

Land at Bondfield Crescent, Wombwell, Barnsley
Ecological Impact Assessment (EclA) including Extended
Phase 1 Habitat Survey

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RECORDS CENTRE (NON-STATUTORY PROTECTED AREAS)**

1.0 INTRODUCTION

1.1 Terms of Reference

SLR Consulting Ltd was commissioned by Gleeson Developments Ltd., to undertake an Ecological Impact Assessment (EclA) of land at Bondfield Crescent, Wombwell, Sheffield, South Yorkshire, S73 0EB (approximate OS grid reference SE 396 029), in order to inform a planning application for residential development.

1.2 Site Description

The site is located within central Wombwell, three kilometres to the south-east of Barnsley. It has an urban setting, being surrounded by residential properties and a school (King's Oak Primary Learning Centre).

The site itself is understood to have formerly contained a school building, which was demolished prior to 2008, the footprint of which is evident by areas of compacted ground. Small areas of hardstanding are located at the south-eastern and north-eastern corners of the site, and an access road to the school runs through it.

Elsewhere the site consists of a mixture of open grassland and extensive scrub, along with a small number of trees, most of which are small and semi-mature. The grassland areas vary from tall coarse to fine-leaved rank swards along with some sparsely vegetated areas (on the formerly developed/ disturbed land) supporting typical early successional plant communities.

The land is not managed but had undergone recent disturbance from tracked excavators, creating some bare patches of ground.

The site is divided unequally into two by an un-named access road that runs from Bondfield Close (which forms the north boundary of the site) to the gates of Kings Oak Primary Learning Centre, the boundary fence of this school forming the southern site boundary.

There are no buildings, structures, waterbodies or streams within the site.

2.0 METHODOLOGY

2.1 Desk study

The Sheffield Biological Records Centre was commissioned to undertake a search of statutory and non-statutory designated sites for nature conservation and protected/ notable species for the site, and land within a one kilometre radius of its centre.

2.2 Field Survey

2.2.1 Extended Phase 1 Habitat Survey

An Extended Phase 1 Habitat Survey and mapping exercise was carried out by a suitably qualified Ecologist with SLR Consulting on 16th November 2016, using standard Phase 1 Habitat survey methodology (JNCC, 2010). The survey aimed to identify any potential ecological constraints to the proposed development. Habitats and features with potential to support protected and/ or conservation priority fauna, together with any field signs of such species were searched for. This included the following:

- A search for badger (*Meles meles*) setts and field signs within the site and 30m radius (where accessible);
- An assessment of trees to ascertain their potential for roosting bats, based on criteria within the third edition of the Bat Conservation Trust's Good Practice Guidelines (Collins, 2016);
- An assessment of the site's potential to support breeding birds;
- An assessment of the site's potential to support great crested newt (*Triturus cristatus*); and
- An assessment of the potential of the site to support reptiles.

Searches were also made for invasive species, including those listed on Schedule 9 of the Wildlife and Countryside Act 1981, which includes Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*) and Himalayan balsam (*Impatiens glandulifera*).

Habitats were mapped and features of interest were recorded using Target Notes (see Drawing 1 and Appendix A).

2.2.2 Assessment of Trees for Potential Bat Roosting Features

In compliance with best practice guidelines (Collins, 2016), a preliminary roost assessment of the trees within the site was undertaken. The aim of the survey was to determine the potential presence of bats and the need, or otherwise, for further survey (for example dusk/ dawn bat detector surveys or climb-and-inspect surveys) and/ or mitigation.

This comprised a detailed inspection of the exterior of the trees from ground level, and in one instance (involving Tree T13) from low ladders, to search for potential bat access points and features that bats could use for roosting (Potential Roosting Features or PRFs), such as:

- Woodpecker holes;

- Rot holes;
- Hazard beams;
- Other vertical or horizontal cracks and splits in stems or branches;
- Partially detached platy bark;
- Knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar;
- Man-made holes or cavities created by branches tearing out from parent stems;
- Cankers in which cavities have developed;
- Other hollows or cavities, including butt-rots;
- Double-leaders forming compression forks with included bark and potential cavities;
- Gaps between overlapping stems or branches;
- Partially detached ivy with stem diameters in excess of 50mm; and
- Bat, bird or dormouse boxes.

Trees were inspected systematically and consistently around all parts of the tree. Binoculars were used to scan for potential features from the ground. A flexi-torch was used to inspect a cavity found on Tree T13, using low ladders.

The following table, adapted from current best practice guidelines (Collins, 2016) was used as a guide to categorise the potential suitability of the trees for roosting bats:

**Table 2-1:
 Guidelines for Assessing the Potential Suitability of Trees for Bats**

Suitability	Description Roosting habitats
Negligible	Negligible habitat features likely to be used by roosting bats.
Low	A tree of sufficient size and age to contain Potential Roost Features (PRFs) but with none seen from the ground or feature seen with only very limited roosting potential.
Moderate	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type).
High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

2.3 Limitations

2.3.1 Desk Study

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that protected and/ or notable species not identified during the data search do in fact occur within the vicinity of the site.

2.3.2 Field Survey

Although the site was fully accessible the field survey was undertaken at a sub-optimal time of year and it is likely that not all components of the vegetation communities present on the

site have been documented. However, given the character and location of the site it is considered that these seasonal absentees would involve widespread and fairly common species, so this is not considered to be a constraint to interpreting the overall value of the habitats present.

2.4 Quality Assurance and Environmental Management

The surveyor is an Associate Member of the Chartered Institute of Ecology and Environmental Management (CIEEM), and follows the code of professional conduct set out by CIEEM the when undertaking ecological work.

3.0 SURVEY RESULTS

3.1 Desk study

The desk study data provided by the Sheffield Biological Records Centre is summarised below.

3.1.1 Statutory Designated Sites

There were no statutory designated sites located within the 1km search area.

