

WYG Planning & Environment

part of the **WYG** group



Turner & Townsend

Sixth Form College Site - Barnsley

**Ecology: Extended Phase 1 Habitat
Survey**

December 2013

Executive Park, Avalon Way, Leicester, LE7 7GR

Tel: 0116 234 8100

Fax: 0116 234 8002

Email: midlands.ecology@wyg.com

www.wyg.com

creative minds safe hands



Document Control

Project: Sixth Form College Site - Barnsley

Client: Turner & Townsend

Job Number: A029037-12

File Origin: \\Lds-dc-vm-002\group ecology\Projects\Projects A029000\A029037-12 Sixth Form College

Document Checking:

Prepared by: Ross Phillips MCIEEM
Senior Ecologist

Signed: 

Checked by: Nicola Tyrrell MCIEEM
Principal Ecologist

Signed: 

Verified by: Nicola Tyrrell MCIEEM
Principal Ecologist

Signed: 

On behalf of:

Claire Wilmer MCIEEM, CEnv
Director of Ecology



Issue	Date	Status
1	13 December 2013	Final

WYG Environment Planning Transport Ltd. accept no responsibility or liability for the use which is made of this document other than by the Client for the purpose for which it was originally commissioned and prepared.



Contents Page

Executive Summary	1
1.0 Introduction	3
1.1 Background	3
1.2 Site Location and General Description.....	3
1.3 Development Proposals	3
1.4 Survey and Reporting Objectives	3
2.0 Desk Study	5
2.1 Methodology	5
2.2 Data Search Results	5
3.0 Survey Methodology	7
3.1 Habitats	7
3.2 Protected and Notable Species	7
3.3 Invasive Species	9
3.4 Limitations	9
4.0 Survey Results	10
4.1 Habitats	10
4.2 Protected and Notable Species	11
4.3 Invasive Species	13
5.0 Ecological Impacts and Recommendations	14
5.1 Habitats	14
5.2 Protected and Notable Species	14



6.0 References.....17

Appendix Contents

Appendix A - Figures

Appendix B – Biodiversity and Environmental Legislation, Conventions & Threatened Lists



Executive Summary

Site Description and Scope of Works		
<p>The study site comprises an area within the centre of Barnsley town centre (central Ordnance Survey National Grid Reference: SE 342 064) which is approximately 0.6 ha in size.</p> <p>The study site primarily comprises the following habitat types: hardstanding, buildings, amenity grassland and introduced shrub planting.</p> <p>The purpose of the Extended Phase 1 Habitat survey was to identify any potential ecological constraints to the proposed development of the area which is to include demolition of the buildings and the construction of a new sixth form college.</p>		
Potential Constraints	Yes	No
Bats		
Has the site been assessed for bats?	✓	
Are there any structures or trees on site which have the potential to support roosting bats? (see section 4.2)	✓	
Breeding birds including barn owls		
Has the site been assessed for breeding birds including barn owls?	✓	
Will areas of hedgerow, scrub, woodland, trees or other features likely to be used by nesting birds be affected by the proposal? (see section 4.2)	✓	
Badgers		
Has the site been assessed for badgers?	✓	
Is there any evidence of badgers on or near the application site including setts, foraging or commuting? (see section 4.2)		✓
Great crested newts		
Has the site been assessed for great crested newts?	✓	
Is there suitable habitat for great crested newts on, or close to the application site? (see section 4.2)		✓
Reptiles		
Has the site been assessed for reptiles?	✓	
Is there suitable habitat on the site for reptiles? (see section 4.2)		✓
Other features of nature conservation interest		
Does the application site support Habitats of Principal Importance or Local Biodiversity Action Plan Priority Habitats?		✓
Does the application site support Species of Principal Importance or Local Biodiversity Action Plan Species?		✓
Have details of biodiversity enhancements been included with the application?	Yes	
Recommendations		
Are further surveys recommended to inform the ecological impact assessment?	✓	
<ul style="list-style-type: none"> Nocturnal bat surveys and/or detailed endoscope inspection of suitable features on the office buildings. 		
Is mitigation (including avoidance / compensation) and enhancement recommended?	✓	
<ul style="list-style-type: none"> It is recommended that the associated landscaping scheme includes the provision of native tree and shrub species of local provenance. 		



- It is recommended that vegetation clearance and removal of the car park structure is carried out outside of the breeding bird season (March to September inclusive). If this is not possible then a suitably qualified ecologist should carry out a nesting birds check prior to works commencing.





