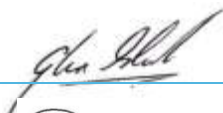


Carrington Avenue Extended Phase 1 Habitat Report Barnsley College June 2014



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1. Summary

Capita Ecologists were commissioned by Barnsley College in June 2014 to undertake an Extended Phase 1 Habitat Survey at Carrington Avenue, Barnsley. The survey has been carried out to inform the client of any protected species or habitat issues that are present and may be affected by the proposed development.

The Extended Phase 1 Habitat Survey was undertaken at the site on Wednesday 4th June 2014. The habitats within the proposed development site boundary comprise of amenity grassland, semi-improved neutral grassland, scattered, broad-leaved trees and intact hedgerow. The scattered trees and hedgerows on site are Local Biodiversity Action Plan (BAP) habitats.

No protected species were found on site, but the site does have potential to support breeding birds and foraging and roosting bats.

Two invasive non-native flora species were recorded on site. These were Japanese knotweed *Fallopia japonica* and *Cotoneaster*, which will require site-specific management methods in order to prevent potential spread.

A series of recommendations are provided in *Section 6* of this report that, if adopted, would help ensure that adverse impacts upon biodiversity are reduced or avoided. They would also help to ensure that positive impacts are enhanced and that the development is managed in-line with legislation protecting habitats and species.

2. Introduction

2.1 Background

Capita Ecologists were commissioned by Barnsley College in June 2014 to undertake an Extended Phase 1 Habitat survey at Carrington Avenue in Barnsley. The survey was undertaken to inform the client of any protected species or habitat issues that may be present and affected by the proposed development.

2.2 Survey Site

The survey site is located on Carrington Avenue, Barnsley, S75 1BH. The Grid Reference is SE 434277 407495. The indicative red-line boundary is illustrated in Appendix B.

2.3 Legislation and Planning Policy

2.3.1 Legislation

Certain habitats and species are subject to protection as laid out in the *Wildlife & Countryside Act 1981 (as amended)* and/or the *Conservation of Habitats and Species Regulations 2010 (as amended)*. The following legislation lists the protected sites and species that apply to the Carrington Avenue site. For a more detail of the offences relevant under each Act, see Appendix A.

The Wildlife & Countryside Act 1981 (as amended) - Bats, nesting birds and non-native invasive species.

Conservation of Habitats and Species Regulations 2010 (as amended) - Bats.

Natural Environment and Rural Communities (NERC) Act 2006 - Section 41 of the Act requires the Secretary of State to draw up a list of Habitats and Species of Principal Importance which should be used to guide decision makers (which include local authorities) in implementing their duty under Section 40. As this applies to local authorities, it applies to Barnsley Council.

2.3.2 Planning Policy

The *National Planning Policy Framework (NPPF)* (Department for Communities and Local Government, 2012) replaces the previous detailed *Planning Policy Statement 9 (PPS9)*, although the guidance document '*Planning for Biodiversity and Geological Conservation: A Guide to Good Practice*' ODPM 06/2005 has not been replaced by the NPPF (Department for Communities and Local Government, 2005).

The NPPF promotes plan-making and decision-taking with a presumption in favour of **sustainable development**. Sustainable development is achieved where developments are designed to address the mutually dependent threads of sustainability: **economic, social and environmental needs**. In terms of biodiversity, sustainable development should **not only achieve no net loss of biodiversity but incorporate proposals that achieve net gains for nature** alongside the other social and economic needs of society.

Protected sites and species are a material consideration in determining planning applications, therefore all information relating to protected sites and species must be submitted with planning submissions for determination of the whole application. The NPPF promotes the approval of plans where applications can demonstrate that they are in accordance with up-to-date Local Plans and have addressed material considerations.

In accordance with Barnsley Local Development Framework, Core Strategy (Adopted September 2011), **CSP 36 Biodiversity and Geodiversity** applies to the site. This 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.

2.3.3 Biodiversity Policy

Section 41 of the 2006 NERC Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. This list is the up-to-date list of Habitats of Principal Importance of Species of Principal Importance requiring action in the UK Biodiversity Action Plan (BAP) and is used as a guide to decision makers such as public bodies (including planning authorities) to implement their duty of having regard to biodiversity when carrying out their functions.

Local Biodiversity Action Plans (LBAP) have also been written and adopted to develop plans for species of nature conservation importance at regional and local levels. The Barnsley LBAP 2008-2012 (Barnsley Biodiversity Trust, 2009) was adopted in 2010 and identifies a list of habitats and species considered as priorities for nature conservation relevant to the site. The LBAP is managed by the Barnsley Biodiversity Trust and further details may be viewed at the trust's website (www.barnsleybiodiversity.org.uk).

