The Co-Operative

Land off Pontefract Road, Lundwood, Barnsley

Extended Phase 1 Habitat Survey

June 2009

Entec UK Limited

Report for

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1. Introduction

1.1 Purpose of this report

Entec UK Ltd (Entec) was commissioned by The Co-Operative to undertake an ecological assessment of a site in Lundwood, Barnsley, South Yorkshire (OS grid reference SE375078)[1]. The land owned by The Co-operative which was subject to survey denoted by the red line on the plan provided by Nigel Smith (1 25000 OS site plan.jpg provided by e-mail on 01/05/09 and included in this report as Appendix A).

In completing the assessment a survey of the site was undertaken, in which any potential ecological issues that might be associated with the development of the site were identified. This report details the methods adopted, the results of the survey work, and makes generic recommendations for biodiversity enhancement and potential mitigation measures as appropriate (given the current absence of information relating to development proposals).

1.2 Site context

The site is located in Lundwood, which itself is located approximately 2km east of Barnsley town centre off the A628 Pontefract Road, West Yorkshire. The surrounding landscape comprises a mixture of built-up areas with roads and residential buildings, small scale industrial depots and a dismantled railway line approximately 500m to the north of the site. Another section of dismantled railway borders the site to the east and now comprises the Trans Pennine Trail long distance path. The River Dearne is located approximately 1km south of the site. The site itself consists in the main of poor semi-improved grassland with scattered scrub and young sapling trees, with a block of plantation woodland along its northern boundary.

1.3 Legislation and policy context

1.3.1 Overview

A number of sites of international or national importance to nature conservation, as well as many species of animal and plant are afforded some degree of legal protection. An overview of the protection afforded to habitats and species is provided in Box 1.1. For further details regarding the protection afforded to species refer to Appendix B.

[1] Hereinafter, the area of land to be directly affected by development is referred to as the site.

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Box 1.1 Designated wildlife sites and protected and otherwise notable habitats and species

Natural England notifies sites in England that are of international or national importance for nature conservation as Sites of Special Scientific Interest (SSSIs) (although some sites that are of national importance for certain species have not been so designated). The UK Government has a duty to notify such sites under the *Wildlife and Countryside Act 1981* (as amended) (WaCA), and the protection afforded such areas was strengthened by the *Countryside and Rights of Way Act 2000* (CRoW Act). Internationally important sites may also be designated as:

- Special Areas of Conservation (SACs): the legal requirements relating to the designation and management of SACs in England are set out in *The Conservation (Natural Habitats, &c.) Regulations 1994* (as amended) (Habs Regs);
- Special Protection Areas (SPAs): strictly protected sites classified in accordance with Article 4 of the *EC Directive on the Conservation of Wild Birds* (79/409/EEC), also known as the *Birds Directive*;
- Ramsar sites: wetlands of international importance designated under the Ramsar Convention, to which the UK is a signatory.

Other statutory site designations relating to nature conservation are:

- National Nature Reserves (NNRs): these represent examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in the country, and are declared in England by Natural England under the National Parks and Access to the Countryside Act 1949 and the WaCA;
- Local Nature Reserves (LNRs): under the National Parks and Access to the Countryside Act 1949, LNRs in England may be declared by local authorities after consultation with Natural England. LNRs are declared and managed for nature conservation, and provide opportunities for research and education, or simply enjoying and having contact with nature.

Non-statutory nature conservation sites

These sites are designated alongside the statutorily protected areas, as they constitute the most important sites for wildlife in each county. In the Barnsley district these sites are termed as Sites of Importance for Nature Conservation (SINC).

Legally protected species

Many species of animal and plant receive some degree of legal protection. For the purposes of this study, legal *protection refers to:*

- species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see Section 9[5] and 13[2]), reflecting the fact that the site disposal will not include any proposals relating to the sale of species;
- species included on Schedules 2 and 4 of *The Conservation (Natural Habitats, &c.) Regulations 1994* (as amended) (SI 1994 No. 2716); and
- badgers, which are protected under the *Protection of Badgers Act 1992.*

See Appendix B for further details of protected fauna.

Other notable habitat/species categories

- Biodiversity Action Plan (BAP) species: those targeted in local or national BAPs as being of particular conservation concern (priority species).
- Habitats and species of principal importance for the conservation of biological diversity in England. These are listed on http://www.defra.gov.uk/wildlife-countryside/pdf/biodiversity/s41-nerc-may2008species.pdf and http://www.defra.gov.uk/wildlife-countryside/pdf/biodiversity/s41-nerc-may2008habitats.pdf. These include those UK BAP priority habitats and species which occur in England.
- Red List plant species: those listed as Critically Endangered, Endangered, Vulnerable or Near Threatened in Cheffings, C. and Farrell, L. (eds.) (2005). *The Vascular Plant Red Data List for Great Britain.* Joint Nature Conservation Committee, Peterborough.
- Red and Amber List birds: those listed as being of high or medium conservation concern respectively in: Gregory R.D., et al (2002). The population status of birds in the United Kingdom, Channel Islands and Isle of Man: an analysis of conservation concern 2002-2007. *British Birds* 95: 410-450.
- Other UK Red Data Book species and Nationally/Regionally/Locally Notable species where appropriate.

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1.3.2 Planning policy

A study of nature conservation related planning policy at the national, regional and local level has also been undertaken for the site and locality in order to highlight any policy requirements which the development scheme would need to meet.

National planning context

Planning Policy Statement 9: Biodiversity and Geological Conservation[2]

The national planning policy statement for biodiversity states that:

> *"Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, local planning authorities should maximise such opportunities in and around developments, using planning obligations where appropriate."*

Regional planning context

The Yorkshire and Humber Plan[3]

Policy ENV8 of the Regional Spatial Strategy (RSS) for Yorkshire and Humber states that:

> *'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"; and*
>
> *"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 context

Barnsley Unitary Development Plan[4]

The Barnsley Unitary Development Plan was adopted in 2000 and the saved policies remain the statutory Development Plan until it is replaced by the emerging Local Development Framework. The site is allocated as Housing Proposal policy BA1/27 for 83 dwellings and lies adjacent to an area of allocated Urban Greenspace policy BA17. An allocated Multi-User Recreational Routeway policy BA15 also runs adjacent to the east.

Several policies on Nature Conservation which are relevant to the Penistone site are outlined within the Barnsley Unitary Development Plan including:

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[2] Office of the Deputy Prime Minister (2005). *Planning Policy Statement 9: Biodiversity and Geological Conservation.* HMSO.

[3] Government Office for Yorkshire and The Humber (2008). *The Yorkshire and Humber Plan; Regional Spatial Strategy to 2026.* Cambridge.

[4] Barnsley County Council (2000). *Barnsley Unitary Development Plan Adopted December 2000.*

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Policy GS15 which states that:

"The Council will seek to safeguard important habitats and species from any activities which would cause disturbance, pollution or other damage. All development proposals should, where appropriate, include measures to conserve and enhance existing features of nature conservation interest and to create new conservation areas."

Policy GS16:

"Development likely to have an adverse effect, either directly or indirectly, on the conservation value of a National nature reserve or Site of Special Scientific Interest or any habitat or species protected by law, will only be permitted if it can be demonstrated that other material considerations outweigh the special interest of the site."

Policy GS18

"Any development which may adversely affect, directly or indirectly, a Local Nature Reserve, a Natural Heritage Site" (now termed as Sites of Importance for Nature Conservation), "ancient woodland, a regionally important geological site or other nature conservation sites identified on the proposals maps, will not be approved unless it can be clearly demonstrated tat there is a case for the development which outweighs the case for safeguarding the conservation interest of the site after available measures to avoid, mitigate or compensate for any adverse affects have been taken into account, in which case the council will seek to minimize the adverse impact and/or secure compensatory provision including, where appropriate, through planning conditions or obligations."

Policy GS18A

"Where the Council considers development may have an adverse effect on nature conservation it may require the applicant to provide an appropriate evaluation of the impact of the development prior to any planning decision."

"The most important nature conservation sites in the Borough have been identified under various headings as follows:

a) Sites of Special Scientific Interest (SSSI's)

b) Natural Heritage Sites

c) Local Nature Reserves

d) Ancient Woodlands

e) Regionally Important Geological/Geomorphological Sites (RIGS)."

And specifically relating to Woodland, Hedgerows & Trees Policy GS22 states the following:

"The Council will seek the retention and management of existing hedgerows, woodlands and trees both individually and in groups."

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2. Desktop Study

2.1 Methods

West Yorkshire Ecology (WYE) was contacted for information regarding statutory and non-statutory designated sites and records of protected and otherwise notable species within 2km of the proposed development site (see Box 1.1 for definitions).

An additional search of the National Biodiversity Network online records (http://data.nbn.org.uk/) was also undertaken to check for records of protected species inside or within 1 km of the site.

Potential great crested newt (*Triturus cristatus*) aquatic habitat located within 500m of the site was identified by studying 1:10,000 (OS) maps, and aerial photographs of the area (obtained from the Microsoft website: http://local.live.com) for any water bodies indicated. Where such water bodies occur, the study aimed to identify whether barriers (main roads, rivers etc.) to the species' movement exist, as these would prevent the species accessing the site from the water body in question. Where such barriers do not exist, the potential for the site to provide terrestrial habitat for the species, and the presence of habitat links between the water body and the development site, were assessed during the site survey.

2.2 Results

The desk study search report produced by West Yorkshire Ecology is provided as Appendix C and provides full details of the locations of protected sites and species records summarised below.