1.0 Introduction

1.1 Background

WYG was commissioned by Turner & Townsend in December 2013 to complete an Extended Phase 1 Habitat survey of an area of land within the centre of Barnsley (hereafter referred to as 'The Site').

1.2 Site Location and General Description

The site is situated in Barnsley town centre (central Ordnance Survey National Grid Reference: SE 342 064) and is approximately 0.6 ha in size. The site is bordered by roads on all sides with Westgate to the north and west, St. Mary's Place to the east and Shambles Street to the south. On either side of these surrounding road are various shops and office buildings which comprise Barnsley town centre.

The site currently supports Barnsley Central Library, a series of vacant offices, associated car parking and small areas of amenity green space and landscaping. The proposed development area primarily comprises the following habitat types: hardstanding, buildings, amenity grassland and introduced shrub planting. The extent of the study area is shown on the Extended Phase 1 Habitat Survey plan (Appendix A, Figure 1).

1.3 Development Proposals

The proposed development for the site comprises the demolition of existing buildings and infrastructure and the construction of a new sixth form college and associated car parking.

No detail regarding the proposed site layout was provided prior to the writing of this report; however, given the sites' size and the enclosed nature of its' location it is considered likely that any proposed layout would result in the loss of virtually all features within the boundary.

1.4 Survey and Reporting Objectives

The ecological investigations undertaken by WYG included the following:

- A desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and records of protected/notable species within the site and its environs;
- An Extended Phase 1 Habitat survey involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species;



- An assessment of the potential ecological constraints to the proposed works at the site and recommendations for further survey, avoidance, mitigation, enhancement and compensation measures where appropriate.



2.0 Desk Study

2.1 Methodology

Information was obtained regarding the presence of nature conservation site designations and protected and notable habitats and species within approximately 2 km of the study site boundary from South Yorkshire Biological Records Centre (SYBRC). In addition, a search for nature conservation site designations within approximately 2 km of the study site boundary was made on Natural England's interactive web-based MAGIC (Multi Agency Geographic Information for the Countryside – www.magic.gov.uk) database.

This data search covers:

- Statutory designated sites for nature conservation, namely Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites, Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), and Local Nature Reserves (LNRs);
- Non-statutory designated sites for nature conservation, namely Local Wildlife Sites (LWS);
- Legally protected species; and,
- Notable species, such as those listed as Habitats or Species of Principal Importance in England (Natural Environment and Rural Communities (NERC) Act 2006); or listed as priority habitats or species within the UK Biodiversity Action Plan (UK BAP) or within the Local 'Barnsley Biodiversity Action Plan' (2002) LBAP.

The data search does not cover:

- Tree Preservation Orders (TPOs); or,
- Conservation areas designated for their special architectural and historic interest.

2.2 Data Search Results

Statutory Sites

The Dearne Valley Park Local Nature Reserve (LNR) lies approximately 1.4km to the east of the study site at its closest point. This site is designated for its' acidic oak woodland and mosaic of wetland habitats.



Non-statutory Sites

At the time of writing the Local Records Centre have not yet returned their records.

Protected and Notable Species

Invertebrates

At the time of writing the Local Records Centre have not yet returned their records.

Great Crested Newts

At the time of writing the Local Records Centre have not yet returned their records.

Reptiles

At the time of writing the Local Records Centre have not yet returned their records.

Birds

At the time of writing the Local Records Centre have not yet returned their records.

Bats

At the time of writing the Local Records Centre have not yet returned their records.

Badgers

At the time of writing the Local Records Centre have not yet returned their records.

Otter

At the time of writing the Local Records Centre have not yet returned their records.

Water Voles

At the time of writing the Local Records Centre have not yet returned their records.





3.0 Survey Methodology

An Extended Phase 1 Habitat survey of the study site was conducted on 10th December 2013. All areas of the site were investigated, including those parts that are not expected to be affected directly by the works but may be indirectly impacted upon.

3.1 Habitats

The vegetation and habitat types within the site were noted during the walkover survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (Joint Nature Conservation Committee, 2010). Dominant plant species were recorded for each habitat present.

3.2 Protected and Notable Species

The site was inspected for evidence of and its potential to support protected or notable species: especially those listed under the *Conservation of Habitats and Species (Amendment) Regulations 2012* and the *Wildlife & Countryside Act 1981* (as amended); including those afforded additional legal protection under the *Natural Environment and Rural Communities (NERC) Act 2006* and *Countryside & Rights of Way (CROW) Act 2000*; and listed on the UK and local Biodiversity Action Plans.