2.4 Personnel and Quality Assurance

All ecologists employed by Capita are members of, or are under application for, membership of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow the Institute's code of professional conduct when undertaking ecological work. All fieldwork is carried out in accordance with current best practice guidelines under the supervision of senior

staff and appropriately licensed ecologists. Ecologist Neil Page undertook the survey with assistance from Assistant Ecologist Andrea Sarkissian.

Neil Page is a Full Member of CIEEM and has been an Ecological Consultant for the last seven years. Neil has a broad range of professional experience in consulting services, including ecosystem management, design, planning, protected species mitigation and environmental research projects. Neil also has experience of a range of habitats and species, coupled with habitat creation and management, which has enabled him to mitigate both social and environmental issues on a wide variety projects and schemes. Neil is an experienced surveyor of reptiles and amphibians and holds a *Natural England Science & Education Great Crested Newt Licence*.

Andrea Sarkissian is a GradCIEEM and has been an Assistant Ecologist for a year. Andrea has experience of organising and undertaking a number of protected species and habitat surveys and writing the associated reports. These include Extended Phase 1 Habitat surveys, bat, breeding bird and great crested newt surveys, and Code for Sustainable Home assessments.

3. Methods

3.1 Survey and Report Objectives

The objects are as follows:

1. To undertake a desk-based study of the proposed development area in order to establish whether there were records of protected species or habitats of importance (on a local, regional, national, or international scale)
2. To review existing information detailing habitats, including flora and fauna, of the existing site, with particular attention given to those that have the potential to support protected or otherwise notable species
3. To undertake a field survey of the site to detail existing habitats and to assess whether the habitats on site have the potential to support protected or otherwise notable species
4. To evaluate the ecological value of the survey site and identify opportunities for enhancement
5. To provide advice and guidance in respect of the need for further appropriate surveys, mitigation and enhancement proposals that will enable the development to proceed in full compliance with the relevant wildlife and nature conservation legislation.

3.2 Desk Based Study

A data search was requested from the Barnsley Biological Record Centre (C/O Sheffield City Council Ecology Service) to obtain information on protected sites and species within a 2 kilometre (km) radius of the site.

MAGIC online (MAGIC, 2008) resource was accessed for information on UK and European protected sites and any other important sites, including:

- Ancient Semi-natural Woodland (ASNW);
- Areas of Outstanding Natural Beauty (AONB);
- Local Nature Reserves (LNR);
- Mapped Biodiversity Priority Habitats;
- National Nature Reserves (NNR);
- Ramsar sites;
- Sites of Special Scientific Interest (SSSI);
- Special Areas of Conservation (SAC); and
- Special Protection Areas (SPA).

The above resources and Ordnance Survey (OS) maps were studied to locate any ponds or water bodies within 500 metres (m) of the site.

3.3 Field Survey

3.3.1 *Habitat Survey*

The Extended Phase 1 Habitat Survey was undertaken on the 4th June 2014 by Neil Page and Andrea Sarkissian. The survey entailed undertaking a detailed walkover across the site demarcated by the indicative red line boundary illustrated by Figure 1. The site and its habitats were assessed for their potential to support protected species.

The Extended Phase 1 Habitat Survey was conducted in accordance with the guidelines set out in the *Handbook for Phase 1 Habitat Survey* (JNCC, 2010). The extent of each observed habitat was recorded and is mapped at *Appendix B*. Photographs are included in this report to illustrate the habitats descriptions.

3.4 Evaluation Methods

The ecological value of the site is evaluated against the following criteria:

- Presence of statutory and/or non-statutory protected sites on or adjacent to the site;
- Presence or likely presence of protected species on or adjacent to the site;
- Presence of UK Priority Species or Habitats of Principal Importance and Local BAP Habitats and Species on or adjacent to the site;
- Habitat quality and condition; and
- Presence of non-native invasive species.

The potential impacts of land use change on the nature conservation value of the site are assessed using these criteria in combination with a professional judgement of the likely impacts on the habitats and species of ecological value (identified through desk-based study and field survey).

3.5 Survey Constraints

No constraints to the survey were encountered.

4. Site Description

4.1 The Site

The Carrington Avenue site is located, approximately, 1 km north of Barnsley Town Centre, South Yorkshire. The site Grid Ref. is SE434277, 407495. The habitats on site comprise of semi-improved grassland, amenity grassland and intact, species-poor hedgerow.