2.2.1 Statutory sites for nature conservation

Two statutory designated sites are present within a 2km radius of the site. The nearest statutory site is Carlton Marsh LNR (Local Nature Reserve), located approximately 1.4km north east of the site at OS grid reference SE 379 099. The marsh comprises 35ha designated for its wet grasslands in the river floodplain area, criss-crossed by ditches that maintain a high water level. The combination of grasslands, wetland margins and ditches promotes a richness of plants and invertebrates and are of particular interest to birds.

Dearne Valley Park LNR is located approximately 1.3km to the south west of the site at OS grid reference SE 360 069. The park comprises 36ha designated for its acidic oak woodland with a mosaic of wetland habitats developed from relict habitats and reclaimed colliery spoil/ associated uses around a river valley. The woodland contains two large ponds - one managed by the angling club - and the site includes some areas of amenity grassland.

Based on the distance of these LNRs from the site and the absence of any linkages to the Lundwood site, it is concluded that any future development proposals would not result in any direct or indirect impact upon the designated features of the LNRs.

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2.2.2 Non-statutory sites for nature conservation

Five Barnsley Local sites are located within a 2km radius of the site. These are outlined in Table 2.1. A plan showing the location of these sites and detailed citations are provided in Appendix C.

Table 2.1 Non-statutory designated sited for nature conservation within 2km of the proposed development site

Site name	Size (ha)	Brief description	Grid reference	Distance (direction) from site
Carlton Marsh	18.4	Site with a variety of habitats including woodland, dry and marshy grassland and open water. The site is noted for its bird interest and rich diversity of invertebrates.	SE 370900	
Sunny Bank and Horse Carr Wood (and Storrs Wood – outside search area)	19.5	Comprise of four discrete areas of silver birch dominated woodland. Supports breeding birds.	SE 389066	Sunny Bank – 1km south east of the site (at its nearest point) Horse Carr Wood – 1.6km south-east of the site.
Cliff Wood	30.5	A mosaic of habitats including woodland, scrub, grassland, marsh and open water. The site is located within an urban area of Barnsley town centre, where there are few semi-natural habitats. Includes a good example of oak/birch woodland.	SE 365067	1.4km south-west of the site
Stairfoot Disused Railway	15.1	The site comprises two disused railway lines and adjacent habitats, known to support barn owl and sparrow hawk.	SE 373063	1.3km south of site

2.2.3 Other habitats

In addition three non-designated ancient woodlands are entirely or partially located within the search area.

Site name	Size (ha)	Brief description	Grid reference	Distance (direction) from site
Un-named wood *Sunny Bank*	2.18	Ancient & semi-natural woodland	SE382069	1.04km (south east)
Un-named wood	1.66	Ancient & semi-natural woodland	SE387067	1.55km (south east)
Un-named wood Horse Carr Wood	5.13	Ancient & semi-natural woodland	SE387065	1.67km (south east)

2.2.4 Protected and notable species

Two protected species records located within the search area were provided by West Yorkshire Ecology. These are detailed in Table 2.2 below. A thorough search of the National Biodiversity Network online records (http://data.nbn.org.uk/) did not reveal the presence of any records of protected species within the 2km search area.

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Table 2.2 Records of protected or notable species within 1km of the site

Common name	*Scientific name*	Status	Location (Grid reference)	Date
Vesper bat species	*Vespertilionidae*	Habitats and Species Directive, W&C Act 1981 Sch 5, UKBAP, LBAP*	Roost record at SE377081	2002
Otter	*Lutra lutra*	W&C Act 1981 Sch 5, UKBAP, LBAP	SE386066	March 2005

2.2.5 Water bodies within 500m

From the desktop study it appears that there are no waterbodies located within the site or within a 500m radius of the site boundary (excluding potential small garden ponds in the neighbouring housing estates). The nearest waterbodies marked on all available map resources and aerial photos are located approximately 1km north of the site at the West Green works. It is therefore considered highly unlikely that any great crested newts would be present within the terrestrial habitats on the site. In addition the roads, railway lines and residential and industrial areas pose a significant barrier to the species' movement within the local area.

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3. Extended Phase 1 Habitat Survey

3.1 Methods

3.1.1 Flora

A Phase 1 habitat survey of the site and its surrounds was undertaken by an Entec ecologist on 13 February 2009; during the survey, distinct habitats were identified and any features of interest subjected to a more detailed description in a target note (TN)[5]. As the standard Phase 1 habitat survey methodology is mainly concerned with vegetation communities, the survey was extended[6] to allow for the provision of information on other ecological features, including identifying the presence/potential presence of legally protected and otherwise notable species.

3.1.2 Fauna

The methodologies used to establish the presence/potential presence of faunal species are summarised below. These relate to those species/biological taxa that the desk study and habitat types present indicated could occur on the site.

Badger

The survey aimed to identify and examine areas where badgers might occur by noting any evidence of badgers observed. This included:

- mammal paths;
- badger hairs caught in sett entrances/fences/vegetation;
- paw prints;
- evidence of foraging (usually in the form of 'snuffle holes');
- latrines; and
- badger setts.

A mammal path was assumed to be used by badgers if the character of the path (in terms of size) was appropriate and if any other signs were in the close vicinity (e.g. a badger sett).

Bats

An assessment of the suitability of the habitats on the site to support populations of bats was made. Where any mature trees were present these were inspected for evidence of cavities, splits, cracks, loose bark and dense and woody ivy (*Hedera helix*) growth that could be used by

[5] Joint Nature Conservation Committee (1993). *Handbook for Phase 1 Habitat Survey*. JNCC, Peterborough.

[6] Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. E&FN Spon, London.

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bats for roosting. Any buildings which were present within the site or directly adjacent to it were also considered for their potential to support roosting bats.

Birds

The site was assessed for its potential to provide nesting habitat for breeding birds or to support important assemblages of rare or notable bird species.

Reptiles

The site was assessed for its potential to provide sheltering, foraging and breeding habitats for the three more widely and abundantly occurring reptile species: common lizard, grass snake (*Natrix natrix*) and slow worm (*Anguis fragilis*). These native reptile species generally require open areas with mixed-height vegetation, such as heathland, rough grassland, open scrub or (in the case of grass snake) water body margins. Suitable well-drained and frost free areas are needed so that they can survive the winter.

Great Crested newt

Although the presence of ponds within the site or within 500m radius of it was not apparent on map resources, the field survey was used to confirm the absence of any on site ponds or other water bodies with potential to support great crested newt.

Other species

In addition, an assessment was made of the potential for the site to support any other species considered to be of value for nature conservation and that were identified as occurring within the study area by the desktop study.

3.2 Results

Figure 1 presents the Phase 1 habitat survey map, and indicates locations of Target Notes (TN). The following sections describe the habitats on and around the site, and also indicate where there was deemed to be the potential for protected and notable species to occur on site.

3.2.1 Site surrounds

The site is accessed off the B628 Pontrefract Road and is bordered to the east by a dismantled railway line, now used as the Trans Pennine Trail cycle/foot path. To the south of the site are residential housing estates of Lundwood itself, and a small industrial site comprising a fenced yard and warehouse building. To the north of the site is an area which appears to be publicly accessible, comprising mown amenity grassland interspersed with distinct blocks of young/ semi-mature plantation woodland.

It is unclear what the proposed vehicular access route into any future residential scheme would be, although it is considered that it is likely to be off Wilson Grove, Elwood or Priory Place. The site is currently fully accessible to the public from the Trans Pennine Trail and from paths off Wilson Grove and Priory Place. It is used for dog walking and has been subject to fly tipping.

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3.2.2 Overview of site conditions

The site covers an area of approximately 1.3ha and comprises one main area of poor semi-improved tussocky grassland, dominated by cocksfoot (*Dactylis glomerata*) meadow foxtail (*Alopecurus pratensis)* and Yorkshire fog (*Holcus lanatus*); with a strong ruderal component largely comprising common nettle (*Urtica dioica*), broad leaved dock (*Rumex obtusifolius*), rosebay willow herb (*Chamerion angustifolium*), mugwort (*Artemisia vulgaris*), hogweed (*Heracleum spondylium*) and Michaelmas-daisies (*Aster novi-begii* agg.).

Herb species recorded frequently across the site include creeping buttercup (*Ranunculus repens*), black knapweed (*Centaurea nigra),* red clover (*Trifolium pratense),* dandelion *(T. officinale* agg.*),* cow parsley (*Anthriscus sylvestris)* and ribwort plantain (*Plantago lanceolata).* Species recorded only occasionally are greater stitchwort (*Stellaria holostea*), bluebell (*Hyacinthoides non-scripta*) and bush vetch (*Vicia sepium).*

Scattered scrub occurs frequently across the grassland, with hawthorn (*Crataegus monogyna*), bramble *(Rubus fruticosus* agg.*)* and dog rose (*Rosa canina* agg.*)* present, as well as patches of small tree saplings (natural regeneration not obviously planted) of hazel (*Corylus avellana*), and silver birch (*Betula pendula*). More obviously planted areas of young trees (less than 5m in height therefore classified as scrub) including goat willow (*Salix caprea*) and apple sp. (*Malus* sp.) were also present within the site. The scrub cover is more extensive on the margins of the site, particularly alongside the block of tree cover alongside the northern boundary and at the north east corner of the site close to the Trans Pennine Trail footpath.