3.1.2 Non-Statutory Designated Sites

The site itself does not contain any non-statutory sites, however, parts of two Local Wildlife Sites (LWSs) occur within one kilometre of the site boundary, as summarised in the table below (citations are provided in Appendix B):

Table 3.1:
Non-Statutory Designated (LWS) Sites within 1 km of the Site

Name of site	Central OS Grid reference	Distance from the Site	Description
Park Hill Nature Reserve	SE 406 031	0.9km to the east	Former brickworks on eastern edge of Wombwell. Contains willow scrub woodland, scrub and plantation along with a pond, swamp/ reedbed, marsh, neutral and poor semi-improved grassland and tall ruderals
Wombwell Wood	SE 387 020	0.97km to the south-west	A large block of woodland around 100ha in size, mainly oak-birch wavy-hair grass acidic woodland but with replanting in some areas to form plantation, mainly of beech. Also contains a few fishing ponds

3.1.3 Species

A total of 184 species records were provided. This included 55 bird records for blackbird (*Turdus merula*) and goldfinch (*Carduelis carduelis*). This, therefore, leaves a total of 129 protected or notable species records, the most relevant of which are summarised below.

Birds

A total of 100 records for 18 species of Birds of Conservation Concern (BoCC)¹ were provided.

¹ Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stround DA and Gregory RD (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 108, pp 708 -746.

These comprised the following: house sparrow (*Passer domesticus*); linnet (*Carduelis cannabina*); starling (*Sturnus vulgaris*); song thrush (*Turdus philomelos*); mistle thrush (*Turdus viscivorus*); bullfinch (*Pyrrhula pyrrhula*); dunnoek (*Prunella modularis*); green woodpecker (*Picus viridis*); willow warbler (*Phylloscopus trochilus*); yellow wagtail (*Motacilla flava*); grey wagtail (*Motacilla cinerea*); willow tit (*Parus montanus*); shoveler (*Anas clypeata*) and mute swan (*Cygnus olor*). The records date from between 1989 and 2016 but the majority are recent records (2009 to 2016). The records are located across a wide area but many are for the former Wombwell Foundry Site (SE39190229), located on the south-west fringe of Wombwell, approximately 600 metres to the south-west of the site itself.

Amphibians

A total of two records of great crested newt (*Triturus cristatus*) were provided. These date from 1991 and both relate to a pond location near to Wombwell Golf Course, 0.8km south of the site.

Reptiles

One very recent record of grass snake (*Natrix natrix*), dating from 31st May 2016, was provided for the former Wombell Foundry Site, circa 600 metres to the south-west of the site.

Bats

A total of 22 records for at least four species of bat were returned, dating between 1988 and 2013. There were two records of noctule (*Nyctalus noctula*), two of common pipistrelle (*Pipistrellus pipistrellus*) and two records of soprano pipistrelle (*Pipistrellus pygmaeus*) from Park Hill Nature Reserve (referred to as Park Hill Brick Pits LWS) dating from 2013. Ten Daubenton's bat (*Myotis daubentonii*) records were also provided from Park Hill Nature Reserve ('Park Hill Brickworks') between the years 1992-2001. An additional four common pipistrelle records were provided for locations in residential areas of Wombwell.

None of the bat records relate to the site itself.

Water vole

Two records of water vole (*Arvicola amphibius*) were provided, both dating from 2007 and relating to Park Hill Nature Reserve.

Other taxa

Of the remaining taxa, one relates to cornflower (*Centaurea cyanus*) on land off Lundhill Lane, Wombwell, and the other for a cinnabar moth (*Tyria jacobaeae*) record from the former Wombwell Foundry Site.

3.2 Field Survey

3.2.1 Overview

The results of the Extended Phase 1 Habitat Survey are illustrated in Drawing 1, with Target Notes provided in Appendix A.

Grasslands

Poor semi-improved grassland occurs primarily in patches across the site, often intermixed with scattered scrub.

These comprise a variety of swards originating from previous landscaping and subsequent disturbance arising from building demolition.

Much of the central part of the site, where scrub has not yet encroached, contains rather sparsely vegetated ground with grassland being intermixed with small annuals and other pioneer species and locally frequent bryophyte cover in some areas. This comprises a mosaic of sparse grassland, bare ground, scattered scrub and ephemeral/ short perennial vegetation (Plate 1 and Target Note 1 in Drawing 1). Among the early successional stage plants present are common centaury (*Centaurea erythraea*), kidney vetch (*Anthyllis vulneraria*), yarrow (*Achillea millefolium*) and hare's-foot clover (*Trifolium arvense*).

More established areas of grassland (Plate 2) support red fescue (*Festuca rubra*), perennial rye-grass (*Lolium perenne*), cock's-foot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*) and among the main herbs present are dandelion (*Taraxacum officinale* agg.), creeping buttercup (*Ranunculus repens*) and ribwort plantain (*Plantago lanceolata*). Occasionally there are small areas where the sward is more diverse, with germander speedwell (*Veronica chamaedrys*), red clover (*Trifolium pratense*) common cat's-ear (*Hypochaeris radicata*), common ragwort (*Senecio jacobaeae*), marjoram (*Origanum vulgare*) and selfheal (*Prunella vulgaris*) being locally frequent.

Some of these grassland areas have been subject to some recent disturbance from heavy tracked plant. One of these grassland areas adjacent to the access road is also used as an informal turning point and parking facility during school run times (Target Note 5).

Trees and Scrub

Until relatively recently the site was open but scrub has colonised in the past decade or so, and is now dense in places.

A large part of the scrub community comprises sapling and young Italian alder (*Alnus cordata*) along with some locally frequent to abundant birch (*Betula* sp.). Other scrub species present include butterfly bush (*Buddleja davidii*), dog rose (*Rosa canina*), elder (*Sambucus nigra*), cherry (*Prunus* sp.), broom (*Cytisus scoparia*), gorse (*Ulex europaeus*), hawthorn (*Crataegus monogyna*), bramble (*Rubus fruticosus* agg.) and willow (*Salix* sp.)

Cotoneaster (*Cotoneaster* sp.) was also present in a small number of locations but these are not thought to comprise any of the four invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).



Plate 1: View (to north-west) of one of the areas of sparsely vegetated grassland supporting an early successional community of plants on partially compacted ground (Target Note 1).



Plate 2: View (to north-east) of one of the main areas of poor semi-improved grassland

Most trees present within the site are semi-mature or early mature specimens (mapped as T1-T15 on Drawing 1 with some shown in Plate 3) among which are sycamore (*Acer pseudoplatanus*), field maple (*Acer campestre*), Norway maple (*Acer platanoides*), beech (*Fagus sylvatica*) and a single young specimen of hornbeam (*Carpinus betulus*).



