CHAPTER 12: ECOLOGY

Introduction

12.1 This Chapter presents the baseline studies carried out to assess the ecological impact of the proposed development. The site comprises a built up urban area in the centre of Barnsley which includes council offices, car parks, shopping centres and the former CEAG building. The studies carried out consist of:

- Bat survey
- Walkover survey
- Desk study

12.2 These reports follow currently published and accepted methodologies which are presented in Volume 2 of the Environmental Statement.

12.3 The key ecological issues, which this Ecological Impact Assessment addresses, are the potential effects of the proposed development upon any statutory or non-statutory nature conservation sites, areas of valuable semi-natural habitat and protected or otherwise notable species within its sphere of influence. It also addresses the need to mitigate potential short, medium and long term impacts and sets out how best to maximise potentially positive effects.

12.4 The structure of this chapter reflects the need to consider the various ecological resources relevant to the application site and then assesses the impacts of the development proposals in relation to each feature. It is therefore presented in terms of:

- The policies for the protection of nature conservation features;
- The general ecological resources of the area (baseline description);
- The value of ecological resources;
- The key impacts and potential effects of the proposals;
- The significance of these impacts during construction and operation; and,
- Mitigation measures and habitat creation opportunities.

Legislation, Policy & Guidance

Legislative Framework

12.5 There is a comprehensive system of planning, both domestic and international, which aims to protect biodiversity. The following are the key Acts appropriate to this study:

The Wildlife and Countryside Act, 1981 (as amended)

12.6 This is the primary legislation for nature conservation in England and Wales. It confers varying degrees of protection on selected species according to their conservation status, ranging from making it an offence to take a species from the wild for profit, to full protection of a species and its habitat. Species are added or removed from the legislation from time to time, as their conservation status changes. The Act also gives guidance and instruction on statutory sites, such as sites of Special Scientific Interest (SSSIs). Licences exempting specific works can be granted by Natural England (NE). Such licences are only granted once a full assessment has been made and an appropriate, sustainable mitigation package devised.

The Conservation of Habitats and Species Regulations 2010

12.7 This legislation amends the Conservation (Natural Habitats etc) Regulations, 1994 which were produced with the aim of implementing the EC Habitats Directive (92/43/EEC). This Directive draws together previous European conservation legislation and conventions, such as the Bern Convention, 1982. The Directive aims to give Europe-wide protection to certain rare and threatened habitats on land and at sea. It builds on legislation already established under the Birds Directive of 1979, and aims to establish a series of protected sites known as The Natura 2000 series. These sites are intended to protect the unique and special wildlife of Europe and to preserve it for future generations. In Britain these Natura 2000 sites include those areas designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The Habitats Directive is implemented in the UK through the Conservation (Natural Habitats etc) Regulations, 1994.

The Countryside and Rights of Way Act, 2000

12.8 As well as providing measures to improve countryside access for walkers, ramblers and horse riders, this Act also strengthens the protection of species and designated sites made in the Wildlife and Countryside Act. This Act also encourages the promotion of nature conservation and biodiversity issues.

ODPM Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System

12.9 This circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It provides guidance on the interpretation of PPS9 (discussed in the planning policy section below).

The Natural Environment and Rural Communities Act 2006

12.10 Aimed primarily at providing for protection and regeneration of rural communities the Act also aims to strengthen provisions on the protection of wildlife and habitats and to mainstream biodiversity considerations into public policy and decision making. It contains provisions to improve protection for certain species, and designated sites as well as defining the powers and responsibilities of Natural England.

Methodology

Consultation

Scoping Reports

12.11 In early 2005, a scoping report was produced by RPS and a formal Scoping Opinion sought from Barnsley Metropolitan Borough Council (BMBC). The first scoping opinion letter dated 2nd March 2005 indicated that the Council was broadly satisfied with the information contained within the scoping report. The response documented comments by Natural England which stated that **"due to the nature of the development site, no detailed ecological information is required."** However, a precautionary approach was recommended in relation to bats and surveys of any suitable buildings would be required.

12.12 A second scoping opinion letter from BMBC dated 7th March 2005 recommended that Barnsley Bat Group be consulted to ascertain whether there were any bat roosts within the buildings to be demolished.

12.13 The scoping opinion letter from BMBC dated 27 April 2011 agreed that the ecological value of the land be assessed in the context of PPS9, a baseline walkover of the site and a bat survey of the CEAG building.