4.2 Site Context

An active railway line runs along the eastern border of site and there is residential housing directly north and west of site. There is a cleared demolition site situated to the south of the site. Within the wider landscape, there is a large open area that contains a mosaic of habitats to the north, through which the River Dearne runs and forms part of the Barnsley Canal Natural Heritage Site. This area also includes ponds, woodland (such as Standhill Wood), agricultural fields and semi-improved grassland. To the south, east and west of the site, the land is largely dominated by residential properties and railway lines, with associated gardens and hedgerows / tree lines.

4.3 Project Description

The proposed development details received to date entail a housing development that will cover the entire site footprint. *Appendix C* includes a plan of the scheme that was current at the time of writing.

5. Results

5.1 Desk Study

5.1.1 Protected Sites

The Dearne Valley Park Local Nature Reserve (LNR) is a statutory designated site that is located within 2 km of the survey site. The following non-statutory sites (i.e. local wildlife sites) are also located within 2 km of the survey site:

- Barnsley Canal at Wilthorpe (Barnsley Natural Heritage Site);
- Old Mill Lane (Barnsley Natural Heritage Site);
- Cliff Wood (Barnsley Natural Heritage Site); and
- Redbrook Pastures (Barnsley Natural Heritage Site).

The locations of these sites are illustrated within *Appendix D*.

5.1.2 Habitats of Principal Importance/Biodiversity Priority Habitats

The following Local and UK Habitats of Principal Importance/Priority Habitats are recorded within 2 km of the site as highlighted on the Barnsley LBAP:

- Trees and Woodland LBAP;
- Amenity grassland LBAP; and
- Hedgerows UKBAP and LBAP

5.1.3 Waterbodies

There are no ponds on site. There are, however, two waterbodies present within 500 m of the red line boundary. One is, approximately, 500 m to the north-west of site and the other is, approximately, 460 m to the east of site.

5.1.4 Protected Species

5.1.4.1 Bats

The following bat species have been recorded within 2 km of the site:

- Daubenton *Myotis daubentoni* - 47 records of roosting bats dating between 1990 and 2012, located 1 km east of site.
- Leisler's *Nyctalus leisleri* - 3 records of roosting bats dating between 2003 and 2005, located within 2 km of site (exact grid reference not provided).
- Noctule *Nyctalus noctula* - 7 bat activity records dating between 1981 to 1991, located 900 m north east, 700m west and 2km south west of site.
- *Myotis* - 1 record, located 700m west of site.

5.1.4.2 Birds

The following notable bird species have been recorded within 2 km of the survey site:

- Black Redstart *Phoenicurus ochruros*;
- Brambling *Fringilla montifringilla*;
- Bullfinch *Pyrrhula pyrrhula*;
- Cuckoo *Cuculus canorus*;
- Curlew *Numenius arquata*;
- Dunnock *Prunella modularis*;
- Fieldfare *Turdus pilaris*;
- Goldfinch *Carduelis carduelis*;
- Grasshopper Warbler *Locustella naevia*;
- Green Sandpiper *Tringa ochropus*;
- Green Woodpecker *Picus viridis*;
- Grey Partridge *Perdix perdix*;
- Hawfinch *Coccothraustes coccothraustes*;
- Hobby *Falco subbuteo*;
- House Sparrow *Passer domesticus*;
- Kingfisher *Alcedo atthis*;
- Lapwing *Vanellus vanellus*;
- Linnet *Carduelis cannabina*;
- Little Ringed Plover *Charadrius dubius*;
- Meadow Pipit *Anthus pratensis*;
- Mistle Thrush *Turdus viscivorus*;
- Nightjar *Caprimulgus europaeus*;
- Oystercatcher *Haematopus ostralegus*;
- Peregrine *Falco peregrines*;
- Redshank *Tringa tetanus*;
- Redwing *Turdus iliacus*;
- Reed Bunting *Emberiza schoeniclus*;
- Sand Martin *Riparia riparia*;
- Snipe *Gallinago gallinago*;
- Song thrush *Turdus philomelos*;
- Starling *Sturnus vulgaris*;
- Tree Sparrow *Passer montanus*;
- Water Rail *Rallus aquaticus*
- Willow Tit *Parus montanus*; ;
- Yellow Wagtail *Motacilla flava*; and
- Yellowhammer *Emberiza citrinella*.

5.1.4.3 Great Crested Newt

The Local Records Centre (LRC) holds 7 records of great crested newt *Triturus cristatus* within 2 km of the site. These date from between 1995 and 2012 and are located, approximately. 1.9km south-west of site.

5.1.4.4 Otter

The LRC holds 1 record of otter *Lutra lutra*, dated from 2007 and located 900 m north east of site.