Plate 3: This is a view (to north) of the main area of semi-mature/ mature trees located in the eastern part of the site, comprising of six Norway maples and a single beech tree.

A dead mature specimen also occurs, which is possibly a Norway maple (T14 on Drawing 1). Most of these trees are located in the eastern part of the site and appear to relate to landscaping around the building that has been demolished in recent years.

A number of 'dens', made by children were found within the south-western part of the site (Target Note 4).

Tall Ruderal

Small patches of tall ruderal vegetation occur along the northern margins of the site. This tended to be dominated by common nettle (*Urtica dioica*) and creeping thistle (*Cirsium arvense*) along with some locally frequent great willowherb (*Epilobium hirsutum*) and rosebay willowherb (*Chamerion angustifolium*).

3.2.2 Protected Species

Bats

None of the trees within the site were assessed as having above negligible potential for roosting by bats; even the dead broad-leaved tree, considered most likely to be a Norway maple (T14) did not appear to support any PRFs.

A mature hawthorn in the south east of the site (T13 in Drawing 1) contained a cavity circa 2 metres up, on the western side, but upon close inspection with a flexi-torch, this cavity was found to be shallow, and of no obvious potential for roosting bats (Plate 4).

The site is likely to support modest levels of bat foraging activity, mostly involving common pipistrelle, particularly in the east, around the trees, and where areas of more mature scrub are present. However, given its urban setting, the site is unlikely to support significant numbers of bats, or species of high conservation value.

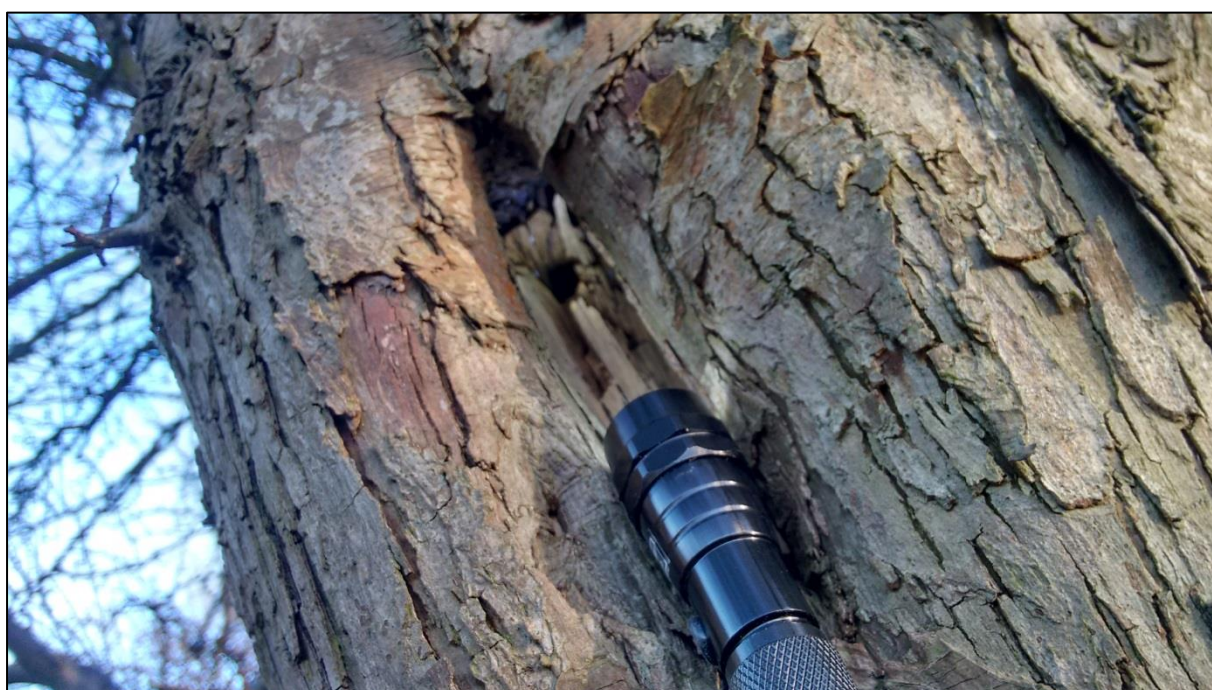


Plate 4: Shallow cavity on west-facing side of mature hawthorn tree (T13) of no potential to roosting bats.

Birds

The following birds were noted on the site during the survey, carried out in November 2016:

- Blackbird (*Turdus merula*);
- Blue tit (*Cyanistes caeruleus*);
- Carrion crow (*Corvus corone corone*);
- Chaffinch (*Fringilla coelebs*);
- House sparrow (*Passer domesticus*);
- Jackdaw (*Corvus monedula*);
- Long-tailed tit (*Aegithalos caudatus*);

- Magpie (*Pica pica*); and
- Robin (*Erithacus rubecula*).

Only one of these species, namely house sparrow, is a red list species of BoCC². Several were noted within the fringes of the site and are likely to breed locally within residential buildings in the area.

The scrub and trees within the site provide suitable nesting habitat for a range of urban and urban-fringe passerines including some of those featuring in the above site list, but the site is not likely to support a breeding bird assemblage of ecological significance.

Reptiles

Whilst some areas of long grassland within the site superficially appear to provide suitable habitat for reptiles, the isolated nature of the site (surrounded by built development), fact that the site is likely to have been subject to historical disturbance, combined with the sparseness of reptile records in the desk study data, suggest that the site is unlikely to support reptiles.

Great Crested Newt

No water bodies occur within the site, and none were evident within a 500m radius of the site. There is a record of this species *circa* 800 metres from the site boundary, but given that great crested newts tend not to disperse further than 500m from breeding ponds to terrestrial habitat (Foster, 2001), and given that there are barriers to dispersal between this off-site pond and the site itself, it is considered highly unlikely that great crested newt would occur on site.

Badger

No evidence of badger was found within the site or the immediate vicinity, and the site has very little potential to support this species.

Invasive species

No evidence of invasive Schedule 9 Wildlife and Countryside Act plant species were recorded on, or immediately adjacent to, the site.

² Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stround DA and Gregory RD (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 108, pp 708 -746.