Desk Study

12.14 An initial desk study was compiled by BMBC in September 2004 referring to designated sites and ecological records within 2km of the site. This was included as part of a Baseline Environmental report produced by Enviros Consulting Ltd (2004).

12.15 An update of the desk study, using a 2km area of search, involved contact with the key local data holder (BMBC, NBM and Barnsley Bat Group) to look for records of protected or otherwise notable species, and a search on the MAGIC website. The MAGIC site contains all statutory sites (e.g. Sites of Special Scientific Interest [SSSI's]) as well as most non-statutorily protected habitats (e.g. Local Nature Reserves [LNRs] and is a valuable tool for assessing the relationship of a potential development site with nearby important habitats.

Walkover Survey

12.16 An initial walkover of the site was conducted by Enviros Consulting Ltd on 15th September 2004, while an additional visit was carried out by Wardell Armstrong in February 2006 with the emphasis on assessing the site for potential bat roosts/habitat. This was updated during April 2011 by Brooks Ecological.

Phase 2 (detailed) surveys and assessments

12.17 The CEAG building on the site was identified as offering some limited potential for bats and was surveyed on 8th June 2006 by Barnsley Bat Group. This building was subject to an updated survey in April 2011, which is included in Volume 2 of the Environmental Statement.

12.18 Evidence of Japanese Knotweed (*Fallopia japonica*), a plant listed under schedule 9 of the Wildlife and Countryside Act (1981), was located outside the site boundary along the railway line by the Enviros survey in 2004 and during visits by Wardell Armstrong in February and May of 2006. As part of the update of ecological information, a further survey was carried out in April 2011 to establish if the treatment regime to remove this plant had been effective. Details of this survey are referred to in the ecological assessment included in Volume 2 of the Environmental Statement.

Impact Assessment Methodology

12.19 In producing this assessment, reference is made to the Institute of Ecology and Environmental Management's (IEEM) Guidelines for Ecological Impact Assessment in the United Kingdom (2006). These guidelines went through extensive consultation and have been approved by a large range of environmental organisations and government agencies/departments. These guidelines have become a standard point of reference for Ecological Impact Assessment methodologies. They can be viewed online at www.ieem.org.uk/ecia.

Evaluation

12.20 This EcIA determines which ecological features or resources (receptors) within the zone of influence of the proposed development are both of sufficient value to be included in the assessment and likely to be vulnerable to significant impacts arising from the project.

12.21 The value or potential value of a receptor is determined within a defined geographical context. The following frame of reference recommended by IEEM is used:

- International;
- UK;
- National (i.e. England/Northern Ireland/Scotland/Wales);
- Regional;

- County (or Metropolitan - e.g. in London);
- District (or Unitary Authority, City, or Borough);
- Local or Parish; and
- Within zone of influence only (which might be the project site or a larger area).

12.22 To help evaluate the baseline, the local area (eg. County or region) may also have a range of relevant reference material describing the status of sites and species in the area. For the application site the specific documents used in this assessment include:

- Natural Area 24 Coal Measures
- Barnsley BAP

Although omitted from the 2006 guidance, IEEM produced Box 3.3 in earlier versions. This gives a good illustration of how ecological receptors may be valued in a geographical context and is retained in this assessment as a helpful point of reference for the value judgments made later in the report and is reproduced below.

Table 12.1 IEEM's former Box 3.3 - approach to valuing ecological receptors

International	An internationally designated site or candidate site (SPA, pSPA, SAC, cSAC, pSAC , Ramsar site, Biogenetic Reserve). A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat which are essential to maintain the viability of a larger whole. Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population of any internationally important species. Also a regularly occurring and nationally significant number of an internationally important species during a critical phase of its life cycle.
National	A nationally designated site (SSSI, ASSI, NNR, Marine Nature Reserve) or a discrete area, which meets the published selection criteria for national designation (e.g. SSSI selection guidelines). A viable area of a priority habitat identified in the UK BAP, or of smaller areas of such habitat which are essential to maintain the viability of a larger whole. Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population of any nationally important species. Also a regularly occurring and regionally or county significant number of a nationally important species during a critical phase of its life cycle.
Regional	Viable areas of key habitat identified in the Regional BAP or smaller areas of such habitat which are essential to maintain the viability of a larger whole; Viable areas of key habitat identified as being of Regional value in the appropriate Natural Area profile; Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species during a critical phase of its life cycle; Sites which exceed the County-level designations but fall short of SSSI selection guidelines, where these occur.