The following species were considered:

Great Crested Newts

The site was appraised for its suitability to support great crested newts (GCN). The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Joint Nature Conservation Committee, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Beckett & Foster, 2001).

Reptiles

The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Joint Nature Conservation Committee, 2003).



Bats

The buildings and trees within the site boundary were appraised by an experienced ecologist from WYG for their suitability to support breeding, resting and hibernating bats using survey methods based on those outlined in the Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines* (Hundt, L. 2012) and English Nature's *Bat Mitigation Guidelines* (2004).

Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines* (Hundt, L. 2012) use the following system to categorise trees:

- Known or confirmed roost;
- Category 1*: Trees with multiple, highly suitable features capable of supporting larger roosts;
- Category 1: Trees with definite potential, supporting fewer suitable features than category 1* trees with potential for use by single bats;
- Category 2: Trees with no obvious potential, although the trees is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some feature which may have limited potential to support bats; or
- Category 3: Trees with no potential to support bats.

Badgers

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989). A 30m buffer zone around the expected zone of influence was surveyed where accessible as recommended in English Nature's *Badgers and Development* (2002).

Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, birds and invertebrates in accordance with the Institute for Ecology and Environmental Management's (IEEM) *Guidelines for Preliminary Ecological Appraisal* (IEEM, 2012). Evidence of any current or historical presence of such species was recorded.



3.3 Invasive Species

The site was searched for evidence of invasive plant species, such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*, horizontal cotoneaster *Cotoneaster horizontalis* and rhododendron *Rhododendron ponticum* (see Appendix B Table B2 for full list).

3.4 Limitations

The comprehensiveness of any ecological assessment will be limited by the season in which surveys are undertaken. The optimum season for undertaking Phase 1 Habitat Surveys is April to September (inclusive). However, whilst this survey was carried out in December, the site is dominated by hard standing and contained few habitats and/or vegetative species. As such the timing of the survey is not considered to represent a significant limitation to identifying potential ecological constraints.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the *potential* of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to the *National Planning Policy Framework* (NPPF, 2012), especially those given protection under UK or European wildlife legislation.

The details of this report will remain valid for a period of two years. Beyond this period, if works have not yet been undertaken, it is recommended that an updated desk study and review of the ecological conditions on site is undertaken.



4.0 Survey Results

An Extended Phase 1 Habitat Survey plan showing the location of key ecological features is presented in Appendix A, Figure 1.

4.1 Habitats

Amenity Grassland

A thin strip of amenity grassland is present along the northern edge of the site with a further larger area present to the west. Both habitat areas are relatively species poor with perennial ryegrass (*Lolium perenne*) and a small number of forb species including with common mouse ear (*Cerastium fontanum*), ribwort plantain (*Plantago lanceolata*), a dandelion species (*Taraxacum* sp), white clover (*Trifolium repens*) and yarrow (*Achillea millefolium*).

Trees

Several mature trees are scattered across the amenity grassland area to the west or within tree pits on the hardstanding to the south west. Trees include a willow species (*Salix* sp), silver birch (*Betula pendula*) and whitebeam (*Sorbus aria*). Two other mature ornamental trees are present towards the eastern end of the development area which include a eucalyptus species (*Eucalyptus* sp) and a false acacia (*Robinia pseudoacacia*).

Introduced Shrub

Several borders predominantly supporting introduced shrubs are present around the north and north eastern parts of the site adjacent to the car parks. Whilst most of the species are non-native such as cotoneasters (*Cotoneaster* sp), buddleia (*Buddleia davidii*), hebe species (*Hebe* sp) and pyracanthas (*Pyracantha* sp), several native species are also present. These include elder (*Sambucas nigra*), ash saplings (*Fraxinus excelsior*), gorse (*Ulex europaeus*), ivy (*Hedera helix*), nettle (*Urtica dioica*) and ragwort (*Jacobaea vulgaris*).

Buildings

Two buildings are present on the site. The building to the eastern end of the site is currently Barnsley Central Library. The large building which comprises a significant proportion of the southern part of the site is a two storey block which is split into several units which is predominantly vacant but is/has been used for



offices, shops and restaurants. Further descriptions of the buildings in respect to bats are presented in Section 4.2.