4.0 RELEVANT LEGISLATION & POLICY³

4.1 Legislation

4.1.1 *Habitat Regulations*

The Conservation of Habitats and Species Regulations 2010 transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb⁴ wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

4.1.2 *Wildlife & Countryside Act*

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CROW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

4.1.3 *National Parks & Access to the Countryside Act*

National Nature Reserves (NNR's) and Local Nature Reserves (LNR's) are designated under the National Parks and Access to the Countryside Act 1949.

4.1.4 *Natural Environment & Rural Communities Act*

The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

³ Please note that this legal information is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information. Web addresses providing access to the full text of these documents are given in the References & Bibliography section.

⁴ Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

4.2 Policy

4.2.1 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) states that the planning system should contribute to and enhance the natural and local environment by:

- Recognising the wider benefits of ecosystem services; and
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Other key principles of the NPPF relating to biodiversity are:

- The conservation of International and National statutorily designated sites;
- Protection of ancient woodland and veteran trees;
- The creation, protection, enhancement and management of networks of biodiversity and green infrastructure;
- The preservation, restoration and recreation of priority habitats and ecological networks; and
- The recovery of priority species populations.

4.2.2 Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A list of national priority species and habitats has been produced with all listed species/ habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.

4.2.3 Local Plans

County, District and Local Councils have Plans and other policy documents that include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions.

5.0 DISCUSSION & RECOMMENDATIONS

5.1 Statutory and Non-statutory designated Sites

No statutory or non-statutory designated sites for nature conservation fall within the site. Only parts of two non-statutory Local Wildlife Sites (LWSs) lie within one kilometre of the site. The nearest of these is Park Hill Nature Reserve lying *circa* 0.9km to the east of the site. The LWSs will not be affected by the proposed residential development, and are not considered further.

5.2 Habitats

The site contains a mixture of open habitats (mostly grassland) and areas of dense to scattered scrub, along with some trees (in the east).

The grassland is mainly poor semi-improved in character, with low species diversity. There are several smaller areas where the sward includes species more characteristic of better quality semi-improved neutral grassland, but these are not extensive, and the grassland is not of high intrinsic nature conservation value, overall.

The plant communities which have established on the open previously disturbed ground comprise species of local interest but are essentially of low ecological value. Furthermore, the extent of this habitat (refer to Target Note 1 and the 'ephemeral/ short perennial habitat' mapped in Drawing 1) is *circa* 0.12 ha, below the threshold of 0.25 ha which is used to define Open Mosaic Habitat on Previously Developed Land as a 'priority habitat'⁵. It does, therefore, not constitute an area of priority habitat, and is not of high intrinsic ecological value.

The scrub and trees provide foraging opportunities for bats and nesting birds, but are of limited intrinsic ecological value.

The majority of these habitats are to be lost during site enabling works, and there is no obvious scope to incorporate them into the scheme, as no Public Open Space is proposed within the development.

It is possible that a small number of existing trees and some of the scrub might be retained around the site boundary, and if so trees and other vegetation to be retained should be protected using Heras fencing, or similar.

All grassland is due to be lost to accommodate proposed housing.

5.3 Bats

All of the trees within the site were assessed as having negligible potential to support roosting bats.

⁵ JNCC (2010). UK Biodiversity Action Plan Priority Habitat Descriptions: Open Mosaic Habitats on Previously Developed Land (Updated July 2010) <http://jncc.defra.gov.uk/page-5706> (refer to criterion 1 in the definition table).

There would most likely be a reduction in the number of bats foraging within the site post-development, as the majority, if not all, of the trees and scrub shall be lost. However, this is not likely to be significant in anything other than a Site context. In the longer-term, trees and shrubs are likely to be planted within the majority of the gardens, and once these gardens, and the planting within them, mature bats are considered likely to use them for foraging, to some extent.

5.4 Breeding Birds

Trees and scrub on site are likely to support a range of breeding birds. Any vegetation removal should ideally therefore take place outside of the main bird breeding season, which for most species extends between March and August inclusive. If this is unfeasible, then a check for nesting birds will be undertaken by a suitably qualified ecologist immediately prior to any vegetation removal. Should nesting birds be encountered, an exclusion zone around any active nests would be established, to prevent damage to the nests and/ or injury to the young birds until they have fledged.

There would be a reduction in the overall value of the site for breeding birds post-development. However, trees and shrubs are likely to be planted within a number of the gardens, and once these gardens, and the planting within them, mature a limited range of urban and sub-urban bird species are likely to return. Some of the new residents may also erect bird nest boxes on their properties, or in their gardens, and/ or put out bird feeders, and this may also benefit certain species, albeit the majority of these are likely to be common and widespread urban/ sub-urban species.

The overall reduction in the value of the site will not be significant in anything other than a Site context.

5.5 Reptiles

It is considered unlikely that the site would support reptiles given its location within a largely urban setting, surrounded by development on all sides. Therefore, no specific sensitive working methods, or Reasonable Avoidance Measures (RAMs) are proposed for this group, and no impact is predicted.

5.6 Great Crested Newt

No potential breeding habitat occurs on site, or is evident within 500m of the site, and great crested newts are therefore very unlikely to occur. Great crested newts will therefore not be affected by the proposed development, and no specific recommendations have been made for this species.

5.7 Badger

No field evidence of badger was found within the site and the immediate surroundings (where accessible). No further survey or mitigation measures are, therefore, recommended for this species, and no impact is predicted.