County	Semi-natural ancient woodland greater than 0.25 ha; County/Metropolitan sites and other sites which meet the published ecological selection criteria for designation, including Local Nature Reserves selected on County / metropolitan; A viable area of habitat identified in County BAP; Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan "red data book" or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species during a critical phase of its life cycle.
District	Semi-natural ancient woodland smaller than 0.25 ha; Areas of habitat identified in a sub-County (District/Borough) BAP or in the relevant Natural Area profile; Local Nature Reserves selected on District/ Borough criteria Sites/features that are scarce within the District/Borough or which appreciably enrich the District/Borough habitat resource; A diverse and/ or ecologically valuable hedgerow network; A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Parish	Areas of habitat considered to appreciably enrich the habitat resource within the context of the Parish or neighbourhood, e.g. species-rich hedgerows. Local Nature Reserves selected on Parish criteria.

N.B Where species or habitats occur in more than one category above, the highest value is applicable.

Impact Prediction

12.23 Impacts are considered at all stages of the project from construction to operation and potential de-commission, reflecting the fact that developments can have short term and long term impacts on the ecological receptors. Impacts on receptors are identified with relation to the following parameters:

- magnitude ('size' or 'amount' of an impact);
- extent (area covered by impact);
- duration (how long a receptor will be impacted);
- reversibility; and
- timing and frequency.

12.24 This system follows guidelines issued by the Institute of Ecology and Environmental Management and is applied appropriately to the impacts related to this application. Parameters are highlighted where they have a bearing on the particular impact assessed. Where possible it is useful to use quantitative measures for these parameters – however in practice this may not be possible and a more descriptive terminology is required, terms used in this assessment are summarised below.

Table 12.2: Terminology relating to impact prediction

Parameter	Terms	Definition
Magnitude / Extent	Large Scale	An impact which will affect populations or habitats occupying an area larger than the application site.
	Medium Scale	An impact confined to the application but which will affect most of (over 50% of the site or population within the site).
	Small Scale	An impact which will affect discrete areas of the site or less than 25% of a population within the site.
Duration	Short term	Only present during certain stages of development (for instance site clearance).
	Medium Term	Present during the construction phase of the site.
	Long Term	Persisting on the site post development into operation and beyond.
Reversibility	Reversible	Impacts which can be redressed or from which recovery is possible.
	Non-Reversible	Impacts which cannot reasonably be redressed or from which recovery is not possible.
Timing / Frequency		Sometimes the specific timing of an event or the fact that it will be repeated determines it significance, e.g. repeated disturbance of some species may lead to their loss while a single disturbance event would have no effect. If appropriate specific reference will be made to this.
Confidence	Certain Probable Unlikely	Terms refer to the probability of an impact at a particular site, this can depend on a variety of factors e.g. the likelihood that soil stripping will lead to siltation of water courses is dependant on factors such as climate, topography, timing, soil type.

12.25 Consideration of these parameters and their effects on specific receptors is carried out within the relevant text sections of both the main text and the Ecological

Assessment included in Volume 2 of the Environmental Statement. This consideration is summarised in Table 12.3, where the ecologist's assessment of the above parameters is measured against the receptors assessed value to establish the impact's significance in its unmitigated and mitigated forms.

Mitigation

12.26 The avoidance, reduction, compensation and mitigation of predicted effects are an integral part of project design. The measures proposed to mitigate the potential impacts are outlined within this assessment.

Planning Policy Context

National Planning Policy

12.27 Planning Policy Statements (PPS) set out the Government's national policies on different aspects of planning in England. PPS 9 (2005) sets out planning policies on protection of biodiversity (and geological conservation) through the planning system.

12.28 The objectives of PPS9 are to guide the local planning process towards the aims of:

- promoting sustainable development by ensuring that biological and geological diversity are conserved and enhanced as an integral part of social, environmental and economic development, so that policies and decisions about the development and use of land integrate biodiversity and geological diversity with other considerations.

- conserving, enhancing and restoring the diversity of England's wildlife and geology by sustaining, and where possible improving, the quality and extent of natural habitat and geological and geo-morphological sites.

- contributing to rural renewal and urban renaissance by: enhancing biodiversity in green spaces and among developments so that they are used by wildlife and valued by people. Recognising that healthy functional ecosystems can contribute to a better quality of life and to people's sense of well-being;

ensuring that developments take account of the role and value of biodiversity in supporting economic diversification and contributing to a high quality environment.