5.1.4.5 Water Vole

The LRC holds 8 records of water vole *Arvicola terrestris* within 2 km of the site. These date from between 1980 to 2004 and are located, approximately, 1.2 km north-west of site.

5.2 Field Survey

A Phase 1 Habitat Survey Plan is included within *Appendix B*.

5.2.1 Habitats

5.2.1.1 Amenity Grassland

The majority of site consists of amenity grassland, dominated by perennial ryegrass *Lolium perenne*. The sward height is approximately 4 cm.



Figure 1: Amenity grassland

5.2.1.2 Hedgerow

There is an intact, species-poor hedgerow (consisting of hawthorn *Crataegus monogyna*) lining the eastern border of the site. A number of standard trees are also present along this border, including sycamore *Acer pseudoplatanus* and Turkey oak *Quercus cerris*. The northern border consists of a privet *Ligustrum Ovalifolium* hedge that contains standard trees, such as silver birch *Betula pendula* and European lime *Tilia x europaea*.

5.2.1.3 Invasive Non-native Flora Species

There is a stand of Japanese knotweed in the middle of the hedgerow (see Target Note TN1) located to the east of the site. This is an invasive non-native species and the stand is, approximately, 5 m tall. *Cotoneaster* is also present on the western border of site (Target Note 4).



Figure 2: Hawthorn hedge containing Japanese knotweed

5.2.1.4 Scattered Broad-leaved Trees

There a number of trees present along the site borders that include those already mentioned, plus ash *Fraxinus excelsior*, Italian alder *Alnus cordata* and hazel *Corylus avellana*. There is also a clump of mature ash, lime and Italian alder at the south end of site (see Figure 5).



Figure 3: Scattered trees

5.2.1.5 Semi-improved Neutral Grassland

Within the fence and hedgerows that border the there is a 2 m wide strip of semi-improved grassland. The species present include black medick *Medicago lupulina*, common vetch *Vicia sativa*, annual meadow grass *Poa annua*, cock's foot *Dactylis glomerata*, bramble *Rubus fruticosus*, cleavers *Galium aparine*, nipplewort *Lapsana communis*, hawkbit *Leontodon*, ribwort plantain *Plantago lanceolata*, sow thistle *Sonchus oleraceus*, creeping thistle *Cirsium arvense*, ox-eye daisy *Leucanthemum vulgare*, goat willow *Salix caprea*, dock *Rumex*, wood forget-me-not *Myosotis sylvatica*, common ragwort *Senecio jacobaea*, rosebay willowherb *Chamerion angustifolium*, oriental poppy *Papaver orientale*, rough brome *Bromus squarrosus*, common daisy *Bellis perennis*, cow parsley *Anthriscus sylvestris*, mugwort *Artemisia vulgaris*, wood millet *Milium effusum*, herb Robert *Geranium robertianum* and garlic mustard *Alliaria petiolata*.

Debris, in the form of a pile of concrete, is present in the north-eastern corner of site (See Target Note TN3). This is illustrated by Figure 6.



Figure 4: Debris located within semi-improved grassland

5.2.2 Biodiversity Habitats of Principal Importance

Table 1 lists the habitats found within or adjacent to the site boundary and whether these are listed as Habitats of Principal Importance in the UK and/or Priority Habitats under the Barnsley Biodiversity Trust Local BAP.

Table 1: Summary of local/nationally importance of habitats

Broad Habitat	Habitat of Principal Importance	LBAP
Amenity grassland	X	✓
Semi-improved grassland	X	X
Scattered Trees, broad-leaved	X	✓ Trees and woodland
Intact species poor hedgerow	✓ Hedgerow	✓ Hedgerow

✓ Listed as national/local Habitats of Principal Importance/BAP species.

x Not listed as Habitats of Principal Importance/BAP species.

5.3 Protected Species

Based upon a professional judgement of the local distribution of species and the results of the site survey, it is considered that the site has the potential to support the species listed in the following sections.

5.3.1 Nesting Birds

Eight bird species were recorded during the site survey. Song thrush was recorded carrying food into the mature trees located to the south of site (TN2). Wood pigeon *Columba palumbus*, blackbird *Turdus merula*, starling and magpie *Pica pica* were present on site, but did not exhibit nesting behaviour. Jackdaw *Corvus monedula*, goldfinch and carrion crow *Corvus corone* were recorded flying over the site. House sparrows were noted within the residential areas adjacent to the site.

5.3.2 Bats

Carrington Avenue is situated in a predominantly residential area, but it is also near to open areas of woodland, hedgerow and ponds. The site is, therefore, likely to support local bat populations. The hedgerow and trees on site may provide foraging habitat for bats and a small number of the trees present have potential to support roosting bats (TN5).