6.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Gleeson Developments Ltd.; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

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Web addresses for access to full UK legislation and policy text:

Conservation of Habitats and Species Regulations 2010:

http://www.opsi.gov.uk/si/si2010/uksi_20100490_en_1

Birds Directive:

eur-lex.europa.eu/LexUriServ/site/en/consleg/1979/L/01979L0409-20070101-en

Wildlife and Countryside Act 1981:

www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810069_en_1

Countryside and Rights of Way Act 2000:

www.legislation.hmso.gov.uk/acts/acts2000/20000037

Natural Environment and Rural Communities Act 2006:

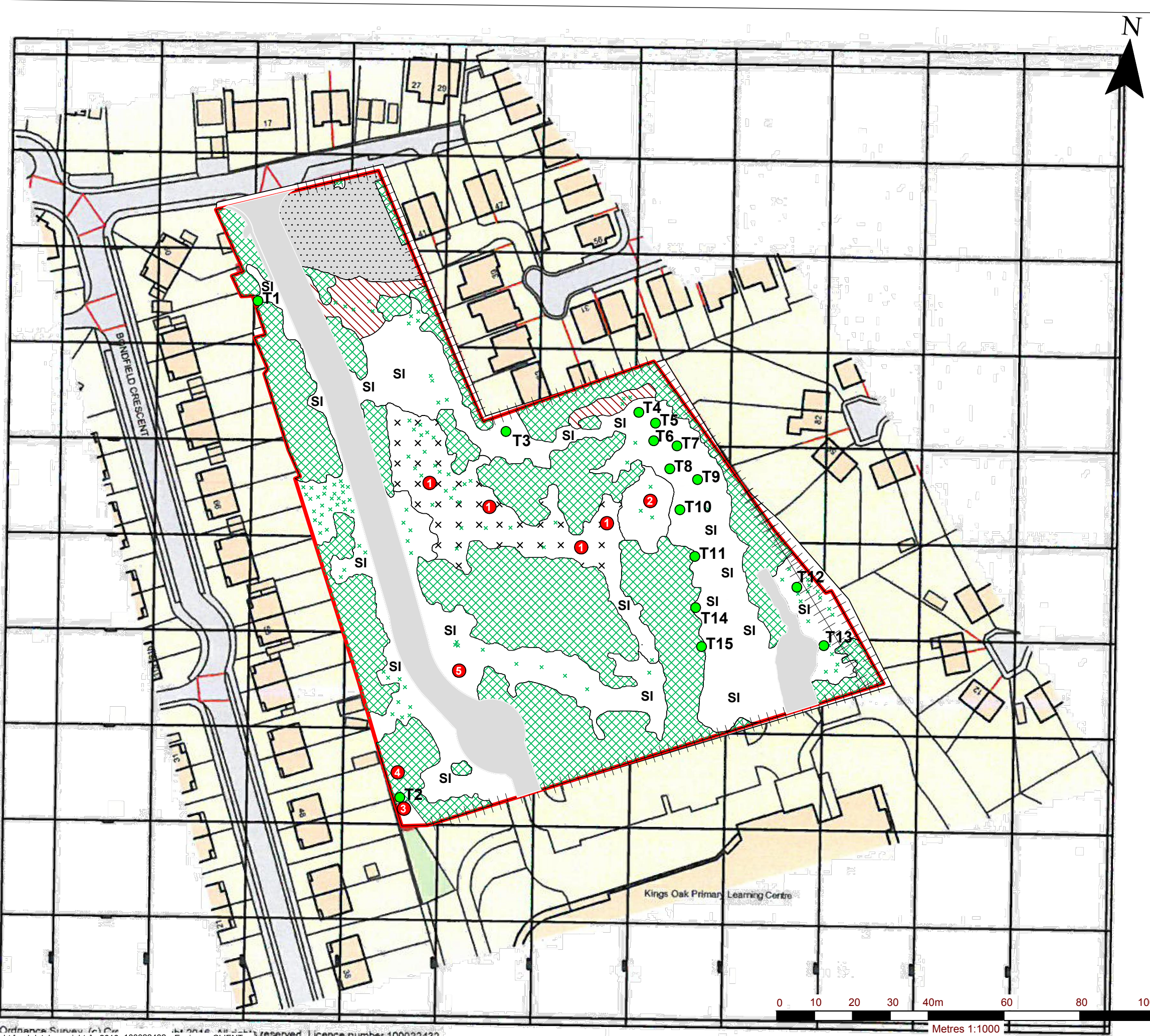
http://www.opsi.gov.uk/acts/acts2006/ukpga_20060016_en_1

Protection of Badgers Act 1992:

http://www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1

DRAWING 1

RESULTS OF EXTENDED PHASE 1 HABITAT SURVEY



LEGEND

	SITE BOUNDARY
	DENSE SCRUB
	SCATTERED SCRUB
	EPHEMERAL/ SHORT PERENNIAL
	TALL RUDERALS
	POOR SEMI-IMPROVED GRASSLAND
	BARE GROUND
	HARDSTANDING
	TREES & TREE REF NO.
	TARGET NOTE LOCATION
	FENCE

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LAND AT BONDFIELD CRESCENT,
WOMBWELL