Along the northern boundary of the site a drainage ditch is present, which at the time of survey was predominantly dry comprising a narrow channel of approximately 1m wide, and banks of no more than 1m in height. The ditch does not support any significant aquatic vegetation and where water was present the quality appeared to be poor. General rubbish is also present within the ditch. A section of above ground pipeline is present within the north east corner of the site.

Outside the site boundary to the north is a block of young plantation woodland of mixed species including ash (*Fraxinus excelsior*) hawthorn, cherry (*Prunus* sp.), field maple (*Acer campestre*) and blackthorn (*Prunus spinosa*). The trees are all of similar age and are approximately 5 to 6m in height. The ground flora is lacking and comprises improved grassland where present.

3.2.3 Fauna

Badger

The habitats identified within the site have limited potential to support badger, particularly in view of their disturbed nature, and no evidence of badger activity was identified during the site visit.

Bats

There are no built structures or large mature trees on the site to provide potential roosting habitat for bats. The small trees present within the site or within the plantation block alongside the northern boundary of the site are not large enough to contain suitable features (such as crevices) to be able to support roosting bats. The on-site grassland and scrub habitats may however provide foraging habitat for bats roosting in the vicinity of the site, such as in the adjacent residential buildings.

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Birds

The tree and scrub habitats across the site have the potential to support common breeding bird species. Several common birds were recorded during the survey including blackbird (*Turdus merula*), blue tit (*Cyanistes caeruleus*), great tit (*Parus major*) and dunnock (*Prunella modularis*).

Great crested newt

The absence of any water bodies within the site was confirmed during the Phase 1 habitat survey. Given the apparent absence of any other water bodies within 500m and the presence of barriers, it is concluded that great crested newt are absent from the site.

Reptiles

The tussocky grassland, scrub and ruderal vegetation found across the site have some potential to provide sheltering and foraging habitat for reptiles. In addition, the spoil piles, ditch and scrub on the fringes of the site in combination with the more open area of the adjacent amenity grassland are also considered to provide good opportunities for basking and hibernating reptiles. Furthermore, the footpath and grassland to the north of the site provides a potential corridor to other areas of potential reptile habitat further north and south. Nevertheless, the distribution of reptiles within West Yorkshire is patchy and their occurrence within the Lundwood site is likely to be limited by the size of the site and the surrounding barriers and land use. Based on the legal protection status of common species of reptiles, which may be present at the site we have provided recommendations to ensure that the potential presence of reptiles is addressed during any future development works.

Other species

No other evidence of the presence of notable species was recorded at the site. The tussocky grassland could provide some limited value for butterflies, although given the limited botanical diversity of the sward it is unlikely to be an important site for rare macro invertebrate species.

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4. Conclusions and Recommendations

4.1 Conclusions

4.1.1 Habitats

The majority of the site comprises poor semi-improved grassland with frequent patches of tall ruderals and scattered scrub. The majority of habitats present at the site are of negligible nature conservation value and as such are not considered to be valued ecological receptors.

Given the distance of the site from the non-statutory designated sites identified by the desk study, any future development proposal for the site would not result in any potential impacts upon these sites of conservation interest.

4.1.2 Species

Habitat with potential to support legally protected species; reptiles and nesting birds, has been identified on-site. However due to the disturbed nature and size of the on-site habitats, these are not considered to be a significant constraint on any future development proposals subject to the adoption of the recommendations outlined in section 4.2 below to avoid breaching wildlife legislation.

4.2 Recommendations

Birds

Although a breeding bird survey is not deemed to be necessary, there is habitat on the site with potential to support breeding birds and therefore there is a requirement to avoid contravention of the legislation relating to nesting birds in the UK (see Appendix B). Vegetation clearance and building demolition should be undertaken outside of the main bird breeding season (generally considered to be late February to July inclusive). In the event that works need to be undertaken within this period, clearance should be preceded by an inspection of the vegetation or building by an experienced ecologist to identify evidence of bird breeding activity (taken as the commencement of nest building through to fledging). If such is found, works should be delayed until young birds have fledged.

Reptiles

Based on the negligible risk of reptiles being present within the site the requirement for specific surveys to determine the presence of reptiles at the site is not deemed necessary. Nevertheless in order to avoid any direct impact upon reptiles which may be present, albeit in low numbers across the site, it is recommended that top soil stripping is undertaken when reptiles are active (between May and September) to allow any individuals to escape direct killing or injury. The site should be cleared from one direction only i.e. not in several directions towards the middle of the site to also allow any individual access to area outside the development area. Where any clearance of earth bunds or spoil or rubble piles is required, their removal should be supervised

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by an ecologist to recover any disturbed reptiles and relocate to alternative suitable off-site habitat.

Bats

Development proposals for the site are currently unknown, therefore it is not possible to determine the requirement for bat surveys. Whilst the on-site habitats are unlikely to be important for bats, adjacent buildings may support roosts and the bordering disused railway line may be an important commuting corridor. If development proposals have the potential to affect bats in these areas, a bat activity survey of the site and immediate surrounding habitats may be required.

4.2.1 Ecological enhancement of the developed site

According to PPS9[2] there is a need to 'enhance biodiversity in green spaces and among developments so that they are used by wildlife and valued by people'. In order to adequately address this requirement, it is recommended that there is specialist ecological input into the development of the scheme design from the outset. This will ensure that the new development retains existing habitats used by protected and notable species on the site, as well as incorporating features within the design to enhance the habitats for biodiversity in general. Such features may include:

- Retention of tree and scrub lines which may be used by foraging and commuting bats;
- Increasing botanical diversity by planting native fruit and flower-bearing species (of local provenance); this will enhance the site for birds and increase invertebrate diversity, which in turn will enhance the site for foraging bats;
- Maximising greenspace in built areas through landscaping and green roofing;
- Provision of artificial roost sites for bats through installation of appropriate boxes and other roost spaces incorporated within new buildings;
- Avoidance of excessive lighting, particularly around artificial bat roost sites and commuting and foraging habitat;
- The creation of new water bodies, designed specifically for amphibians, supporting native aquatic or marginal vegetation;
- Installing reptile and amphibian hibernacula – i.e. piles of loose, inert fill with plenty of crevices, covered with top soil and turf with the inert material exposed around the margins to allow access for reptiles and amphibians;
- Creating compost heaps, carefully designed to provide habitat for reptiles. These should be positioned in sunny areas, with a number of criss-crossing branches forming the base on the ground, piled with grass cuttings, leaves and/or wood chippings; and
- Retaining a graded edge to grassland habitats, with a long grass sward, ruderal species and scrub buffer between short sward grass and denser scrub/woodland.

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Further guidance is provided in the publications 'Biodiversity by Design', 'Habitat Management for Bats'[7] and 'Herpetofauna Workers' Manual'[8].

[7] Entwistle, A. C., Harris, S., Hutson, T. M., Racey, P. A., Walsh, A., Gibson, S. D., Hepburn, I., Johnston, J. (2001). *Habitat Management for Bats.* Joint Nature Conservation Committee, Peterborough.

[8] Bullock, D. J., Oldham, R. and Corbett, K. (1998). Habitats and their management. In: Gent, A. H. and Gibson, S. D. eds. *Herpetofauna workers' manual.* Joint Nature Conservation Committee, Peterborough, pp61-73.

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Appendix A
Site Plan

1 page

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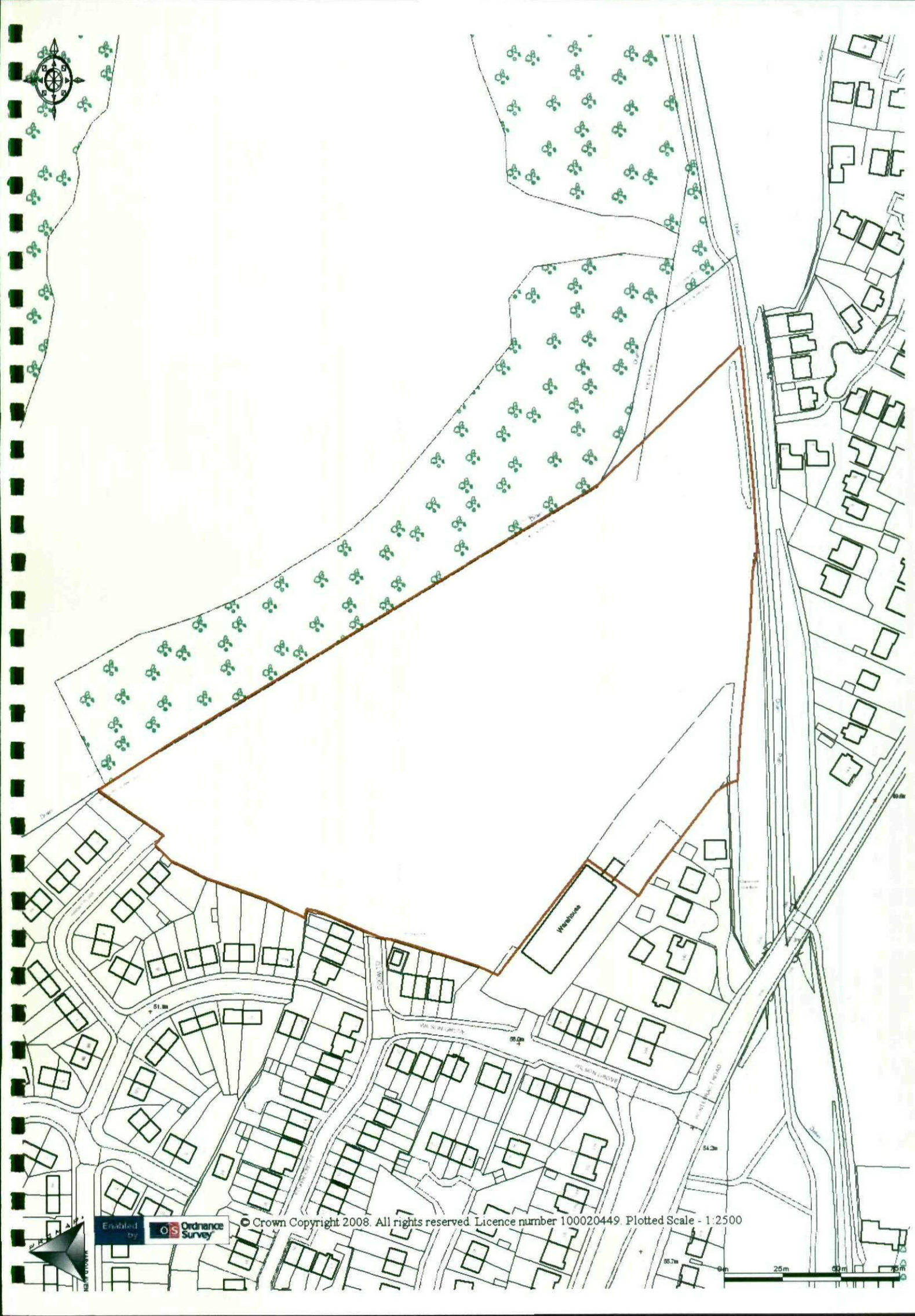