Hardstanding

Most of the site comprises hardstanding in the form of paths, access roads, concrete amenity areas and car parking. The car park areas central to the site are dual level.

4.2 Protected and Notable Species

Invertebrates

The site is predominantly hardstanding and buildings and the remaining habitats do not offer particular botanical interest. It is therefore considered that the invertebrates present on site would not constitute an assemblage of interest or nature conservation significance.

Breeding Birds

The introduced shrubs and trees on the site have the potential to offer suitable nesting habitat for common birds during the breeding season and roosting and feeding habitat for the same range of bird species during the remainder of the year. Additionally the concrete beams supporting the upper section of the carpark were also recorded as supporting nesting pigeons (*Columba livia*).

Due to the size of the site and presence of locally common habitats present in the wider area, it is not considered that the site would support significant populations of breeding birds, or rare or notable species which would require further species specific surveys.

Great Crested Newts

No ponds were recorded on accessible land either on the site or adjacent to it. No suitable terrestrial habitats were present on or adjacent to the site which were likely to support great crested newts. Furthermore, the surrounding area comprises an urban town centre with very limited green space which is considered to act as a significant barrier to dispersal for great crested newts as such a search radius of 500m was not considered necessary.

Reptiles

No habitats were present within or adjacent to the site which could support any reptile species.





Bats

There are two buildings on the site which were externally assessed for their potential to supporting roosting bats and a brief description for each building along with their potential is provided below.

Central Library Building

The building is of brick built construction with large concrete pillars interspersed along the exterior walls and a flat roof. Large areas of full height glass windows are present on three of the four building elevations. The building appears to be of modern construction type given that it was built in 1975 and as such shows little sign of exterior degradation which could provide suitable potential for roosting bats to enter.

No potential features which are considered likely to be used by roosting bats were noted anywhere on the exterior and the lack of any obvious roof void would also indicate that it is unlikely that roosting bats would be able to reside within the building. No evidence of roosting bats was noted on the exterior of the building; as such the building has been assessed as being of negligible potential to support bats.

Office Buildings – Target Note 1 on Phase 1 Plan

This block of individual offices, shops and restaurants is of brick construction with a flat roof. The exterior brick walls and wooden window frames appear to be in good condition and offer no suitable access for bats; however, portions of the exterior walls are clad in a pebble dash concrete panels which are partially lifted from the walls and offer some potential for roosting bats to enter behind (Plate 1 below). Whilst many of these panels on the northern elevation could be inspected due to their height from the ground and were found to be partially blocked with spiders webs and debris, those panels on the upper storey of the southern elevation could not be accessed.

Whilst no evidence of roosting bats was recorded on the building, it is considered that the concrete cladding on the building could offer some limited potential for roosting bats. Taking into account the urbanised location of the building, it is considered unlikely that the building would support large numbers of bats or more uncommon species; however, it has been assessed as being of low potential for roosting bats.

Given the sites' urban location and the relative lack of habitats on the site, the site overall is considered to offer only limited potential for foraging and/or commuting bats.





Plate 1 – Indicating potential roosting locations behind concrete cladding



Badgers

No habitats are present on or within 30m of the site which could support badgers.

Water vole

No habitats are present on site which could potentially support water vole.

Otter

No habitats are present on site which could potentially support otter.

Other Species

No signs of any other protected species were recorded on site during the survey.

4.3 Invasive Species

No invasive species were recorded within the study site during the survey.



5.0 Ecological Impacts and Recommendations

5.1 Habitats

The vast majority of the site comprises of hardstanding and buildings and although trees, amenity grassland and introduced shrub habitats are present, they are not considered to be of particular ecological value, except for the species which they may support.

As such the loss of these habitats is not considered to represent an ecological constraint. No further works or recommendations with regards to habitats are provided.

Enhancements

Where possible it is recommended that any landscaping scheme associated with the development should seek to include the provision of native tree and shrub species of local provenance within its final layout.

5.2 Protected and Notable Species

Only those species which are likely to be present on the site are considered further.

Breeding Birds

All breeding wild birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) against intentional disturbance, damage and destruction during the nesting season (generally considered to be March to September inclusive although some species are known to breed outside this period and even throughout the year).

It is likely that trees and shrubs with nesting bird potential will be cleared to facilitate the development. Additionally the concrete support structure of the car park, noted as supporting nesting pigeons, will also be removed. As such it is recommended that pre-construction site investigations, site clearance and construction works should be timed to occur outside the nesting season (March to September inclusive). If it is not possible to conduct site works October to February inclusive, each area of suitable nesting habitat (i.e. trees, shrubs and concrete support structure) should be searched for nesting birds prior to clearance by a suitably qualified and experienced ecologist.