12.29 PPS 9 establishes amongst other things that reference should be made to the species and habitats of key importance for England as listed under Section 74 of the Countryside and Rights of Way Act (2000). This makes it clear that the UK Biodiversity Action Plan must be considered by local Planning Authorities during the planning process. The assessment made and presented in this chapter pays consideration to the local and national Biodiversity Action Plan.

Regional Planning Policy

Yorkshire and Humber Regional Plan (2008)

12.30 Policy ENV8 relates to biodiversity and states

"The Region will safeguard and enhance biodiversity and geological heritage, and ensure that the natural environment functions as an integrated network of habitats. Plans, strategies, investment decisions and programmes should aim to maintain and enhance, restore or add to distinctive elements of the natural environment in line with international, national, regional, sub regional and local importance for biodiversity, to:

- **Maintain and restore natural processes**

- **Protect geological and geomorphological features and processes**

- **Support the recovery of priority species and restore and enhance priority habitats and functional networks of biodiversity in the floodplains, peat lands and saline lagoons of the Humber, calcareous grasslands, heaths and bogs, limestone pavements and meadows, especially in parts of North Yorkshire, East Yorkshire, and South and West Yorkshire**

- **Retain and incorporate biodiversity in development and encourage networks of green infrastructure and ecological corridors in line with the Region's habitat enhancement areas".**

12.31 Section 10.42 states:

"The distinctive coasts, uplands, lowlands and towns of the Region have evolved slowly to support a wide range of wildlife species and habitats that are characteristic to the area (e.g. limestone pavements, red kites and saline lagoons). The decline of this resource in the last four decades of the 20th century has been more severe than that experienced nationally, though there have been some limited signs of recovery recently. Climate change presents a further set of challenges, such as the need to address the loss of upland habitats, wetlands, isolated habitats and coastal habitats. This will necessitate the facilitation of alternative sites, especially for the migration of species. Urban regeneration provides an opportunity to conserve, restore and create additional multi-functional habitat networks as part of its green infrastructure."

12.32 The purpose of policy ENV8 is to safeguard and enhance the Region's ecology, and in particular to ensure that it functions as an integrated network of connected corridors and buffer zones, thereby reversing the pattern of fragmentation, loss and decline.

Local Planning Policy

12.33 Local Planning Policy is currently defined in the Barnsley Unitary Development Plan (UDP). Policy GS15 relates to the protection of habitats and species and seeks to resist development that would cause disturbance, pollution or other damage. Policy GS16 seeks to protect habitats or species protected by Law.

12.34 The UDP is being gradually superseded by Barnsley's Local Development Framework (LDF) and as part of the update, the draft Core Strategy was the subject of an Examination in Public in March 2011; this sets out the council's vision for the future development of Barnsley over the next 15 - 20 years and is the principal, overarching document in the LDF. Policies relevant to ecology are included within section 7.10 Green Infrastructure which is outlined below

12.35 Within this section are found the following policies which are of relevance to ecology: these are listed below:

12.36 Policy CSP 33 Green Infrastructure states:

"We will create, maintain and enhance an integrated network of connected and multi functional open spaces that:

- **provides attractive environments where people want to live, work, learn, play, visit and invest**
- **meets the environmental, social and economic needs of communities across the borough and the wider City Regions**
- **enhances the quality of life for present and future residents and visitors**
- **helps to meet the challenge of climate change**
- **enhances biodiversity and landscape character**
- **improves opportunities for recreation and tourism**
- **respects local distinctiveness and historical and cultural heritage**
- **maximises potential economic and social benefits".**

12.37 Policy CSP 35 Green Space states:

"We will work with partners to improve existing green space to meet the standards in our Green Space Strategy. Green space refers to any land within or close to towns and village that is or could be used by people for recreation or by wildlife. We will only allow development proposals that result in the loss of green space where:

- **an assessment shows that there is too much of that particular type of green space in the area which it serves and its loss would not affect the existing and potential green space needs of the borough; or**

- **an appropriate replacement green space of at least an equivalent community benefit, accessibility and value is provided in the area which it serves; or**

- **the development is for small scale facilities needed to support or improve the proper function of the green space".**

12.38 Policy CSP 36 Biodiversity and Geodiversity states:

"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 in Section 74 of the Countryside and Rights of Way Act 2000 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 river corridors of the Dearne and Dove as natural floodplains and important strategic wildlife corridors**

Development which may harm a biodiversity or geological feature will not be permitted unless effective mitigation and/or compensatory measures can be ensured".