5.3.3 *Amphibians*

There are no ponds on site and the habitats present are not likely to support amphibians. However, there are two ponds within 500 m of the site one to the east one to the north. The pond to the east is large and is separated from the site by road barriers and residential areas. The habitat surrounding this pond is more optimal for amphibians and as such populations are more likely to stay within the surrounding habitat.

The pond to the north, is likewise, a large waterbody and although connected to site by a hedgerow lined active railway, local amphibian populations are likely to use the more favourable habitat to the north of the site, containing a mosaic of woodland, grassland and ponds. Aside from the potential connection to the site via boundaries which line the active railway, connectivity is poor due to the urban nature of the site.

In addition, both ponds are likely to contain fish in that viewed by aerial photography there are a number of platforms dotted around both water bodies and taking into consideration their large size, are likely to be used for recreational angling. Fish predate on amphibian larvae thereby reducing its potential to support viable breeding populations.

Taking the following limiting factors into consideration:

- The distance of the ponds from the site;
- The lack of connectivity;
- The more favourable habitat surrounding the ponds;
- Lack of suitable habitat on site; and
- The potential for predation by fish.

The likelihood of encountering amphibians onsite is low and as such the potential risk of an impact to amphibians is considered to negligible and, as such, this species group is not considered further within this report.

5.3.4 *Reptiles*

The habitats on site do not provide optimal habitat for reptiles due to the intensive management regime in place. Whilst the semi-improved grassland and the pile of concrete debris in the north eastern corner provide some suitability as commuting, foraging and hibernation habitat, the majority of site is managed playing field, with a very short sward and is unsuitable to support reptiles. The large mosaic area of woodland, grassland and ponds (to the north of site) are more likely to support local reptile populations. As such, the risk of encountering reptiles on site is considered to be low. The impacts are deemed negligible and, as such, are not considered further within this report.

5.4 Biodiversity Species of Principal Importance

Table 2 details the species of local and national importance which are likely to occur on or adjacent to the site that are listed as Species of Principal Importance in England or as Priority Species under the LBAP.

Table 2: Summary of local and national importance of species found locally.

Species	Species of Principal Importance	LBAP
House sparrow	✓	✓
Starling	✓	✓
Song thrush	✓	✓
Bats	✓	✓

Listed as national/local BAP species ✓ , not listed as BAP species x.

6. Interpretation and Advice

The following is an interpretation of the value of the biodiversity found on site (to date). Recommendations are made in relation to methods of working in order to limit the development's potential impact on biodiversity. In addition, biodiversity enhancement measures are provided that, if adopted, would contribute to the sustainability of the development, in-line with the NPPF and the conservation of biodiversity, locally.

6.1 Overall Conclusion of Site Ecological Value

The site's biodiversity value is largely attributed to the two points listed, below. These are explained in further detail within the following sections.

- The presence of Habitats of Principal Importance. These include the 'Hedgerows UK and LBAP', 'Trees and Woodland LBAP' and 'Amenity Grassland LBAP'.
- The presence of foraging and shelter habitat for European Protected Species, UK BAP species and LBAP species. These consist of bats and breeding birds, including song thrush, house sparrow and starling.

6.2 Habitats

6.2.1 *Amenity Grassland*

Potential Impacts

According to the current development proposals, the amenity grassland will be lost to accommodate the new development. Whilst it is not a UKBAP habitat, if managed appropriately, this habitat can provide foraging habitat for bird and invertebrate species, including local BAP and RSPB Red List species (e.g. song thrush). The grassland is currently intensively managed and, as such, the potential to support biodiversity is reduced. At present, the habitat to the north of the site offers more in the way of a range of habitat features, including managed grassland.

Recommendations

At present, the grassland along the edge of the site is left uncut. This habitat should be retained (as detailed in Section 6.2.5). Where possible, areas of grassland should be retained or native grassland areas should be incorporated into the new landscape design (e.g. within the open 'greens').

6.2.2 *Hedgerow, Species Poor, Intact*

Potential Impacts

Whilst the potential impact upon the existing onsite hedgerows by the current scheme proposal appears to be minimal, with potentially removal only to make way for access, it should be highlighted that the full details of the scheme are not yet known. The hedgerows on site are afforded protection under LBAP and UK Habitats of Principal Importance in England.

Recommendations

All hedgerows occurring on site should be retained as far as possible and protected from development impacts by installing a buffer zone and fencing-them-off to prevent damage or

loss. The hedgerows will provide the new residents with a noise and visual buffer from the adjacent railway line, as well as providing a valuable habitat for wildlife.