If an active nest is found, the feature containing the nest and an agreed exclusion zone (as advised by the ecologist) would need to be left undisturbed until nesting is complete and the birds have fledged. This could result in delays to work being undertaken.



Bats

All bats and their roosts receive full protection both under the Conservation of Habitats and Species (Amendment) Regulations 2012 and the Wildlife and Countryside Act 1981 (as amended). The provisions of NERC Act 2006 require local authorities to have due regard to protected species when determining planning applications – this applies to bat species.

The office buildings (TN1) are considered to offer some limited potential to support roosting bats and have been assessed as having low potential. As such further detailed works are recommended to determine their actual value to roosting bats. These additional works should include:

- A detailed inspection of suitable features on the building by a licensed bat worker using an endoscope. Noting the height of the features and the relative difficulty in accessing them, it may be necessary to use a Mobile Elevated Working Platform (MEWP) to access these features; and/or,
- Carry out at least two nocturnal surveys to determine if bats are using the office building (TN1) and its features for roosting. In line with current guidance (Hundt, L. 2012) a building of low potential will require at least two dusk emergence surveys carried out within the optimal survey season on May to September inclusive. With the caveat that if bats are recorded using the building within these surveys, additional nocturnal surveys should be undertaken to gain a better understanding of the number and species of bats and features on the building which are used.

Please note that following the completion of a detailed building inspection it may be possible that the bat potential of the building may be reevaluated as negligible (should inadequate features be available to bats for roosting), thus ruling out any requirement for further work.

Conversely the detailed building inspection may not be able to completely rule out the presence of bats or may identify some evidence of roosting bats; in which case, nocturnal surveys would also be required. It is considered unlikely that the Local Planning Authority would condition any of the above survey requirements. As such it is recommended that as a minimum a detailed building inspection is carried out prior to submission of a planning permission submission.

As the library building was assessed as having negligible potential for roosting bats, no further works are recommended in respect of this building.



6.0 Summary of Recommendations

- To ensure legal compliance, it is recommended that vegetation clearance of the site is avoided during the bird nesting season (March to September inclusive) or, if necessary, preceded by a search for nesting birds by a suitably experienced and qualified ecologist. If birds are found to be nesting in any vegetation, then work on or near these areas will not be able to proceed until all of the young birds have fledged.
- It is also recommended that any planting of trees and shrubs associated with the landscaping scheme includes native species of local provenance.
- It is recommended that a detailed building inspection of the office building is carried out to determine if it is likely to support roosting bats.
- If the detailed building inspection is not possible, or if following this survey it is still considered inconclusive or likely to support roosting bats, then nocturnal bat surveys, including at least two dusk emergence surveys should be carried out on this building.



6.0 References

Communities and Local Government (2012) *National Planning Policy Framework*

English Nature (2002). *Badgers and Development*. English Nature, Peterborough, UK.

Gent, T. & Gibson, S. (2003). *Herpetofauna Workers' Manual*. JNCC, Peterborough, UK.

Harris, S., Cresswell, P. & Jeffries, D. (1989). *Surveying Badgers. An occasional publication of the mammal society – No. 9*. Mammal Society, London, UK.

Hundt, L. (2012). *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London, UK.

Institute for Ecology and Environmental Management (IEEM) (2012). *Guidelines for Preliminary Ecological Appraisal*. IEEM, Winchester, UK.

JNCC, UK (2010). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*. JNCC, Peterborough.