Existing Situation

Desk Study

English Nature Natural Area

12.39 The site falls within *Natural Area 24 – Coal Measures*

12.40 Based on shale and sandstone deposits, Natural Area 24 is characterized by dense population centres such as Sheffield, Leeds and Wakefield. The area's ecology

reflects the changing geology which underlies it and is typified by mixed agriculture, acidic / ancient woodlands, valley wetlands and acidic / neutral grasslands.

12.39 There are no nationally important conservation priorities. Local Conservation priorities for the area are:

- Acid Grassland
- Fen, Marsh and Swamp
- Lowland Heathland
- Neutral Grassland
- Rivers and Streams
- Standing and open water
- Wet Woodland

12.40 The site does not contain examples of any of these habitats.

Local Biodiversity Action Plan

12.41 The local BAP is the "Barnsley Biodiversity Action Plan". Under this, plan have been created for the following species and habitats:

12.42 Species

- Great Crested Newt (*Triturus cristatus*)
- Skylark (*Alauda arvensis*)
- Bittern (*Botaurus stellaris*)
- White-clawed Crayfish (*Austropotomobius pallipes*)
- Grey Partridge (*Perdix perdix*)
- Twite (*Carduelis flavirostris*)
- Little Ringed Plover (*Charadrius dubius*)
- Bluebell (*Hyacinthoides non-scripta*)
- Glow Worm (*Lampyris noctiluca*)
- Barn Owl (*Tyto alba*)
- Lapwing (*Vanellus vanellus*)
- Water Vole (*Arvicola terrestris*)

- Otter (*Lutra lutra*)
- Bats
- Hedgehog (*Erinaceus europaeus*)
- Kestrel (*Falco tinnunculus*)
- Tree Sparrow (*Passer montanus*)
- Salmon (*Salmo salar*)
- Bullhead (*Cottus gobio*)
- Dingy Skipper (*Erynnis tages*)

The site contains no habitat for any of the above species with the possible exception of bats. This are addressed more fully in later sections of the report.

12.43 Habitats

- Upland Oakwood
- Lowland Mixed Deciduous Woodland
- Wet Woodland
- Wood Pasture and Parkland
- Hedgerows
- Arable Field Margins
- Floodplain Grazing Marsh
- Lowland Meadows
- Lowland Dry Acidic Grassland
- Lowland Heathland
- Upland Heathland
- Blanket Bog
- Purple Moor Grass and Rush Pasture
- Reedbeds
- Ponds
- Rivers
- Open Mosaic Habitats on Previously Developed Land

The site contains no good examples of any of these habitats.

MAGIC [www.magic.gov.uk] search

12.44 The MAGIC search revealed only the following designated site within 2 km of the application site.

- Dearne Valley Park: a Local Nature Reserve located approximately 1km to the north east of the development. Adjacent to the River Dearne, the site is reclaimed derelict land and is now an urban park with areas of ancient acidic oak woodland, wetlands and grassland habitats.

12.45 The following non-stautory locally designated Natural Heritage Sites are found within 2km of the development.

- Barnsley Canal at Wilthorpe: located 1.6km from the site, this is a stretch of canal, and contains wetland and grassland habitats.

- Cliffe Wood: adjacent to the Dearne valley Park, this has a mixture of ancient Oak/Birch woodland, a mixed plantation area and an area of wet, Willow dominated woodland; as well as areas of open grassland and scrub

12.46 The development is located at some distance from these sites and is highly unlikely to have any adverse impacts on them.

Data Search

12.47 A data search carried out by BMBC for the original Enviros report showed that there were "no ecological records of any note" for the town centre. (see Appendix 2 Enviros chapter 12, 12.32). As part of the ecological update a search was made for any records listed since 2004. The Barnsley area does not have currently have any dedicated ecological record holder at this time so any records of additional protected or otherwise notable species where collected from the National Biodiversity Network (NBN) Gateway website.

12.48 No new records for protected or notable species are held by NBN Gateway for the Barnsley town centre area.

12.49 The Barnsley Bat Group does hold a number of records for bats within a 2km radius of the development although these tend to be centred around the north western area of the town which has a higher number of mature trees. Records closer to the development are limited to single grounded or found within buildings. A single pipistrelle bat species was found in a shop on Market Hill, while an indeterminate species of bat was seen close to the offices opposite the railway. At the time of writing, records since 2006 have yet to be returned from the bat group.

Walkover Survey Results

12.50 An update to the original survey was carried out on 19th April 2011. The area was dominated by hard standing and buildings with small areas of scattered scrub that had colonised the empty CEAG building to the east of the site while a thin band of immature trees is located alongside the A61.