Any hedgerow removal works will require consultation with the Local Planning Authority prior to their removal. Under the Hedgerow Regulations 1997, it is against the law to remove most countryside hedgerows. Certain factors would need to be considered prior to removal, for example length of hedgerow to be removed, type of hedge and reason for removal, the Local Planning Authority will be able to advise as to whether consent is required. Removal of a hedgerow without permission may result in a fine.

Consideration should be given to enhancing any hedgerows to be retained by planting-up with native species of local provenance. Likewise, any new hedgerows should be planted with native species of local provenance.

6.2.3 *Scattered Trees, Broad-Leaved*

Potential Impacts

With the exception of a small clump of predominantly lime trees located to the south of the site, the majority of the trees occurring on site are associated with the boundary hedgerows. From the current scheme proposals, the trees to the south will be lost in order to make way for new access onto the site. Scattered trees are a LBAP habitat.

Recommendations

Boundary trees should be retained within the scheme proposals. Any trees to be affected during the development (including those that are directly impacted or indirectly impacted on by works falling within the Root Protection Zone) should be carried out in-line with *BS5837:2012 Trees in Relation to Design, Demolition, and Construction*. In addition, it is advised that an Arboricultural Risk Assessment is undertaken and a report produced that set-out specific measures to protect the retained trees.

6.2.4 *Semi-improved Neutral Grassland*

Potential Impacts

The semi-improved grassland has a sward height of up to approx. 1.5 m and contained over 25 different species. From the current development proposals, it appears that this habitat could potentially be lost as a result of the new development.

Recommendations

As mentioned in 6.2.1, unmanaged grassland should be retained as far as possible and native grassland areas should be incorporated in to the new landscape design (e.g. within the open greens).

6.3 Protected Species

6.3.1 *Nesting Birds*

Potential Impacts

The hedgerows and trees on site have the potential to support breeding and roosting birds. This was confirmed for the trees located to the south of the site (TN2), as a song thrush was recorded carrying food into the trees there. Nesting birds are protected under the *Wildlife & Countryside Act 1981 (as amended)* and it is an offence to disturb birds and their nests during

the breeding season. The main impacts to nesting birds would occur as a result of disturbance from site clearance and mobilisation works if this is carried out during the breeding bird season, which runs March to August (inclusive) which may result in an offence under Schedule 1 of the Act.

Recommendations

Any site clearance works that involve the removal of vegetation (including trees, hedgerows, tall grass) should be scheduled to occur outside of the bird breeding season. If this is not possible, a targeted breeding bird survey should be carried out within any affected areas with the potential to support nesting birds during this breeding season. This will ascertain the use of the hedgerow and trees by birds and allow appropriate mitigation and compensation measures to be developed. If any active nests are found, all affecting works must stop and an appropriate buffer established until the young have fledged the nest.

It is also recommended that appropriate (i.e. a mixture of both open fronted, closed fronted and multi-use boxes) bird boxes should be incorporated in to the finished design. These would benefit local bird populations and could be installed upon trees that are to be retained.

6.3.2 *Bats*

Potential Impacts

The main impacts to bats would occur as a result of the removal of any trees with the potential to support a roost (TN5) and the loss of potential foraging/commuting habitat. From the current scheme proposals, it appears that there will be minimal impacts to the hedgerows and trees occurring on site. A small clump of predominantly lime trees will be removed in order to make way for access, but these did not have the potential to support bats. However, full details of the scheme are as yet unknown

Bats and their roosts are protected under the *Conservation of Habitats and Species Regulations 2010 (as amended)* and the *Wildlife & Countryside Act 1981 (as amended)*. It is an offence to intentionally or recklessly kill, injure or take a bat; damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not); or to disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

Recommendations

If any trees that have been highlighted as providing the potential to support bat roosts are to be affected by the development works, these should be subject to further surveys and assessment. Any proposed external lighting should be directed away from existing tree lines, in particular the boundary to the east.

6.4 Non-Native Invasive Species

Potential Impacts

The following non-native invasive species were recorded on site during the survey:

- Japanese knotweed (TN1); and
- *Cotoneaster* (TN4).

It is an offence to plant or otherwise cause to grow (inc. spreading) in the wild any plants listed on *Part II of Schedule 9 of the Wildlife & Countryside Act 1981 (as amended)*.

Recommendations

It is recommended that the methods of working for the site are designed to avoid spreading these species, particularly where there is a risk that these could be spread into the semi-natural habitats located to the north of the site.