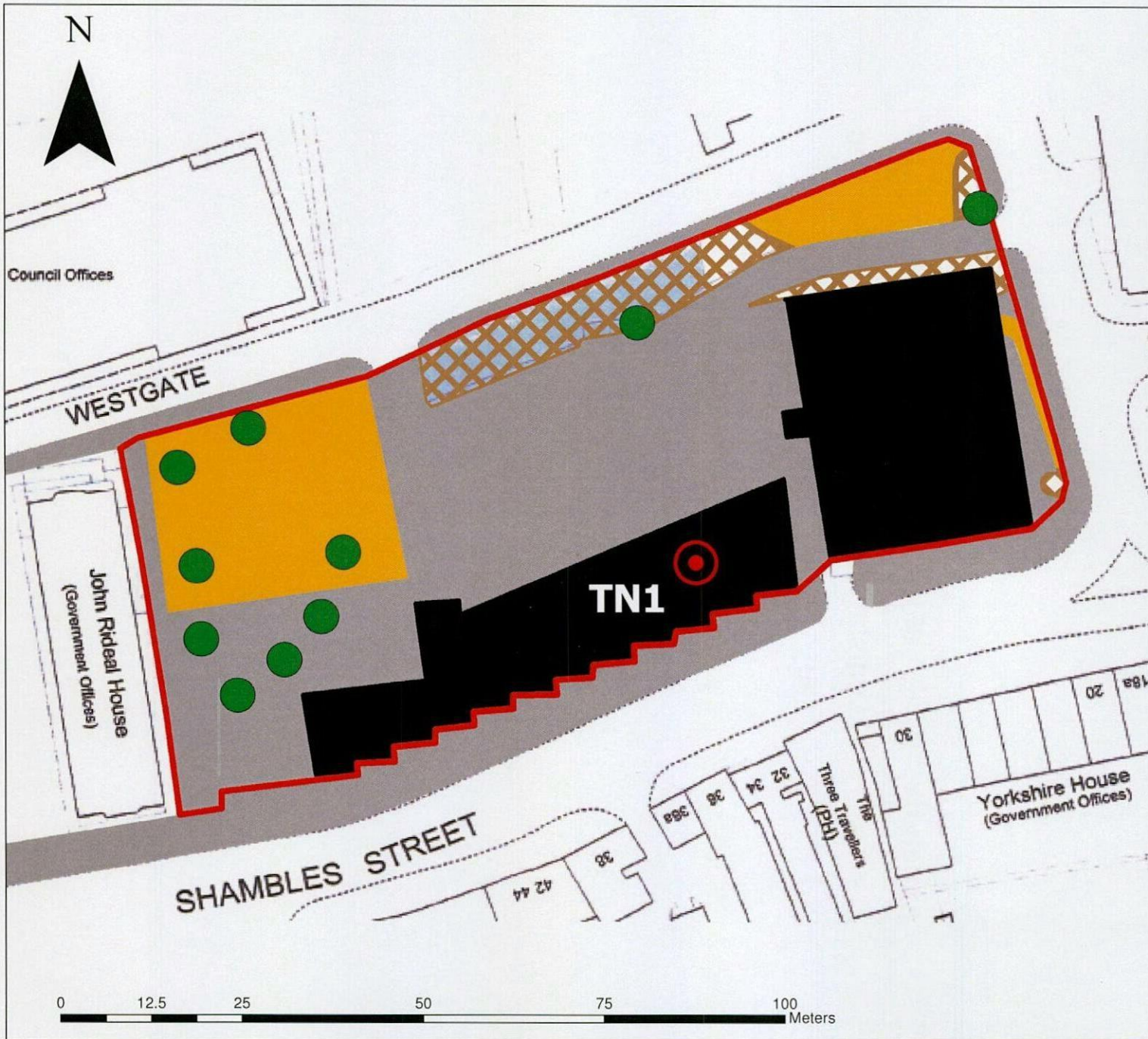
Langton, T.E.S., Beckett, C.L. and Foster, J.P. (2001). *Great Crested Newt Conservation Handbook*. Froglife, Halesworth, UK.

Mitchell-Jones, A.J. & McLeish, A.P. (Eds) (2004). *Bat Workers Manual, 3rd Edn*. JNCC, Peterborough. UK.

Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000). Evaluating the suitability of habitat for the great crested newt *Triturus cristatus*. *Herpetological Journal*, **10(4)**, 143-155.



Appendix A - Figure 1



Legend

- Survey Area Boundary
- Buildings
- Hard standing
- Introduced Shrub
- Amenity Grassland
- Mature Tree
- Target Note

Executive Park Tel: 0116 2348100
 Avalon Way Fax: 0116 2348002
 Anstey email: midlands.ecology@wyg.com
 Leicester LE7 7GR



WYG Environment

Project
Sixth Form College Barnsley

Drawing Title:

Phase 1 Habitat Survey

Scale at A3: 1:500	Drawn by: Date: RP 12/12/13	Checked By: Date: NT 12/12/13	Approved By: Date: CW 12/12/13
Project No: A029037-12	Office Type: 45 94	Drawing No. Figure 1	Revision 01

Base map provided by NPS Group



Appendix B – Biodiversity and Environmental Legislation, Conventions & Threatened Lists



Introduction

The UK has ratified a number of Conventions and implemented legislation pertaining to the protection of biodiversity and habitats, either independently or as member state of the European Union. These are defined and summarised below.