EXTENDED PHASE 1




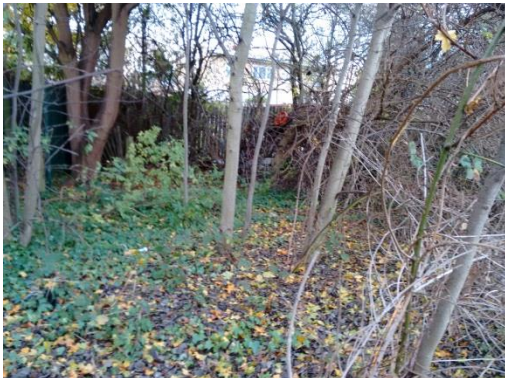
HABITAT SURVEY 16/11/16


424.03044.00057

Scale 1:1000 @ A3 Date JANUARY 2017

APPENDIX A

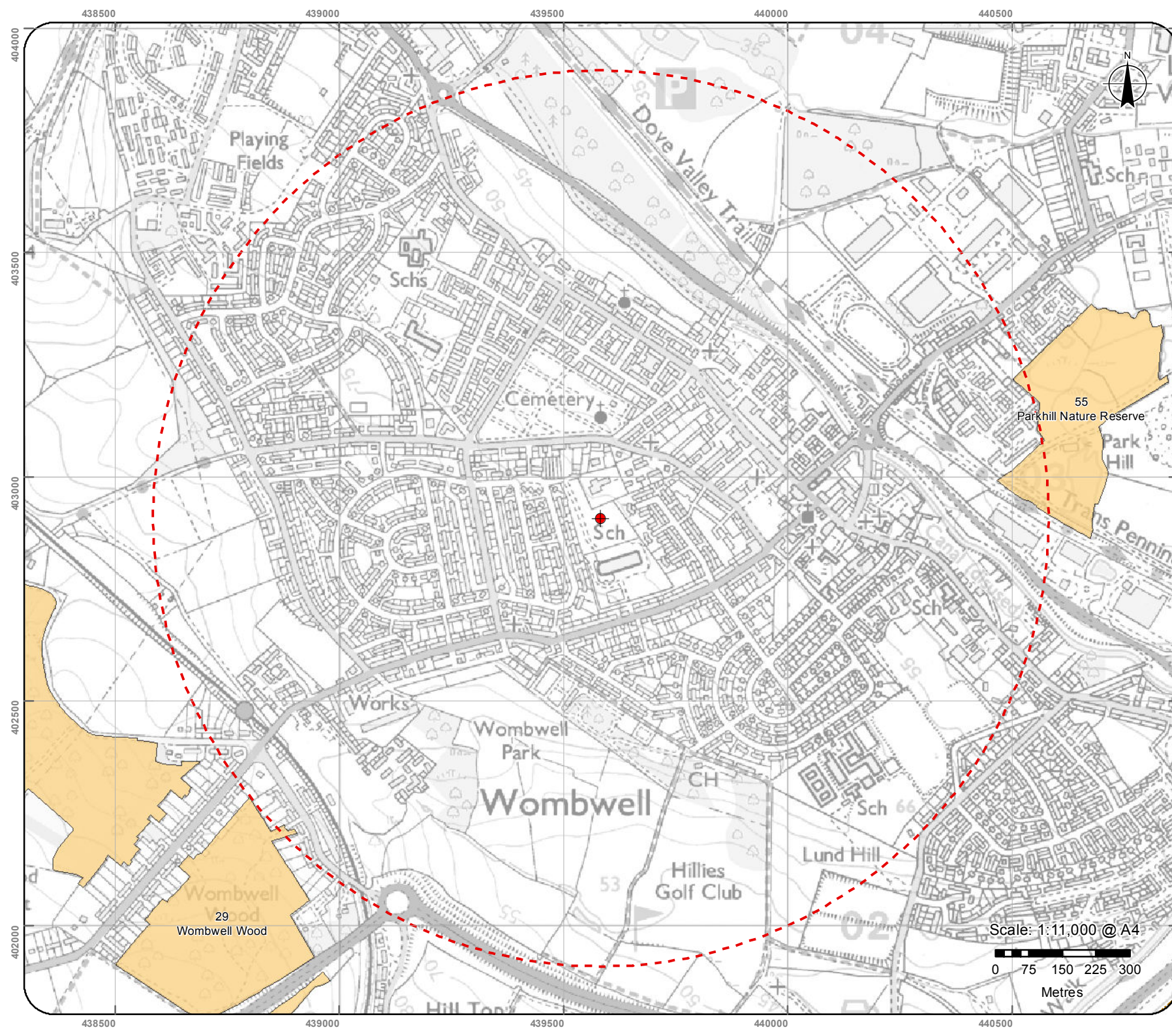
TARGET NOTES ASSOCIATED WITH DRAWING 1

Number	Plate	Description
1		Areas of sparsely vegetated ground supporting an early pioneer community of plants growing on disturbed/ compacted ground.
2		One of the most extensive of recent disturbance caused by tracked heavy plant.
3		A small heavily shaded area fenced off from the site which is used for informal play by children attending Kings Oak Primary Learning Centre.
4		Dens used by children/ youths.

Number	Plate	Description
5		This is a part of the site this is used as an informal turning point and for parking-up, usually at the time of the school run when parents come to drop off and collect children attending the Learning Centre.





APPENDIX B

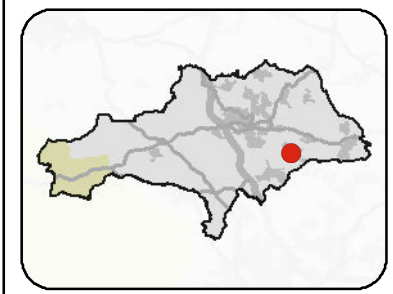
DESK STUDY DATA OBTAINED FROM SHEFFIELD BIOLOGICAL RECORDS CENTRE (NON-STATUTORY PROTECTED AREAS)



Statutory and Non Statutory
Local Wildlife Sites
Within the Search Area

**Bondfield Crescent,
Wombwell**

-  Location
-  1km Radius
-  Local Wildlife Sites
-  Barnsley District Boundary

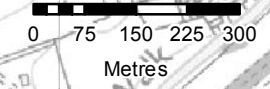


Map Created - 10 Nov 2016



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Scale: 1:11,000 @ A4





29. Wombwell Wood

LWS Assessment and Phase 1 Survey

Prepared by
TEP

for

Barnsley Metropolitan Borough Council

January 2011
(Edited December 2011)

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Site Name:	Wombwell Wood
Site Area:	106.59
Survey Date:	August 2010
Nearest Settlement:	Wombwell, Hoyland, Worsbrough
Grid Reference at Centre:	SE37789, 02641
Surveyor(s)	PG, VG

Site Description:

This is a large block of woodland and plantation which extends along a north-west to southeast axis across a largely agricultural landscape. The wood and surrounding fields are almost entirely enclosed by the settlements of Worsbrough, Wombwell and Hoyland.

Comprising more than 100ha of woodland this is one of the largest woodland areas in the Barnsley area and is contiguous to other blocks and strips of woodland in the north. It is associated, along its north boundary, with a disused railway line and, to the north of this, the valley of the River Dove.

Considering the density of human settlement in this area, this is a well-wooded part of Barnsley. The majority of the woodland designated within the Local Wildlife Site is, or has been, woodland of long-standing. Around 20% of the area has been replanted, mainly with beech (*Fagus sylvatica*), but the great majority of the semi-natural woodland here is included on the national register of ancient and semi-natural woodland sites. Most of the woodland vegetation matches the national NVC type W16a - the oak sub-community of oak-birch- wavy hair-grass woodland, typical of acidic conditions in coal measures landscapes. Much of the woodland is typical of this type, with a canopy of oak (*Quercus robur*), silver birch (*Betula pendula*) and downy birch (*B. pubescens*) over a species-poor ground layer dominated by wavy hair-grass (*Deschampsia flexuosa*), Yorkshire fog (*Holcus lanatus*) and bracken (*Pteridium aquilinum*).

