*, slow worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus* are partially protected under the WCA 1981 (as amended); this prohibits the intentional killing and injuring and trade (i.e. sale, barter, exchange, transporting for sale and advertising to sell or to buy). It is not an offence under the WCA 1981 (as amended) to disturb or possess these species.

³⁵ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds

³⁶ IUCN (2000): 'The revised Categories and Criteria (IUCN Red List Categories and Criteria version 3.1)'.

³⁷ Eaton et al (2015): 'Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man'. *British Birds* 108, 708–746.

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC



B. Photographs

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC



Photograph 1 – Semi-natural broad-leaved woodland at the Site. Habitat located along part of the northern boundary of the Site. Photograph facing north. Note unmanaged amenity grassland undergoing colonisation in the foreground. This grassland is typical within the NHS facility.



Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Photograph 2 – Broad-leaved scattered trees at the Site. Habitat located along western and southern boundary of the recreational field. Photograph facing south west. Note SI grassland in the foreground within the large recreational field.



Photograph 3 – Semi-improved grassland habitat at the Site. Photograph shows large recreational field in the south western section of the Site. Photograph facing north west.

Appendices



Photograph 4 – Defunct species poor hedge present along the eastern boundary of the semi-improved grassland field. Photograph facing north west.



Photograph 5 – Defunct species poor hedge present along the southern boundary of the NHS facility. Photograph facing north west.

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC



Photograph 6 – Dry remnant pond identified on aerial photography located in the north east corner of the Site. Photograph facing east.



Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Photograph 7 – Small leaved cotoneaster located at several locations at the Site (TN2; **Figure 1**). Photograph facing east.



Photograph 8 – Gaps under tiles along roof verge and due to missing concrete mortar (TN3; **Figure 1**). Several instances recorded across several buildings. Photograph taken of **B4**.

Appendices



Photograph 9 – Missing tiles in pitched roof structure providing access to a potential loft void (**TN4; Figure 1**). Multiple instances recorded across two buildings. Photograph taken of **B1**.



Appendices

Photograph 10 – Lifted and damaged fascia boarding providing voids/crevices (TN5; **Figure 1**). Multiple instances recorded across buildings. Photograph taken of **B7**.



Photograph 11 – Crevice due to missing mortar at the confluence of adjoining brick work (TN6; **Figure 1**). Photograph taken of **B1**.

Appendices



Photograph 12 – Raised and damaged ridge tiles (**TN7; Figure 1**). Several instances recorded across buildings. Photograph taken of **B1**.



Photograph 13 – Vent providing access to a possible loft void (**TN8; Figure 1**). One instance. Photograph taken of **B3**.

Appendices



Photograph 14 – Instance of raised and damaged roof tiles amongst lifted lead flashing on a small rooftop (TN10; Figure 1). Photograph taken of B6.

Appendices



C. EDWARD ARCHITECTURE DRAWING REF. 0632/EA/A/S0

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC



D. Results of the Preliminary Bat Roost Assessment

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Structure / tree reference	Description	Suitability rating	Photograph
Building 1 (B1; Figure 1)	Large C shaped brick structure with a pitched, ceramic tiled roof. The structure is a former NHS building, disused at the time of the PBRA and had deteriorated in condition. The structure supported several potential roosting features (PRFs); • Gaps under tiles along roof verge and due to missing concrete mortar (TN3 and Photograph 8); • Missing tiles in roof structure providing access to a potential loft void (TN4 and Photograph 9); • Lifted and damaged fascia boarding (TN5 and Photograph 10); • Instances of missing mortar at the confluence of adjoining brick work (TN6 and Photograph 11); • Raised and damaged ridge tiles (TN7 and Photograph 12);	Moderate	
Building 2 (B2; Figure 1)	L shaped brick structure with a pitched, ceramic tiled roof. Structure supported a wooden soffit box. The structure is a former NHS building and was in good condition. At the time of the PBRA B2 was used as temporary accommodation. The structure did not support and PRFs.	Negligible	

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Structure / tree reference	Description	Suitability rating	Photograph
Building 3 (B3; Figure 1)	A large complex shaped brick structure with a pitched, ceramic tiled roof. The structure is a former NHS building, disused at the time of the PBRA and had deteriorated in condition. The structure supported several potential roosting features (PRFs); - Gaps under tiles along roof verge and due to missing concrete mortar (TN3 and Photograph 8); - Raised and damaged ridge tiles (TN7 and Photograph 12); and - Vent in roof providing internal access/crevice (TN8 and Photograph 13)	Low	
Building 4 (B4; Figure 1)	Large complex shaped brick structure with a pitched, ceramic tiled roof. The structure is a former NHS building, disused at the time of the PBRA and had deteriorated in condition. The structure supported several potential roosting features (PRFs); - Gaps under tiles along roof verge and due to missing concrete mortar (TN3 and Photograph 8); - Lifted and damaged fascia boarding (TN5 and Photograph 10); and	Moderate	

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Structure / tree reference	Description	Suitability rating	Photograph
Building 5 (B5; Figure 1)	Large complex shaped brick structure with a pitched, ceramic tiled roof. The structure is a former NHS building, disused at the time of the PBRA and had deteriorated in condition. The structure supported several potential roosting features (PRFs); - Gaps under tiles along roof verge and due to missing concrete mortar (TN3 and Photograph 8); - Hole in wooden doorway cover (TN9); and	Moderate	
Building 6 (B6; Figure 1)	Large complex shaped brick structure with a pitched, ceramic tiled roof. The structure is a former NHS building, disused at the time of the PBRA and had deteriorated in condition. The structure supported several potential roosting features (PRFs); - Several instances of gaps under tiles along roof verge and due to missing concrete mortar (TN3 and Photograph 8); - Missing tiles in roof structure providing access to a potential loft void (TN4 and Photograph 9); - Instance of raised and damaged roof tiles amongst lifted lead flashing on a small rooftop (TN10 and Photograph 14); and	Moderate	

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Structure / tree reference	Description	Suitability rating	Photograph
Building B7 (B7; Figure 1)	Large complex shaped brick structure with a pitched, ceramic tiled roof. The structure is an active NHS building and was in good condition. The structure supported a single PRF; Lifted and damaged fascia boarding (TN5 and Photograph 10);	Low	
Building B8 (B8; Figure 1)	L shaped brick structure with a pitched, ceramic tiled roof. The structure is a disused former NHS building and was in good condition. The structure did not support and PRFs.	Negligible	

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Structure / tree reference	Description	Suitability rating	Photograph
Tree T1 (T1; Figure 1)	A mature sycamore tree. The tree is c. 15m in height and is in a fair condition. The tree supported a single PRF; Large rot hole facing east located c. 2 into the canopy upon the main trunk. Providing access into a possible cavity. NGR - SE 33476 05453	Moderate	
Tree T2 (T2; Figure 1)	A mature cherry tree. The tree is c. 20m in height and is in a fair condition. The tree has a dense canopy coverage limiting visual access. Tree considered likely to provide potential roosting features due to age and condition. NGR - SE 33491 05756	Low	None available
Tree T3 (T3; Figure 1)	A mature sycamore tree. The tree is c. 15m in height and is in a fair condition. The tree has a dense ivy coverage limiting visual access.	Low	None available

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

Structure / tree reference	Description	Suitability rating	Photograph
	Tree considered likely to provide potential roosting features due to age and condition. NGR - SE 33349 05709		

Appendices

Preliminary Ecological Appraisal Report

WIE17125-100

WIE17125-100-R-1-1-3-AJC

UK and Ireland Office Locations