Lists of threatened, endangered and extinct species are also provided, together with a summary explanation of each.

Bern Convention (1982)

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Biodiversity Action Plan (BAP)

The UK *Biodiversity Action Plan* (UKBAP – UK Steering Group, 1995; UK Biodiversity Group, 1998 - 2000) lists and prioritises habitats and species and sets national targets to be achieved. The intent of the UKBAP, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The UKBAP underwent a review (Biodiversity Reporting and Information Group, June 2007) resulting in the identification of 391 'Priority' Species Action Plans (SAPs), 45 'Priority' Habitat Action Plans and 162 Local Biodiversity Action Plans.

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.



Birds Directive (BD)

The *EC Directive on the Conservation of Wild Birds* (791409/EEC) or '*Birds Directive*' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Birds of Conservation Concern (BoCC)

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2009 (Eaton *et al*, 2009) and identified 52 red list species, 126 amber species, and 68 green species. The criteria are complex, but generally:

- Red list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- Amber list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- Green list species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or '*Bonn Convention*' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.



In the UK, the requirements of the convention are implemented via the *Wildlife & Countryside Act 1981* (as amended), *Wildlife (Northern Ireland) Order 1985*, *Nature Conservation and Amenity Lands (Northern Ireland) Order 1985* and the *Countryside and Rights of Way Act 2000* (CRoW).

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Habitats Directive

The *Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora*, or the '*Habitats Directive*', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the *Habitats Directive* is transposed into national law via the *Conservation of Habitats and Species (Amendment) Regulations 2012* in England, Scotland and Wales, and via the *Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended)* in Northern Ireland.

Protection of Badgers Act 1992 (PBA 1992)

The main legislation protecting badgers in England and Wales is the *Protection of Badgers Act 1992* (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger"



National Planning Policy Framework (2012)

Following the publication of the National Planning Policy Framework (NPPF) in March 2012, *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation (2005)* has been withdrawn. However, *ODPM 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System* (the guidance document that accompanied PPS9) has not been withdrawn and, where more detailed guidance is required than is given within the NPPF, local planning authorities will continue to rely on ODPM 06/2005.

This guidance requires local planning authorities to take account of the conservation of protected species when determining planning applications and makes the presence of a protected species a material consideration when assessing a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.

In the case of European Protected Species such as bats, planning policy emphasises that strict statutory provisions apply (including the *Conservation of Habitats and Species (Amendment) Regulations 2012*), to which a planning authority must have due regard.

Where developments requiring planning permission are likely to impact upon protected species it is necessary that protected species surveys are undertaken and submitted to meet the requirements of paragraph 98 of ODPM Circular 06/2005 which states that:

'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'

General guidance within the body of the NPPF which are also potentially relevant to the possible presence of bats at the site includes the following statements:

"The planning system should contribute to and enhance the natural and local environment 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 coherent ecological networks that are more resilient to current and future pressures"*



"Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged."

"When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;"*

Species of Principal Importance in England

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the *Natural Environment and rural Communities (NERC) Act 2006*, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 habitats of principal importance and 1,150 species of principal importance.

The Conservation of Habitats and Species (Amendment) Regulations 2012

The *Conservation of Habitats and Species (Amendment) Regulations 2012* came into force on 16th August 2012 and amends the *Conservation of Habitats and Species Regulations 2010* to ensure the various provisions of Directive 92/43/EC ('the Habitats Directive') are transposed in a clear manner.

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. The 2012 amendments include that public bodies help preserve, maintain and re-establish habitats for wild birds.

The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 (see Table B1).