Some areas in the northern fringes of TN15 area retain tiny vestiges of former heather (*Calluna vulgaris*) heath, but these are now rare. Also in the northern area are various gaps in the canopy where neutral grassland and tall herb communities survive (TN17, TN18, TN19, T20). Due to lack of management intervention, however, these are rapidly closing over under natural succession of the vegetation to woodland. The central part of the semi-natural woodland area (TN5) has the added diversity of the fishing ponds with areas of open water and some swampy vegetation (TN7).

The second most extensive vegetation type on this site is well-established broadleaved plantation, generally dominated by tall and mature beech (*Fagus sylvatica*). This species forms a dense canopy casting very heavy shade, so that large areas have next to no ground vegetation but are dominated by beech leaf litter.

Important Species:

Bluebell (*Hyacinthoides non-scripta*), remote sedge (*Carex remota*), dog's mercury (*Mercurialis perennis*) and greater stitchwort (*Stellaria holostea*) are all present on the site and are ancient woodland indicator species for South Yorkshire.

UKBAP herptile species found on site are adder (*Vipera berus*) and common lizard (*Zootoca vivipara*).

UKBAP breeding bird species include song thrush (*Turdus philomelos*), dunnock (*Prunella modularis*), willow tit (*Poecile Montana*) and bullfinch (*Pyrrhulla pyrrhulla*).

Target Note:	TN1
Habitat:	Continuous bracken
Species List:	
A narrow strip dominated by dense continuous bracken which runs through broadleaved woodland beneath electricity lines. Parts of the bracken ride are being colonised by woody regeneration from adjoining woodlands (TN14, TN15 and TN16).	
No species list recorded	

Target Note:	TN2	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Betula pendula</i>	Silver Birch	A
<i>Quercus robur</i>	English Oak	A
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Pteridium aquilinum</i>	Bracken	F
<i>Corylus avellana</i>	Hazel	O
<i>Prunus padus</i>	Bird Cherry	O
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Target Note:	TN3	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Quercus robur</i>	English Oak	D
<i>Betula pendula</i>	Silver Birch	A
<i>Holcus mollis</i>	Creeping Soft-grass	F
<i>Pteridium aquilinum</i>	Bracken	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Castanea sativa</i>	Sweet Chestnut	O
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	O
<i>Fagus sylvatica</i>	Beech	O
<i>Agrostis capillaris</i>	Common Bent	R
<i>Dryopteris dilatata</i>	Broad Buckler-fern	R
<i>Hedera helix</i>	Ivy	R
<i>Hyacinthoides non-scripta</i>	Bluebell	R
<i>Ilex aquifolium</i>	Holly	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Sorbus aucuparia</i>	Rowan	R
<i>Urtica dioica</i>	Nettle	R
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Target Note:	TN4	
Habitat:	Semi-natural broadleaved woodland (understorey and groundflora species)	
Species List:		
Scientific Name	Common Name	Frequency

<i>Acer pseudoplatanus</i>	Sycamore	R
<i>Arctium minus</i>	Lesser Burdock	R
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Blechnum spicant</i>	Hard Fern	R
<i>Brachypodium sylvaticum</i>	False Brome	R
Carex remota	Remote Sedge	R
<i>Corylus avellana</i>	Hazel	R
<i>Digitalis purpurea</i>	Foxglove	R
<i>Glechoma hederacea</i>	Ground-ivy	R
Mercurialis perennis	Dog's Mercury	R
<i>Prunus avium</i>	Wild Cherry	R
<i>Rubus idaeus</i>	Raspberry	R
<i>Sambucus nigra</i>	Elder	R
Stellaria holostea	Greater Stitchwort	R
<i>Teucrium scorodonium</i>	Woodsage	R
<i>Vaccinium myrtillus</i>	Bilberry	R
<i>Viola riviniana</i>	Wood-dog-violet	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN5	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Rubus fruticosus</i> agg.	Bramble	D
<i>Pteridium aquilinum</i>	Bracken	A
<i>Holcus mollis</i>	Creeping Soft-grass	F
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Epilobium montanum</i>	Broad-leaved Willowherb	O
<i>Galium aparine</i>	Cleavers	O
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Juncus effusus</i>	Soft Rush	O
<i>Lolium perenne</i>	Ryegrass	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Urtica dioica</i>	Nettle	O
<i>Arctium minus</i>	Lesser Burdock	R
<i>Blechnum spicant</i>	Hard Fern	R
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	R
<i>Elytrigia repens</i>	Common Couch	R
<i>Festuca gigantea</i>	Giant Fescue	R
<i>Plantago major</i>	Greater Plantain	R
<i>Stachys sylvatica</i>	Hedge Woundwort	R
<i>Symphytum x uplandicum</i>	Russian Comfrey	R
<i>Taraxacum officinale</i> agg.	Dandelion	R
<i>Teucrium scorodonium</i>	Woodsage	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN6	
Habitat:	Tall ruderal herb	
Species List:		
Scientific Name	Common Name	Frequency
<i>Reseda luteola</i>	Weld	D
<i>Fallopia japonica</i>	Japanese Knotweed	F
<i>Sisymbrium officinale</i>	Hedge Mustard	F
<i>Agrostis stolonifera</i>	Creeping Bent	O
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Silene latifolia</i>	White Campion	O
<i>Symphytum x uplandicum</i>	Russian Comfrey	O
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	O
<i>Artemisia vulgaris</i>	Mugwort	R

<i>Papaver rhoeas</i>	Common Poppy	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN7	
Habitat:	Swamp	
Species List:		
Scientific Name	Common Name	Frequency
<i>Glyceria maxima</i>	Reed Sweet-grass	D
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Senecio aquaticus</i>	Marsh Ragwort	O
<i>Juncus effusus</i>	Soft Rush	R
<i>Salix cinerea</i>	Grey Willow	R
<i>Typha latifolia</i>	Greater Reedmace	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN8	
Habitat:	Broadleaved plantation	
Species List:		
Scientific Name	Common Name	Frequency
<i>Fagus sylvatica</i>	Beech	D
<i>Agrostis capillaris</i>	Common Bent	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Chamerion angustifolium</i>	Rosebay Willowherb	R
<i>Dactylis glomerata</i>	Cock's-foot	R
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	R
<i>Epilobium hirsutum</i>	Great Willowherb	R
<i>Epilobium sp.</i>	Willowherb species	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Rubus fruticosus agg.</i>	Bramble	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Taraxacum sp.</i>	Dandelion species	R
<i>Urtica dioica</i>	Nettle	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN9	
Habitat:	Tall ruderal herb	
Species List:		
Scientific Name	Common Name	Frequency
<i>Urtica dioica</i>	Nettle	D
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Agrostis capillaris</i>	Common Bent	O
<i>Agrostis stolonifera</i>	Creeping Bent	O
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Epilobium hirsutum</i>	Great Willowherb	O