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Appendix B
Relevant Legislation Relating to Species

3 pages

Bats

All British bat species are listed on Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and are therefore afforded protection under Section 9 of this Act. In addition, all bat species are listed in Schedule 2 of *The Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994 No. 2716)* (as amended) (known as the Habitats Regulations) and are therefore protected under Regulation 39 of the Regulations. These Regulations make provision for the purpose of implementing European Union Directive on the *Conservation of Natural Habitats and of Wild Fauna and Flora 1992*, under which bats are included on Annex IV. The Act and Regulations makes it an offence, *inter alia*, to:

- intentionally kill, injure, take (handle) or capture a bat;
- intentionally or recklessly 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) - under the Habitats Regulations it is an offence to damage or destroy a breeding site or resting place of any bat; or
- intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection - under the Habitats Regulations it is an offence to deliberately disturb a bat (this applies anywhere, not just at its roost) in such a way as to be likely to significantly affect:
  - the ability of any significant group of bat species to survive, breed, or rear or nurture their young; or
  - the local distribution or abundance of that bat species.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*);
- Lesser horseshoe bat (*Rhinolophus hipposideros*);
- Bechstein's bat (*Myotis bechsteinii*);
- Barbastelle (*Barbastella barbastellus*) and
- Greater mouse-eared bat (*Myotis myotis*)

These species are so rare that the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside of SACs, the level of legal protection that these species receive is the same as for other bat species. However, because of the nature conservation importance of all populations of these five species, it is less likely that adequate mitigation for loss of roosts of these species will be possible.

For projects in England: Further details of the above legislation, and of the roles and responsibilities of developers and planners in relation to bats, can be found in Natural England's

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Bat Mitigation Guidelines, which can be downloaded from the NE website: http://www.english-nature.org.uk/pubs/publication/PDF/Batmitigationguide2.pdf#search=%22bat%20mitigation%20guidelines%22

Reptiles

The four widespread[9] species of reptile that are native to Britain, namely viviparous lizard, slow worm, adder and grass snake, are listed on Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and are afforded limited protection under Section 9 of this Act. This makes it an offence, *inter alia*, to:

- intentionally kill or injure any of these species.

Birds

With certain exceptions[10], all wild birds, their nests and eggs are protected by the *Wildlife and Countryside Act 1981* (as amended). Therefore, it is an offence, *inter alia*, to:

- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or
- take or destroy the egg of any wild bird.

Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

disturb any bird while it is nest building, or is at a nest containing eggs or young; or disturb the dependent young of any such bird.

Section 34 of this Act places a duty on any person who imports, produces, carries, keeps, treats or disposes of controlled waste to handle waste responsibly and in accordance with the law at all stages between its production and final recovery or disposal.

Waste must be transferred to an authorised person (a registered carrier, or one who is exempted from registration by the *Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991*). A waste transfer note must be completed and signed, provisions relating to which are set out in the *Environmental Protection (Duty of Care) Regulations 1991 (as amended)*.

The Hazardous Waste Regulations 2005 set out provisions relating to the handling and movement of hazardous waste. Untreated Japanese knotweed is not classed as hazardous waste, but material containing the plant which has been treated with certain herbicides, may be classified as hazardous waste. Paragraph 4 of Schedule 4 of the *Waste Management Licensing Regulations 1994* describes relevant objectives in relation to the disposal or recovery of waste. These include:

---

[9] The two other native species of British reptile (sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*) receive a higher level of protection under the *Wildlife and Countryside Act* 1981 (as amended). However, the distribution of these species is restricted to a limited number of sites in particular geographic locations.

[10] Some species, such as game birds, are exempt in certain circumstances.

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- ensuring that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment and in particular without:
  - risk to water, air, soil, plants or animals; or
  - causing nuisance through noise or odours; or
  - adversely affecting the countryside or places of special interest

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Appendix C
Desk Study – West Yorkshire Ecology Report, Magic plan and search report

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Entec

Site Check Report

Report generated on May 5 2009.

You clicked on the point:
Grid Ref: SE 374 078
Full Grid Ref: 437486 , 407886

The following features have been found within 2,000 metres of your search point:

Counties, Metropolitan Districts and Unitary Authorities (GB)

Geographic Level	Name
METROPOLITAN DISTRICT	BARNSLEY

NUTS1 - Government Office Regions (GB)

Hotlink	Name	Reference
http://www.statistics.gov.uk/geography/nuts_york_hum.asp	YORKSHIRE AND THE HUMBER	UKE

Ancient Woodland (England)

Grid Reference	Wood Name	Theme ID	Theme Name
SE387067		1411835	ANCIENT & SEMI-NATURAL WOODLAND
SE387065		1411832	ANCIENT & SEMI-NATURAL WOODLAND
SE382069		1411836	ANCIENT & SEMI-NATURAL WOODLAND

Local Nature Reserves (England)

Name	Reference
DEARNE VALLEY PARK	1008867
CARLTON MARSH	1008825

National Nature Reserves (England)

There are no features within your search area.

Ramsar Sites (England)

There are no features within your search area.

Special Protection Areas (England)

There are no features within your search area.

Special Areas of Conservation (England)

There are no features within your search area.

Sites of Special Scientific Interest (England)

There are no features within your search area.

Areas of Outstanding Natural Beauty (England)

There are no features within your search area.

Environmentally Sensitive Areas (England)

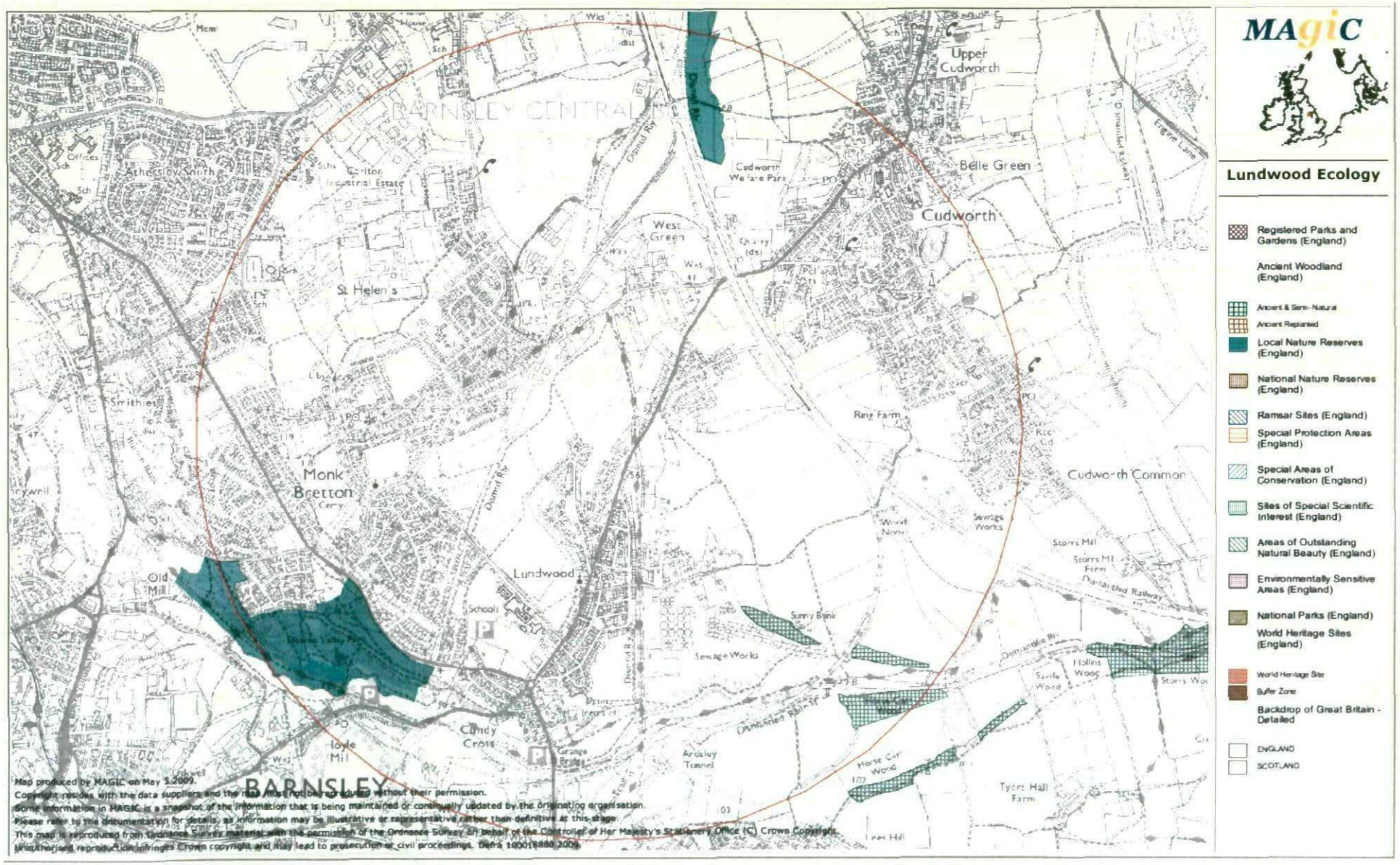
There are no features within your search area.