If these species are spread into the wild, but it can be clearly demonstrated that all reasonable steps were taken to avoid this, this may constitute a defence against prosecution. For this reason and to ensure an appropriate strategy is identified, it is recommended that a method statement is prepared and implemented prior to any affecting works taking place. Provided that the recommended methods (within the method statement) are adopted and upheld, this would help demonstrate that reasonable avoidance measures were included within the development of the site.

Effective management of this species may be achieved through the following methods of control:

- Mechanical Removal;
- Digging; and/or
- Herbicide Treatment.

With regards to the Japanese knotweed, a 7 m exclusion zone should be set-up so as to prevent impact/disturbance of this species during construction and site clearance. Any contaminated soils or excavated materials that are to be removed from site will need to be sent to a licensed facility in accordance with waste management legislation. The waste carrier receiving site will need to be informed in advance that the soil contains Japanese knotweed.

7. References

Barnsley Biodiversity Trust, *Barnsley Biodiversity Action Plan, Second Edition*, 2009, [online]
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Environment Agency, 2010. *Managing invasive Non-native Species*, s.l.: s.n.

Fure, A., 2006. Bats and Lighting. *The London Naturalist*, Volume 85.

JNCC, 2010. *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*. 3rd ed.
Peterborough: Joint Nature Conservation Committee.

JNCC, 2011. *UK BAP list of priority habitats*. [Online]
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<http://magic.defra.gov.uk/MagicMap.aspx>

Appendix A Wildlife Legislation

The following has been produced as a guide, to outline possible offences that could occur during development. For a definitive list of all species of flora and fauna, and a full interpretation, please refer to relevant *Acts* listed below.

A.1 The Wildlife and Countryside Act 1981 (as amended)

A.1.1 *Schedule 1*

Applies to all wild birds where it is an offence:

- to kill, injure or take any wild bird (subject to certain exceptions);
- to take, damage or destroy a nest whilst it is in use or being built; or
- to take or destroy the egg of any wild bird.

It is also an offence to disturb any wild bird listed on *Schedule 1* of the *Wildlife & Countryside Act 1981 (as amended)*:

- while it is nest building;
- at a nest containing eggs or young; or
- disturbs the dependant young of any such bird.

A.1.2 *Schedule 5*

This is for animals fully protected under *Schedule 5*, which includes all bats, great crested newt, otters, water vole, sand lizard, smooth snake and natterjack toad. It is an offence:

- to intentionally kill or injure or take;
- to intentionally or recklessly damage or destroy or obstruct access to any structure or place which a species uses for shelter or protection, at any time even if the animal is not there;
- to intentionally or recklessly disturb whilst it is occupying a place which it uses for shelter or protection; or
- to obstruct access to any structure or place which an animal uses for shelter or protection.

Adder, grass snake, common lizard and slow worm are only protected from being killed or injured. White-clawed crayfish is only protected from being taken.

A.1.3 *Schedule 8*

Specific species of plants listed in *Schedule 8* are protected. It is an offence:

- to intentionally pick, uproot or destroy a wild plant listed in *Schedule 8*.

A.1.4 *Schedule 9*

Invasive non-native species are listed under Schedule 9. It is an offence:

- to plant or otherwise cause to grow in the wild.

There is a defence to the above offence that, if such species are spread into the wild but it can be demonstrated that all reasonable steps have been taken to avoid committing the offence, this may be a defence accepted under the legislation.

If soils are contaminated by invasive non-native plant species, it becomes classified as 'controlled waste' under the *Environmental Protection Act 1990 (England, Wales & Scotland)* and must be disposed of accordingly.

A.2 The Conservation of Habitat and Species Regulations 2010

Schedule 2 applies to all European Protected Species (EPS). This includes all bat species, great crested newt, dormice, otter, sand lizard, smooth snake and natterjack toad. The protection afforded is overlapping, but separate from the *Wildlife & Countryside Act 1981 (as amended)*. It is an offence:

- to deliberately capture, injure or kill;
- to deliberately disturb; or
- to damage or destroy a breeding site or resting place of an EPS; this applies whether species are present or not.

In order to permit a development where the above offences to EPS are likely to be committed, an EPS License must be obtained from Natural England where appropriate mitigation is offered to offset the negative impacts to local populations.

Appendix B Phase 1 Habitat Plan

B.1.1 *Target notes*

- TN1 – Stand of Japanese knotweed
- TN2 – Song thrush carrying food into trees
- TN3 – Rock pile
- TN4 – *Cotoneaster*
- TN5 - Trees with the potential to support bats.