12.51 None of the trees on site had features likely to support roosting bats and would provide some limited foraging habitat. The scrub and tree areas may have limited potential for nesting birds.

Phase 2 Survey

Invasive Species

12.52 No evidence of the Schedule 9 plant Japanese Knotweed was identified during the updated survey indicating that the treatment regime to eradicate it from the site has been effective.

Bats

12.53 An update to the bat survey on the CEAG building was carried out on 19th April 2011. Detailed information in terms of methodology and result is found in the Ecological Assessment included in Volume 2 of the Environmental Statement. An initial walkover survey identified the CEAG building as offering potential for roosting bats and in June 2006 Barnsley Bat Group (Eric Bennett) completed a bat roost potential and emergence survey. A single common pipistrelle was seen passing the CEAG building and no bats were found roosting within the building or using the area for foraging.

Birds

12.54 The site generally provides poor habitat for birds, as it only contains nesting potential for common urban bird species within the buildings on site and the small areas of scrub and vegetation in the eastern corner. The site will not support any notable bird species and its loss will not be significant to any local populations of birds.

Impact of Development

12.55 Through assessment, the proposed development has been found to have few potentially significant negative impacts on biodiversity, with these being summarised in Table 12.3 below. These are almost exclusively associated with potential incidental impacts on bats or nesting birds.

12.56 Table 12.3 following summarises the nature of potential impacts and the significance of these impacts in their unmitigated and mitigated forms. Detailed discussion of the nature of the ecological receptors outlined and their potential to be affected by the impacts associated with this development can be found in the relevant text sections of this report.

Table 12.3 Evaluation of Ecological Receptors

Receptor	Summary of value	Assessed value
Within the application site		
Habitats and vegetation	Extremely limited in range, secondary habitats not supporting any locally or nationally important or scarce species.	Less than Parish value (dropped from the assessment)
Bats	Single common pipistrelle recorded passing through site. Very limited foraging/roosting habitat on site	Less than parish value (dropped from the assessment)
Great crested newt	Absent from site	-
Reptiles	Absent from site	-
Birds	Small numbers of common breeding species. No locally or nationally scarce or specially protected species breeding on site or any with	Less than parish value (dropped from the

	dependency on the site at any other time of year.	assessment)
Outside the application site		
None	N/A	N/A

12.57 In accordance with IEEM guidance, loss of habitats on site can not be assessed as significant because they have been afforded **less than Parish value**. No species receptors have been identified at Parish level or above and as a consequence no significant ecological impacts can be predicted.

Mitigation Measures

12.58 Due to the low value of the exiting baseline within the application site, mitigation to prevent impacts upon valuable receptors is not required. Mitigation is however necessary to ensure that the Wildlife and Countryside Act and the Conservation (Natural Habitats &c.) Regulations (1994) as amended are not contravened. In this regard the following will be required for this site:

- Vegetation will be cleared outside of the bird nesting season or following a nesting bird survey which demonstrates absence of nests. This also applies to the demolition of the CEAG building which had evidence of birds nesting within the brickwork.

12.59 The boundaries of the site with the adjacent railway present opportunities to enhance the site, both as habitat and as part of the local green network allowing movement of species. Landscaping of these areas will maximise the use of native species to create areas of scrub type vegetation and will introduce trees which will grow to become features of the local landscape. As well as providing amenity value for the site it will serve to increase green networks across the town for groups such as bats and birds. In addition, nesting and bat roosting boxes could also be incorporated into the design of the southern and eastern elevations of buildings.

Monitoring Programme

12.60 Monitoring by a suitably qualified ecologist will only be required should works likely to impact on nesting birds be carried out within the bird nesting season (March – September).

Alternative Scenarios

12.49 The development location is prescribed by policy and includes a vacant brownfield plot in the centre of Barnsley. In terms of provision for development of this scale close to the town centre, there are no alternatives to this site. There is no evidence to suggest that alternative sites to the proposed development need be considered from an ecological perspective.

Robustness of Analysis

12.50 Surveys at the site were unconstrained and there are no known inadequacies in the gathering of information

Summary and Conclusions

12.51 The proposals for the site involve the loss of current urban and derelict areas to create a new market development within the centre of Barnsley. The site has been found to represent poor habitats with little ecological value. They do not present risks of impacts on protected or otherwise important species or habitats.

12.52 Landscaping and construction of the developed site provides some opportunities for ecological enhancements, primarily providing improved connectivity around the site and providing bird nesting and bat roost potential in parts of the new buildings.