National Parks (England)

There are no features within your search area.

World Heritage Sites (England)

There are no features within your search area.


MAGIC
Lundwood Ecology
Registered Parks and Gardens (England)
Ancient Woodland (England)
Ancient & Semi-Natural
Ancient Replanted
Local Nature Reserves (England)
National Nature Reserves (England)
Ramsar Sites (England)
Special Protection Areas (England)
Special Areas of Conservation (England)
Sites of Special Scientific Interest (England)
Areas of Outstanding Natural Beauty (England)
Environmentally Sensitive Areas (England)
National Parks (England)
World Heritage Sites (England)
World Heritage Site
Buffer Zone
Backdrop of Great Britain - Detailed
ENGLAND
SCOTLAND
BARNSLEY CENTRAL
BARNSLEY
Upper Cudworth
Belle Green
Cudworth
Cudworth Common
Monk Bretton
Lundwood
St Helen's
West Green
Athersley South
Carlton Industrial Estate
Smithies
Old Mill
Doyle Mill
Cundy Cross
Grange Bridge
Ardsley Tunnel
Tyers Hall Farm
Ring Farm
Sewage Works
Sunny Bank
Hollins Wood
Storrs Mill
Cudworth Welfare Park
Quarry (ds)
Schools
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West Yorkshire Ecology

West Yorkshire Joint Services

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Wakefield
WF1 2DE
Tel/Fax: 01924 306 793
Email: ecology@wyjs.org.uk

ECOLOGICAL RECORDS SEARCH

FOR A SITE AT

LUNDWOOD, BARNSLEY

Ref No:- 20090520 BA PH

Date: 20th May 2009

Prepared For Jennie Caddick

Entec UK Ltd
Princes Exchange
Princes Square
Leeds LS1 4BY

West Yorkshire Joint Services are provided by a Joint Committee of the Metropolitan Districts of Bradford, Calderdale, Kirklees, Leeds and Wakefield.

West Yorkshire Joint Services

Bradford Calderdale Kirklees Leeds Wakefield

Table of Contents

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2 Mammals 1
2.1 Bats 1
2.2 Terrestrial Mammals (Excluding Bats) 1
3 Designated sites 2
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Appendix A – Local Site Citations i

1 Introduction

This report provides a summary of the notable species and designated sites information held by West Yorkshire Ecology (WYE) within 2km of grid reference SE 374 078.

The information within this report is supplied subject to WYE's 'Terms and Conditions', which can be viewed on the WYE website (http://www.ecology.wyjs.org.uk).

2 Mammals

2.1 BATS

West Yorkshire Ecology holds the following bat record within your defined search area. The West Yorkshire Bat Group (c/o Jane Liddle, wybatsearch@blueyonder.co.uk) holds additional records within this area.

Table 1 – Bat records

Grid Ref	Common Name	*Latin Name*	Date	Record Type
SE377081	Vesper Bat species	*Vespertilionidae*	04/07/2002	Roost

Bats are protected under Schedule 5 of the Wildlife & Countryside Act (1981, as amended) and are also listed under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act). They are protected by law against all of, but not limited to, the following:

- intentional or reckless killing, injuring, taking;
- damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection; and
- disturbance of animal occupying such a structure or place.

2.2 TERRESTRIAL MAMMALS (EXCLUDING BATS)

West Yorkshire Ecology holds the following additional mammal records within the search area:

Table 2 - Terrestrial mammal records (excluding bats)

Grid Ref	Common Name	*Latin name*	Date
SE386066	Otter	*Lutra lutra*	Mar-05

Otters are listed under Schedule 5 of the Wildlife and Countryside Act (1981) and as such are protected by law against all of, but not limited to, the following:

- intentional or reckless killing, injuring, taking;
- damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection; and
- disturbance of animal occupying such a structure or place.

Otters are also listed on the UK Biodiversity Action Plan (*Report on the Species and Habitat Review*, June 2007).

3 Designated sites

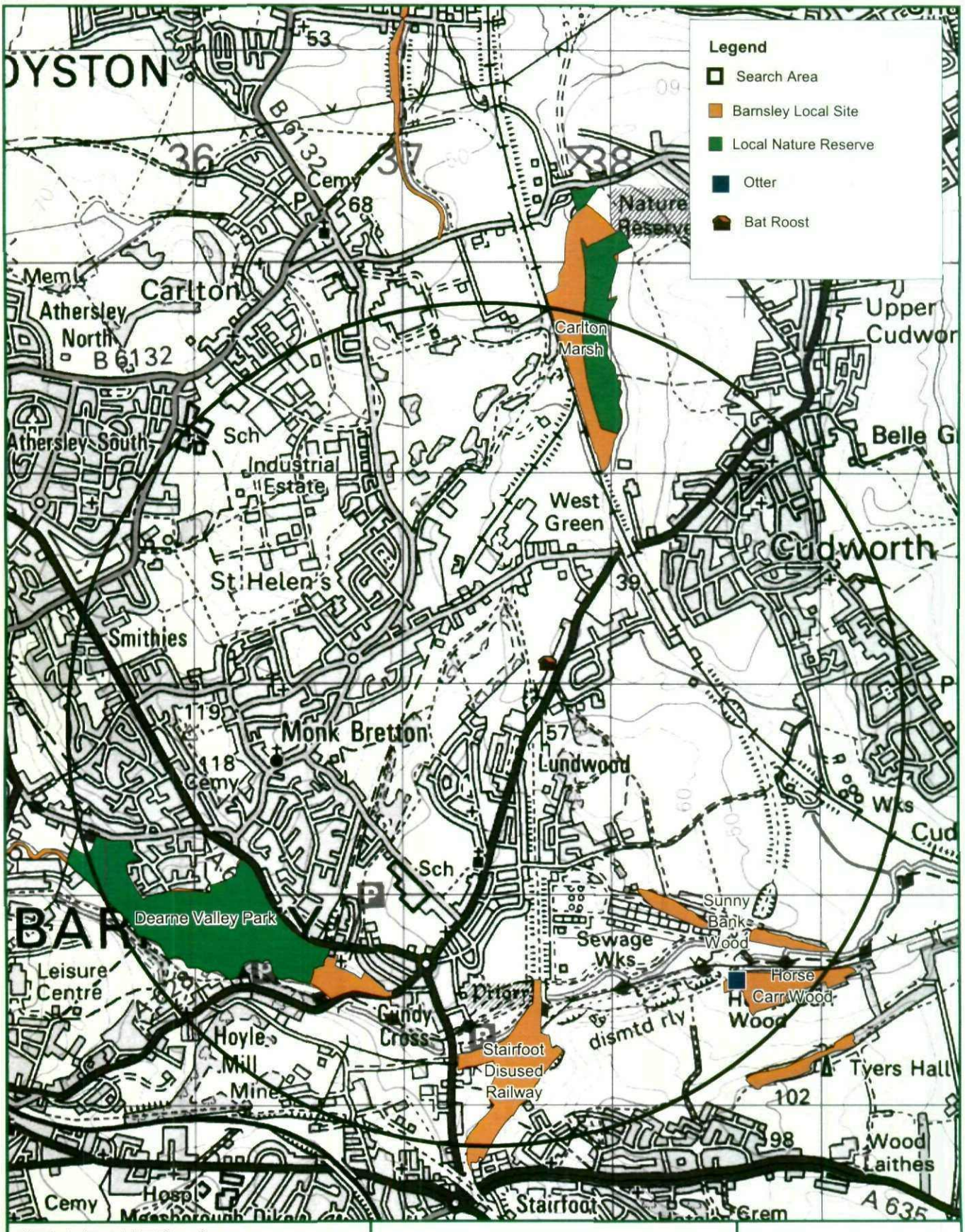
3.1 LOCAL SITES

There are 5 Barnsley Local Sites within your search area, namely Carlton Marsh, Sunny Bank Wood, Horse Carr Wood, Cliff Wood and Stairfoot Disused Railway. Local Sites are areas identified by the relevant local authority as being important for their flora, fauna, geological or physiological features. They are of county wide importance.

Copies of notification for these sites are provided in Appendix A.

3.2 LOCAL NATURE RESERVES

There are 2 Local Nature Reserves within your search area, namely Carlton Marsh and Dearne Valley Park. LNRs are sites of local or district-wide importance for the enjoyment, study or conservation of wildlife, geological features and landforms, but there is seldom detailed ecological information on record for them.