Table B1 Schedules of the Conservation of Habitats and Species (Amendment) Regulations 2012

Schedule 2 – European Protected Species of Animals		Schedule 5 – European Protected Species of Plant	
Common name	Scientific name	Common name	Scientific name
Horseshoe bats	Rhinolophidae - all species	Dock, Shore	<i>Rumex rupestris</i>
Common bats	Vespertilionidae - all species	Killarney Fern	<i>Trichomanes speciosum</i>
Wildcat	<i>Felis silvestris</i>	Early Gentian	<i>Gentianella anglica</i>
Dolphins, porpoises and whales	Cetacea – all species	Lady's-slipper	<i>Cypripedium calceolus</i>
Dormouse	<i>Muscardinus avellanarius</i>	Creeping Marshwort	<i>Apium repens</i>
Pool frog	<i>Rana lessonae</i>	Slender Naiad	<i>Najas flexilis</i>
Sand Lizard	<i>Lacerta agilis</i>	Fen Orchid	<i>Liparis loeselii</i>
Fisher's Estuarine Moth	<i>Gortyna borelii lunata</i>	Plantain, Floating-leaved water	<i>Luronium natans</i>
Newt, Great Crested	<i>Triturus cristatus</i>	Yellow Marsh Saxifrage	<i>Saxifraga hirculus</i>
Otter	<i>Lutra lutra</i>		
Lesser Whirlpool Ram's-horn Snail	<i>Anisus vorticulus</i>		
Smooth Snake	<i>Coronella austriaca</i>		
Sturgeon	<i>Acipenser sturio</i>		
Natterjack Toad	<i>Bufo calamita</i>		
Marine Turtles	<i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempii</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i>		



The Hedgerow Regulations 1997

The *Hedgerow Regulations 1997* were made under Section 97 of the *Environment Act 1995* and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Wildlife and Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the *Bern Convention* and the *Birds Directive* are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird,
- take, damage or destroy the nest of any wild bird while that nest is in use, or
- take or destroy an egg of any wild bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5,
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places.
- The Act also prohibits certain methods of killing, injuring, or taking wild animals

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant,
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8,
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.



Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

Table B2 provides a comprehensive list of plant species listed in this schedule. It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Table B2 Invasive plant species listed in Schedule 9 of the *Wildlife & Countryside Act 1981* (as amended)

Common name	Scientific name
Perfoliate alexanders	<i>Smyrnium perfoliatum</i>
Red algae	<i>Grateloupia luxurians</i>
Variagated yellow archangel	<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>
Yellow azalea	<i>Rhododendron luteum</i>
Himalayan balsam	<i>Impatiens glandulifera</i>
Cotoneaster	<i>Cotoneaster horizontalis</i>
Entire-leaved cotoneaster	<i>Cotoneaster integrifolius</i>
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>
Hollyberry cotoneaster	<i>Cotoneaster bullatus</i>
Small-leaved cotoneaster	<i>Cotoneaster microphyllus</i>
False Virginia creeper	<i>Parthenocissus inserta</i>
Virginia creeper	<i>Parthenocissus quinquefolia</i>
Purple dewplant	<i>Disphyma crassifolium</i>
Fanwort or Carolina water-shield	<i>Cabomba caroliniana</i>
Water fern	<i>Azolla filiculoides</i>
Hottentot fig	<i>Carpobrotus edulis</i>
Three-cornered garlic	<i>Allium triquetrum</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>
Water hyacinth	<i>Eichhornia crassipes</i>
Giant kelp	<i>Macrocystis</i> spp.
Giant knotweed	<i>Fallopia sachalinensis</i>
Hybrid knotweed	<i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i>



Common name	Scientific name
Japanese knotweed	<i>Fallopia japonica</i>
Few-flowered garlic	<i>Allium paradoxum</i>
Water lettuce	<i>Pistia stratiotes</i>
Parrot's-feather	<i>Myriophyllum aquaticum</i>
Floating pennywort	<i>Hydrocotyle ranunculoides</i>
Duck potato	<i>Sagittaria latifolia</i>
Floating water primrose	<i>Ludwigia peploides</i>
Water primrose	<i>Ludwigia grandiflora</i>
Water primrose	<i>Ludwigia uruguayensis</i>
Rhododendron	<i>Rhododendron ponticum</i>
Rhododendron	<i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i>
Giant rhubarb	<i>Gunnera tinctoria</i>
Japanese rose	<i>Rosa rugosa</i>
Giant salvinia	<i>Salvinia molesta</i>
Green seafingers	<i>Codium fragile</i>
Californian red seaweed	<i>Pikea californica</i>
Hooked asparagus seaweed	<i>Asparagopsis armata</i>
Japanese seaweed	<i>Sargassum muticum</i>
Laver seaweeds (except native species)	<i>Porphyra</i> spp
Australian swamp stonecrop or New Zealand pygmyweed	<i>Crassula helmsii</i>
Wakame	<i>Undaria pinnatifida</i>
Curly waterweed	<i>Lagarosiphon major</i>
Waterweeds	<i>Elodea</i> spp.