Appendix C Proposed Plan



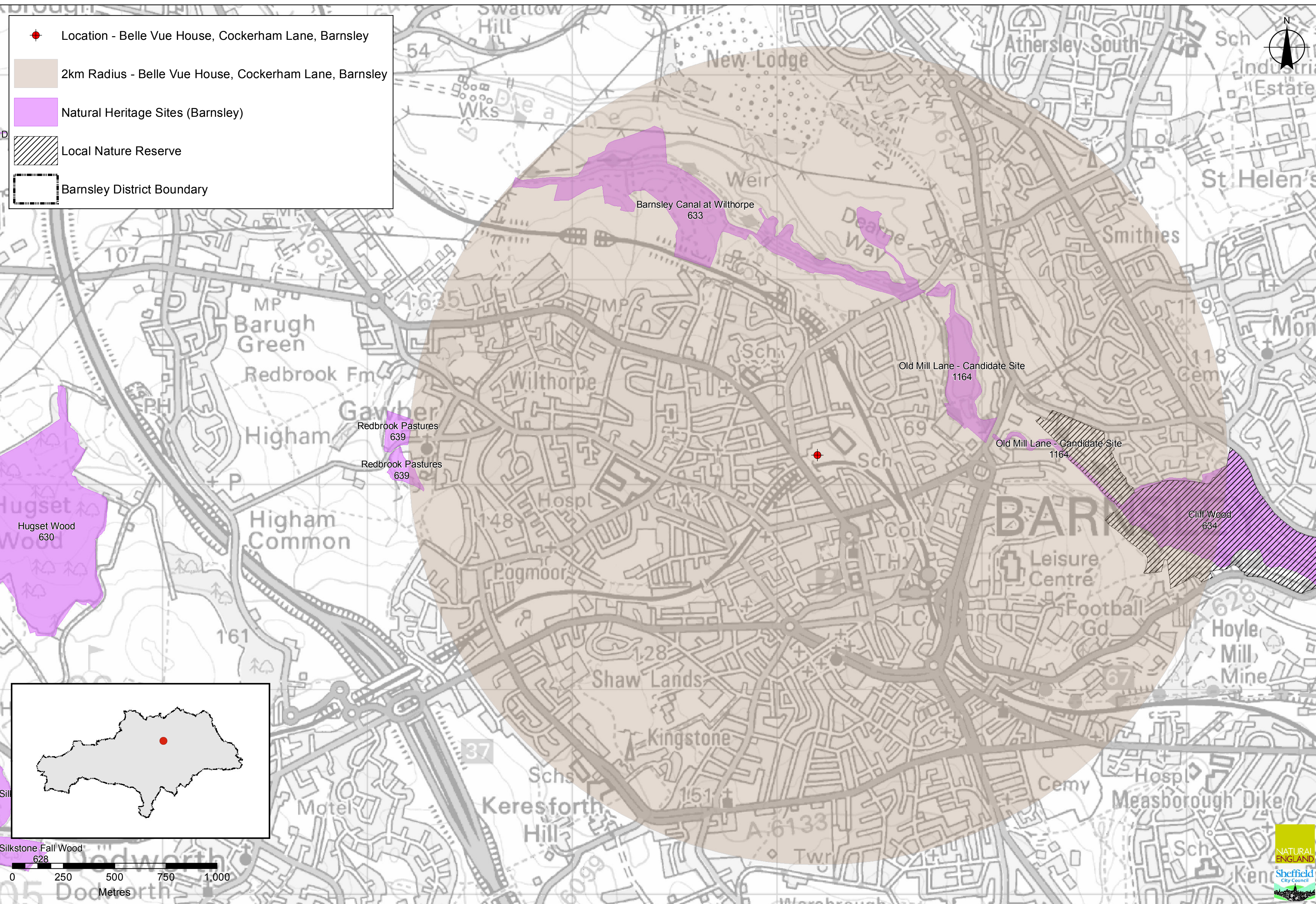
NOTES

1 Do not scale this drawing.
2 Site dimensions to be taken.
3 Contract administrator to be notified of any discrepancies prior to ordering of equipment and/or materials.

Client BARNSELEY COLLEGE				
 Working in partnership with CAPITA property design Quadrant, Cobalt Business Park, North Tyneside, NE27 0BY Tel: 0191 643 4089				
Project Barnsley College Housing Sites Carrinton Avenue				
Drawing Title Housing Proposal				
Drawn By SM		Date 27.01.14		
Checked By KS		Date 27.01.14		
Approved By KS		Date 27.01.14		
Drawing Number PCAR / A / 001				Rev 000
Drawing Scale 1:500 @ A1				
Drawing Status FEASIBILITY/ TENDER/ CONTRACT/AS BUILT				

ALL PROPOSED
DRAWINGS ARE TO BE TAKEN FROM
THIS DRAWING ONLY

Appendix D Local Wildlife Sites



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