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N W E S

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kilometres

West Yorkshire Ecology
West Yorkshire Joint Services

FIGURE 1: SPECIES AND DESIGNATED SITES

Registry of Deeds, Newstead Road, Wakefield, WF1 2DE Ph/Fax: 01924 306 793 Email: ecology@wyjs.org.uk Licence No LA 076406, © WYE

Appendix A. Local Site Citations

Site Name: Carlton Marsh Parish:

Grid Reference: SE 370900 Area: 18.4 ha

SITE DESCRIPTION

Carlton Marsh is located between Carlton and Shafton at an altitude of 50 m AOD. It is a Local Nature Reserve (LNR). The site comprises a variety of habitats including woodland, dry and marshy grassland and open water.

An island had been recently created in the eastern water area at the time of 1990/1 survey. The northern part of the marsh has areas of open water and the surrounding marshy grassland contains stands of reed (Phragmites australis) and great reedmace (Typha latifolia) swamp. The Nature Reserve boundary includes an areas of rough marshy grassland in which two ponds have been created.

In the southern areas great burnet (Sanguisorba officinalis) is found with adder's tongue (Ophioglossum vulgatum), a rare plant in the district. An area of willow (Salix species) carr grows beside Cudworth Dyke and bankside trees include hazel (Corylus avellana), elder (Sambucus nigra) and hawthorn (Crataegus monogyna) and areas of teasel (Dipsacus fullonum). In the south there is an abundance of great reedmace along the dyke with rose-bay willow-herb (Chamerion angustifoilium), nettle (Urtica dioica), yarrow (Achillea millefolium) and some hawthorn. Birch (Betula species), hawthorn and hazel form the southern boundary to this area.

Part of the disused railway forms the western boundary of the site and this comprises scattered scrub of birch with semi-improved grassland containing flowering plants such as yellow toadflax (Linaria vulgaris), coltsfoot (Tussilago farfara), adder's tongue and lesser knapweed (Centaurea nigra) with southern marsh orchid (Dactylorrhiza praetermissa), a rare plant in the district.

A path across the site is fenced and a patch of heather (Calluna vulgaris) is found in this area. The semi-improved grassland south of the path is grazed and has scattered trees of hawthorn. An area of mire in the south of the site contains Sphagnum species with cotton-grass (Eriophorum vaginatum) and southern marsh orchid.

The site is noted for its bird interest and is a migration ringing station for Barnsley Ringing Group. The interest includes breeding grasshopper, reed and sedge warbler, little grebe, little owl and lesser whitethroat. A variety of birds use the site on passage; common and green sandpiper, wheatear, whinchat, spotted flycatcher, redstart, long-eared owl and roosting swallows. In winter the site is used by teal, snipe, goldcrest, siskin, golden plover, lapwing, Jack snipe and wildfowl. Fieldfare and redwing roost there in winter.

There is a rich diversity of invertebrate interest and a history of recording at the site. A recent notable find is the Red Data Book dipteron Dichetophora finlandica.

SITE EVALUATION

Criteria

Size: Carlton Marsh is an average-sized site containing a significant area of wetland.

Diversity: The site contains a diversity of habitats including standing and running water, woodland, swamp, mire, marshy and dry grassland. These habitats comprise a diversity of plant species and support a rich variety of birds and invertebrates.

Naturalness: The site is owned and managed by Barnsley MBC who are carrying out management to enhance its nature conservation interest.

Rarity: Ophioglossum vulgatum and Dactylorhiza praetermissa are both rare plants in Barnsley. Dichetophora finlandica is a Red Data Book (Shirt, 1987) species and as such is considered as a rare and threatened species in Britain.

Fragility: There are no obvious threats to the site.

Typicalness: The marsh areas contain a typical range of plant species including single species stands of Typha latifolia and Phragmites australis.

Evaluation of important features

Site Feature				
1.	Habitat type	Importance		
		District		
	Woodland	Low		
	Standing water	Low		
	Running water	Low		
	Swamp	High		
	Mire	Average		
	Marshy grassland	High		
	Grassland	Average		
2.	Species National	County	District	
	Ophioglossum vulgatum			High*
	Dactylorhiza praetermissa			High*
	Breeding birds			High
	Passage birds			High
	Wintering birds			High
	Invertebrates			High
	Dichetophora finlandica	High*		

*- Requires survey to verify current status.

Existing site designations: LNR, NHS

Site justifications: Carlton Marsh is a diverse site comprising a mosaic of largely wet habitats including open water, swamp and marshy grassland and dry grassland which supports populations of Ophioglossum vulgatum and Dactylorrhiza praetermissa, both rare plants in Barnsley. The site is most noted for its faunal interests, in particular the rich diversity of breeding, wintering and passage birds which it supports and the range of invertebrate fauna on the site including Dichetophora finlandica, a Red Data Book species.

Barnsley Biodiversity Action Plan
HAP 3 Wet Woodland, HAP 9 Lowland Dry Acid Grassland, HAP 10 Lowland Heathland, HAP 13 Reedbeds, HAP 14 Ponds and Canals, HAP 15 Running Water, HAP 16 Standing Water.

SITE MANAGEMENT

The site is managed by Barnsley MBC who have a management plan in operation on the site.

Management objective:

Initial Management:

Ongoing management:
New pond and wet meadow habitats have been created. The intention is to graze this area with cattle.

Constraints:

Opportunities:

SITE CONSTRAINTS AND OPPORTUNITIES

Constraints:

Opportunities:
LNR status and local authority ownership, with interpretative facilities on the site, make this an ideal location for publicity of the NHS system.

REVIEW OF BARNSLEY NHS SITES - FEBRUARY/MARCH 2003

Carlton Marsh

1. Site Boundaries
The site boundaries, as shown on the 1990 Survey Map, were identified as being correct with the addition of an area to the north west (included within the nature reserve boundary) where two new ponds have been created. There is also an area of marshy land outside the southern tip of the nature reserve, which may be worthy of inclusion following further survey.

2. Main Habitat Components
The main habitat compartments shown on the 1990 Survey Map were identified as being correct, although the areas of marshland around the ponds appear to have increased and the site generally appears to be wetter than the 1990/1 site report suggests.

3. Habitat Change/Loss
No habitat change or loss noted

4. Notable/Rare Species
Not evident during 2003 survey. A survey later in the year is recommended.

5. Potential Threats
None

Site Name: Cliff Wood Parish:

Grid Reference: SE 365067 Area: 30.5 ha

SITE DESCRIPTION

Cliff Wood is located at Cundy Cross in the centre of Barnsley and in the corridor of the River Dearne, at an altitude of 50 m AOD. The river forms the southern boundary of the site. The site is a mosaic of habitats including woodland, scrub, grassland, marsh and open water.

Grassland adjacent to the road in the north is planted with hawthorn (Crataegus monogyna) and wild cherry (Prunus avium). The main blocks of woodland comprise scrubby oak (Quercus species) and birch (Betula species). The northern area of woodland has an understorey of bracken (Pteridium aquilinum) and bramble (Rubus fruticosus) with a ground flora of creeping soft-grass (Holcus mollis) and wavy hair-grass (Deschampsia flexuosa). A new pond in the south of this area has willow (Salix species) around it. The woodland is divided by a disused section of the Barnsley canal and in the old canal banks are found white willow (Salix alba), goat willow (S.caprea) and alder (Alnus glutinosa). The wood slopes upwards to the north-west and has a tree cover of birch, oak and hazel (Corylus avellana).

The route of the old canal is now a wide, grassy path with woodland sloping away to the south and a bank sloping upwards to the north. The upper bank adjacent to the path has been planted with white poplar (Populus alba), cherry (Prunus species), white willow, hazel, guelder rose (Viburnum opulus), alder and horse chestnut (Aesculus hippocastanum). Bracken dominates the open areas. Single trees of the same species have been planted with white poplar and broom (Cytisus scoparius) with occasional field horsetail (Equisetum arvense). The banks south of the path comprise birch, hawthorn, oak *and* rowan (Sorbus aucuparia) with bracken and bramble.

A grassy area with copses of trees is found in the west of the site with a plantation of mixed deciduous trees of ash (Fraxinus excelsior), beech (Fagus sylvatica), oak, birch and hazel to the east. A new pond south of this plantation is edged by willow and great reedmace (Typha latifolia) with lesser water-parsnip (Barula erecta) in the water. The adjacent lake is used for fishing and has small trees scattered around the banks.

The southern part of the woodland is wetter with goat willow, crack willow (Salix fragilis) and common sallow (S. cinerea) and a wetland area of tall herbs including nettle (Urtica dioica), bittersweet (Solanum dulcamara) and an abundance of hemlock water-dropwort (Oenanthe crocata), a rare plant in the district. Small, open flush areas of marshy grassland contain common-spotted orchid (Dactylorrhiza fuchsii). Further east a wetland area comprises great reedmace and soft rush (Juncus effusus) with lesser pond sedge (Cares acutiformis), a rare plant in the district.

Willow carr of goat willow is found east of the spring and further east is dense woodland of ash, rowan and oak with hawthorn, hazel and elder (Sambucus niga) and bracken and bramble in the open areas. The eastern part of the wood is a steep bank down to the road with old coppice of hazel and sessile oak (Quercus petraea). Other trees include ash, field maple (Acer campestre) and birch with a mixed ground cover of ivy (Hedera helix), wood sage (Teucrium scorodonia), bittersweet and bracken. Scrubby grassland is adjacent to the road and includes yellow toadflax (Linaria vulgarias), coltsfoot (Tussilago farfara) and pineapple weed (Matricaria matricariodes).

SITE EVALUATION

Criteria

Size: Cliff Wood is an average -sized site. It has a large population of Oenanthe crocata, a rare plant in Barnsley.

Diversity: The site comprises a great variety of habitats including dry and wet woodland, scrub, grassland, marsh and open water with a correspondingly large number of plant species.

Naturalness: The site is under active management and there are areas of plantation woodland. Much of the site comprises semi-natural habitats.

Rarity: Cliff Wood is located in the middle of an urban area where there is no other woodland and is thus a scarce habitat in the locality. Oenanthe crocata is a rare plant in Barnsley and found in abundance in Cliff Wood. Carex acutiformis is only also a rare plant in Barnsley.

Fragility: The location of Cliff Wood in the centre of an urban area poses threats from illegal tipping and the possibility of infill residential development. Barnsley MBC own the site and would seek to retain its integrity.

Typicalness: Much of the woodland is a good example of oak/birch woodland and there are areas of representative willow carr.

Evaluation of important features

Site Feature		Importance		
1.	Habitat type	District		
	Woodland	Average		
	Scrub	Low		
	Grassland	Low		
	Marsh	High		
	Open water	Low		
2.	Species National	County	District	
	Oenanthe crocata			Average*
	Carex acutiformix			Average*

* - Requires survey to verify current status on the site.

Existing site designations: NHS

Site justifications: Cliff Wood is a diverse area of woodland, grassland and wetland habitats in Barnsley town centre, where there are few semi-natural habitats. It includes good examples of oak/birch woodland and willow carr, an abundance of Oenanthe crocata and an area of Carex acutiformis, both rare plant species in the district.

Barnsley Biodiversity Action Plan
HAP 1 Upland Oak Woodland
HAP 3 Wet Woodland
HAP 14 Ponds and Canals

SITE MANAGEMENT

Cliff Wood is owned by Barnsley MBC. A management plan for the site is required to balance the needs of recreation and nature conservation on the site.

Management objective:
To maintain and enhance the present diversity of habitats.

Initial Management:
Consider early selective felling of some trees in the densely planted woodland area to encourage woodland flora.
Clear some tall herb vegetation from the wetland area to encourage diversity of wetland plants.

Ongoing management:

Constraints:
Current lack of management plan covering the various interests of the site. Present site management is biased towards recreation.

Opportunities:
Owned by Barnsley MBC, so opportunities for management to be carried out within the management plan, possibly with involvement of local people.

SITE CONSTRAINTS AND OPPORTUNITIES

Constraints:
Threats to site from activities such as motorcycling and tipping.

Opportunities:
Site very well-used by local people and crossed by many public paths (not shown on boundary map as the network is complex).
Ownership by Barnsley MBC gives opportunity to promote NHS and encourage community involvement in site, which may discourage tipping and other damaging activities.
Environmental education opportunities with nearby schools.

REVIEW OF BARNSLEY NHS SITES - FEBRUARY/MARCH 2003

Cliff Wood

1. Site Boundaries
The site boundaries, as shown on the 1990 Survey Map, were identified as being correct. This site linked to NHS 25 Barnsley Canal at Wilthorpe by the candidate NHS Old Mill Lane.

2. **Main Habitat Components**
The main habitat compartments shown on the 1990 Survey Map were identified as being correct.

3. Habitat Change/Loss
No habitat change or loss noted. Many parts of the site are still managed for recreation and on the day of the survey it was obvious that it is heavily utilised by the public especially around the ponds. Much of the site still contains valuable habitats.

4. Notable/Rare Species
Not evident during survey (March 2003).

5. Potential Threats
None

x

Site Name: Sunny Bank, Horse Carr and Storrs Wood

Parish:

Grid Reference: SE 389066

Area: 19.5 ha

SITE DESCRIPTION

Sunny Bank Woods, Horse Carr Wood and Storrs Wood are located on the eastern outskirts of Barnsley in the corridor of the River Dearne, at an altitude of 50 m AOD. The river separates Sunny Bank Woods from Horse Carr Wood and forms the northern boundary of Storrs Wood.

These four discrete areas form a series of similar woodlands dominated by silver birch (Betula pendula) and downy birch (B. pubescens) with sessile oak (Quercus petraea) and occasional sycamore (Acer pseudoplatanus). There is good regeneration of young oak in the woods. The trees are generally well-spaced throughout the woods. The woodland understorey is mainly of elder (Sambucus nigra) and the ground flora is dominated by mosaics of creeping soft-grass (Holcus mollis) or bracken (Pteridium aquilinum) or bramble (Rubus fruticosus) with bluebell (Hyacinthoides non-scripta) in Horse Carr Wood. White climbing fumitory (Corydalis claviculata), a rare plant in the district, is found in abundance in Horse Carr Wood and in Sunny Bank Woods. Storrs Wood has sweet cicely (Myrrhis odorata) and aspen (Populus tremula), a rare plant in the district, on the river bank and bur-reed (Spaganium erectum) and fennel-pondweed (Potamogeton pectinatus) in the river.

An additional narrow strip of ancient woodland, omitted from the original site lies to the south of Horse Carr Wood. This area of oak, birch and sycamore woodland also has a herb layer of bluebell and brambles. There is regeneration of oak in an area of adjacent grassland. A jack snipe was flushed from the eastern end of this areas of woodland in March 2003.

The woodlands support breeding great spotted and green woodpecker, sparrowhawk, tree pipit, and turtle dove (a Bird of Conservation Concern). A protected animal is found in the woods. The scarce oak nut weevil Curculia venosus occurs in Storrs Wood.

SITE EVALUATION

Criteria

Size: Each of the four woodlands are of small size. The woods support a large population of Corydalis claviculata, a rare plant in Barnsley.

Diversity: The woods are not particularly diverse in plant species. They support a variety of fauna including protected animal, several breeding bird species and a scarce weevil species.

Naturalness: The woods are all existing ancient semi-natural woodland (ASNW) (NCC, 1986) with an almost entirely native, broadleaved tree cover.

Rarity: Populus tremula and Corydalis claviculata are rare plants in Barnsley. Curculia venosus is a scarce species, particularly in the north of Great Britain (Coldwell, 1991). The site supports a population of protected animals which are widespread in Great Britain, but their numbers are not great in Yorkshire and particularly low in South and West Yorkshire.

Fragility: Protected animal vulnerable to illegal activities. There is rubbish dumped in Sunny Bank west and the east of Storrs Wood.

Typicalness: This series of woods is a good example of oak/birch woodland with a typical ground flora.

Representativeness: The woods are located within an urban area which has little woodland and are representative of oak/birch woodland in the eastern part of the district.

Evaluation of important features

Site Feature		Importance	
1.	Habitat type	District	
	Woodland	High	
2.	Species National	County	District
	Protected animal		Average*
	Breeding birds		Average
	Corydalis claviculata		High*
	Populus termula		Average*
	Curculia venosus		High*

* Requires survey to verify current status.

Existing site designations: Horse Carr Wood. Existing ASNW. Tree Preservation Order (TPO) exists on Horse Carr Wood, NHS

Site justifications: Sunny Bank Woods, Horse Carr Wood and Storrs Wood are good examples of oak/birch woodland with a typical ground flora, including a large population of Corydalis claviculata, a rare plant in Barnsley. The woodlands are all existing ancient semi-natural woodland with a predominantly native broadleaved tree cover, a scarce habitat in the district. They are locate din an urban area where there is little woodland. The site supports a variety of faunal interests including a number of breeding bird species, a protected animal and a scarce species of oak nut weevil, Curculia venosus.

Barnsley Biodiversity Action Plan: HAP 1 Upland Oak Woodland, FLS 5 Bluebell

SITE MANAGEMENT

Management objective:
To maintain the existing woodland habitat.

Initial Management:
In the south-west of Storrs Wood there are many tall, slender trees close together. Selectively thin to allow unrestricted growth of trees.

Ongoing management:

Constraints:

Opportunities:
Liaise with landowners regarding planting trees to link the separate woodland blocks. This could be in the form of hedges with hedgerow trees initially and build up a wooded link over time.

SITE CONSTRAINTS AND OPPORTUNITIES

Constraints:
Threats posed by rubbish dumping in Sunny Bank west and Storrs Wood.

Opportunities:
Close proximity to urban areas could make the woods ideal to promote as community woodlands. Giving the woods a higher profile in local people's minds may discourage dumping and encourage people to safeguard the woods.

REVIEW OF BARNSLEY NHS SITES - FEBRUARY/MARCH 2003

Sunny Bank, Horse Carr and Storrs Wood

1. Site Boundaries
The site boundaries, as shown on the 1990 Survey Map, were identified as being correct except for the eastern section of Sunny Bank Wood which would appear, from the aerial photographs to be much narrower strip of woodland than is indicated on the Habitat Map. A small strip of Ancient Semi-Natural Woodland to the south of the site is suggested for inclusion as this is, in fact, a relict area of Horse Carr Wood.

2. Main Habitat Components
The main habitat compartments shown on the 1990 Survey Map were identified as being correct.

3. Habitat Change/Loss
Some changed to woodland boundaries have been noted.

4. Notable/Rare Species
Not evident at time of 2003 survey.

5. Potential Threats
Motorcycling is damaging the northern section of Horse Carr Wood and Storrs Wood. There is a large amount of fly tipping in the old railway cutting under Storrs Mill Lane.

Site Name: Stairfoot Disused Railway Parish:

Grid Reference: SE 373063 Area: 15.1 ha

SITE DESCRIPTION

Stairfoot Disused Railway is located between Stairfoot and Ardsley to the south and Cundy Cross to the north, at an altitude of 40 m AOD. The site comprises two disused railway lines and their adjacent habitats, including areas of attractive ruderal and meadow flora. The River Dearne forms the northern boundary of the site.

In the west of the site is a dense thicket of hawthorn (Crataegus monogyna). A pond and area of fen adjacent to this scrub contains great reedmace (Typha latifolia). Fennel pondweed (Potamogeton pectinatus), bur-reed (Sparganium erectum) and hemlock water-dropwort (Oenanthe crocata), a rare plant in the district, were also noted in 1990/1. False fox-sedge (Carex otrubae) was found in large numbers and brown sedge (C. disticha) a rare plant in the district was also reported as growing here. Part of this wetland area is spring-fed and the vegetation is dominated by an abundance of water mint (Mentha aquatica), gipsy-wort (Lycopus europaeus) and common skull-cap (Scutellaria galericulata).

Earth had been tipped at the western end of the rail track and several attractive annuals such as field poppy (Papaver rhoeas) and opium poppy (P. somniferum), tall rocket (Sisiymbrium altissimum) and common melilot (Melilotus officinalis) were noted on this area in 1990/1. Bracken (Pteridium aquilinum) dominates the bank of the rail track in the east. There is an area of semi-improved grassland adjacent to the river dominated by false oat-grass (Arrhenatherum elatius) with hoary pepperwort (Cardaria draba), cat's ear (Hypochaeris radicata), ox-eye daisy (Leucanthemum vulgare) and tansy (Tanacetum vulgare). (Species recorded in 1990/1).

In 1990/1 the rail tracks had much bare ground and have been colonised by a diversity of interesting plants including broom (Cytisus scoparius), rat's rail fescue (Vulpia myuros) and dark green mouse-ear chickweed (Cerastium diffusum) both of which were only found on this site in the district. Other plants include lesser knapweed (Centaurea nigra), greater knapweed (C. scabiosa) and hare's foot (Trifolium arvense) both plants rare in the district, restharrow (ononis repens), wild mignonette (Reseda lutea) and weld (R. Luteola). The open nature of the tracks has decreased since 1990, with the encroachment of birch scrub. Elsewhere, landscaping associated with the Trans Pennine Trail has led to the loss of some acid grassland and trackbed habitats, especially at the southern end of the site.

The site has been used by breeding sparrowhawk and barn owl, a protected species under the Wildlife and Countryside Act 1981 and a rare species in Barnsley. Swift and swallow (a Bird of conservation Concern) feed over the site on passage and fieldfare and redwing roost there in winter. Daubenton's bats roost in a tunnel on the edge of the site and common toad, common frog and smooth newt have bred on the site.

SITE EVALUATION

Criteria

Size: Stairfoot Disused Railway is a fairly small site comprising a variety of habitats.

Diversity: The habitats on the site include scrub, grassland, ruderal communities, fen and standing water. The site formerly had one of the best ruderal floras in the district although this interest has decreased over time. These habitats support a variety of animals including breeding, wintering and passage birds, a Daubenton's bat roost and 3 species of breeding amphibian.

Naturalness: The site is almost entirely man-made, but had developed semi-natural habitats since the railway lines became disused. The creation has caused the loss of some semi-natural habitats but significant areas of semi-natural habitat still remain.

Rarity: The site is located in an urban area and contains the best wetland area remaining in the central Dearne valley. Barn owl has bred within the site. This species is protected from harm under Schedule 1 of the Wildlife and Countryside Act 1981. It is a scarce and declining bird in Britain (NCC, 1989) and only about 12 pairs breed in the district (Carr and Massey, 1996). Daubenton's bats are considered to be vulnerable and their numbers declining in Great Britain (NCC, 1989). All species are protected under the Wildlife and Countryside Act 1981. Several of the ruderal plant species found on the site are of limited distribution in the district and this was the only site in the district for Carastium diffusum and Vulpia myuros. Oenanthe crocata, Carex disticha, Trifolium arvense and Centaurea scabiosa are rare plants in Barnsley.

Fragility: Dumping of ash and rubbish into the site from the adjacent factory has been a problem in the past. The fen and open water is vulnerable to pollution.

Typicalness: The artificial origins of much of this site make it difficult to classify any of the semi-natural habitats as typical of a particular vegetation type.

Evaluation of important features

Site Feature		Importance		
1.	Habitat type	District		
	Scrub	Low		
	Ruderal communities	Moderate		
	Grassland	Average		
	Fen	High		
	Standing water	Average		
2.	Species	National	County	District
	Centaurea scabiosa			Average*
	Trifolium arvense			Average*
	Vulpia myuros			High*
	Cerastium diffisum			High*

Carex disticha			Average*
Oenanthe crocata			Average*
Barn owl	Average	High	
Breeding birds			Average
Wintering Birds			Average
Daubenton's bats			High

* Requires survey to verify current status.
Existing site designations: NHS

Site justifications: Stairfoot Disused Railway is a diverse site in an urban area. It was noted for one of the best ruderal floras in the district and contains the best remaining wetland area in the central Dearne valley. This was the only site in the district for Vulpia myuros and Cerastium diffusum and four species which are rare in Barnsley have occurred here. This variety of habitats support a diversity of fauna including 3 amphibian species and breeding, passage and wintering birds. Barn owl, a scarce and vulnerable species, and Daubenton's bats are protected species under the Wildlife and Countryside Act 1981.

The quality of the site has been diminished through the construction of the Trans Pennines Trail and the ruderal communities for which the site was noted may have been lost. Further survey in the appropriate season is recommended so that the current value of the site can be assessed.

Barnsley Biodiversity Action Plan
HAP 14 Ponds and Canals
HAP 16 Standing Water
(HAP 18 Post Industrial, Derelict and Degraded Lane)
FLS 4 Barn Owl

SITE MANAGEMENT

Management objective:

To maintain and enhance the present habitat mosaic.

Initial Management:

Thin dense thicket of hawthorn to allow ground flora to develop whilst retaining scrub for birds.
Control area of bracken with selective herbicide to encourage more interesting flora to develop.

Ongoing management:

Maintenance of Trans Pennine Trail.

Constraints:

Periodic clearance of birch scrub and undergrowth will be necessary to maintain an open route along the Trans Pennine Trail.

Opportunities:

The maintenance of the Trans Pennine Trail may help to maintain botanical diversity by preventing the natural transition to birch woodland alongside the Trail.

SITE CONSTRAINTS AND OPPORTUNITIES

Constraints:

Trans-Pennine Trail, a cycling, riding and walking route now runs through the site. The Trail is being used by off-road motorbikers.

Opportunities:

Location of site in urban area gives opportunities to involve local people in its management and safeguard. Mosaic of different habitats makes it a good site for educational use. A good community nature area.

The site had been considered as a possible Local Nature Reserve.

REVIEW OF BARNSLEY NHS SITES – FEBRUARY/MARCH 2003

Stairfoot Disused Railway

1. Site Boundaries
The site boundaries, as shown on the 1990 Survey Map, were confirmed as being correct except for the need to exclude an area of improved grassland and ornamental planting.

2. Main Habitat Components
The remaining main habitat components, as shown on the 1990 Habitat Map, have been broadly confirmed as correct, but see (3) below.

3. Habitat Change/Loss
There have been several minor habitat changes which are noted on the 1990 Habitat Map.

1) The Trans Pennine Trail now passes through the area. This has caused the loss of some of the trackbed habitats. In any case, the ruderal and bare ground/ ephemeral habitats have now reached an advanced stage of birch wood colonisation, except where some of the sapling trees have been cleared alongside the route of the Trans Pennine Trail.

2) The acid grassland of the southern arm has been lost due to landscaping works associated with the Trans Pennine Trail.

3) Scrub covers an increased area, especially around the western boundary of the pond and fen area.

4) The Typha now covers 65 to 70% of the fen and pond area.

5) The area of bracken has spread onto surrounding embankments but not to an excessive extent.

6) The tunnel entrance has been filled in and now comprises grassland.

4. Notable/Rare Species
Ruderal communities now much smaller. These areas are at a much more advanced state of colonisation and may have lost several of the ruderal plant species found on the site which were considered to be of limited distribution in the district. The site was noted as the only site in the district for Carastium diffusum and Vulpia myuros. Oenanthe crocata, Carex disticha, Trifolium arvense and Centaurea scabiosa are rare plants in Barnsley. The value of these ruderal habitats needs to verified by a follow-up survey in the appropriate season.

Barn owl a scarce and declining bird in Britain (NCC, 1989) may still breed on the site. This needs to be verified by future survey.

The south-western tunnel entrance to the tunnel has been filled however the other end has a grill to permit bats to enter. The site still supports Daubenton's bat (pers. comm. Eric Bennett 2003).

5. Potential Threats
The presence of the Trans Pennine Trail whilst leading to a loss of some of the available track-bed habitats, the management work associated with maintaining a clear route will

retard the development of birch woodland and may in fact help to preserve elements of ruderal flora for which the site was noted.
Dumping of ash material from adjacent factory appears to have ceased and no long appears to be a threat to the wetland. There may be an application for extension of the adjacent works.
The open water area will be much reduced unless the Typha is controlled. This, together with increased shading by encroaching scrub may reduced aquatic diversity.

Cycle and bridleway trails are being churned up by motorbikes.