<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Sambucus nigra</i>	Elder	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Juncus conglomeratus</i>	Compact Rush	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Lolium perenne</i>	Ryegrass	R
<i>Plantago lanceolata</i>	Ribwort Plantain	R
<i>Plantago major</i>	Greater Plantain	R
<i>Poa annua</i>	Annual Meadow-grass	R
<i>Polygonum aviculare</i>	Knotgrass	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Salix caprea</i>	Goat Willow	R
<i>Trifolium repens</i>	White Clover	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN10	
Habitat:	Broadleaved plantation	
Species List:		
Scientific Name	Common Name	Frequency
<i>Fagus sylvatica</i>	Beech	A
<i>Holcus mollis</i>	Creeping Soft-grass	F
<i>Pinus sylvestris</i>	Scots Pine	F
<i>Quercus robur</i>	English Oak	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Agrostis capillaris</i>	Common Bent	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Dryopteris dilatata</i>	Broad Buckler-fern	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Hyacinthoides non-scripta</i>	Bluebell	O
<i>Pinus nigra</i>	Black Pine	O
<i>Pteridium aquilinum</i>	Bracken	O
<i>Sambucus nigra</i>	Elder	O
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Castanea sativa</i>	Sweet Chestnut	R
<i>Dactylis glomerata</i>	Cock's-foot	R
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	R
<i>Galeopsis tetrahit</i>	Common Hemp-nettle	R
<i>Hedera helix</i>	Ivy	R
<i>Ligustrum ovalifolium</i>	Garden Privet	R
<i>Salix caprea</i>	Goat Willow	R
<i>Stellaria media</i>	Chickweed	R
<i>Urtica dioica</i>	Nettle	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN11	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Acer pseudoplatanus</i>	Sycamore	A
<i>Holcus mollis</i>	Creeping Soft-grass	A
<i>Quercus robur</i>	English Oak	A
<i>Betula pendula</i>	Silver Birch	F
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Agrostis capillaris</i>	Common Bent	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Pteridium aquilinum</i>	Bracken	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Castanea sativa</i>	Sweet Chestnut	R
<i>Crocsmia x crocosmiiflora</i>	Montbretia	R

<i>Dactylis glomerata</i>	Cock's-foot		R
<i>Dryopteris dilatata</i>	Broad Buckler-fern		R
<i>Festuca rubra</i>	Red Fescue		R
<i>Fraxinus excelsior</i>	Ash		R
<i>Hedera helix</i>	Ivy		R
<i>Hieracium</i> sp.	Hawkweed species		R
<i>Hyacinthoides x massartiana</i>	Hybrid Bluebell		R
<i>Ilex aquifolium</i>	Holly		R
<i>Lamium galeobdolon argentatum</i>		Variegated Archangel	R
<i>Mercurialis perennis</i>	Dog's Mercury		R
<i>Rhododendron ponticum</i>	Rhododendron		R
<i>Rubus idaeus</i>	Raspberry		R
<i>Rumex obtusifolius</i>	Broad-leaved Dock		R
<i>Senecio jacobaea</i>	Ragwort		R
<i>Ulmus glabra</i>	Wych Elm		R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN12		
Habitat:	Broadleaved plantation		
Species List:			
Scientific Name	Common Name		Frequency
<i>Fagus sylvatica</i>	Beech		D
<i>Castanea sativa</i>	Sweet Chestnut		O
<i>Deschampsia flexuosa</i>	Wavy Hair-grass		O
<i>Rhododendron ponticum</i>	Rhododendron		O
<i>Sambucus nigra</i>	Elder		O
<i>Agrostis capillaris</i>	Common Bent		R
<i>Alliaria petiolata</i>	Garlic Mustard		R
<i>Betula pendula</i>	Silver Birch		R
<i>Crataegus monogyna</i>	Hawthorn		R
<i>Elymus caninus</i>	Bearded Couch		R
<i>Hyacinthoides non-scripta</i>	Bluebell		R
<i>Plantago major</i>	Greater Plantain		R
<i>Pteridium aquilinum</i>	Bracken		R
<i>Ranunculus repens</i>	Creeping Buttercup		R
<i>Rubus fruticosus</i> agg.	Bramble		R
<i>Senecio jacobaea</i>	Ragwort		R
<i>Taraxacum</i> sp.	Dandelion species		R
<i>Urtica dioica</i>	Nettle		R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN13		
Habitat:	Semi-natural broadleaved woodland		
Species List:			
Scientific Name	Common Name		Frequency
<i>Betula pendula</i>	Silver Birch		D
<i>Quercus robur</i>	English Oak		D
<i>Pteridium aquilinum</i>	Bracken		A
<i>Brachythecium rutabulum</i>	Moss species		F
<i>Deschampsia flexuosa</i>	Wavy Hair-grass		F
<i>Rubus fruticosus</i> agg.	Bramble		F
<i>Betula pubescens</i>	Downy Birch		O
<i>Fagus sylvatica</i>	Beech		O
<i>Polytrichum</i> sp.	Moss species		O
<i>Agrostis capillaris</i>	Common Bent		R
<i>Castanea sativa</i>	Sweet Chestnut		R
<i>Chamerion angustifolium</i>	Rosebay Willowherb		R
<i>Deschampsia cespitosa</i>	Tufted Hair-grass		R
<i>Hedera helix</i>	Ivy		R
<i>Juncus conglomeratus</i>	Compact Rush		R

<i>Juncus effusus</i>	Soft Rush	R
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Target Note:	TN14	
Habitat:	Semi-natural broadleaved woodland, plantation	
Species List:		
Scientific Name	Common Name	Frequency
<i>Alnus incana</i>	Grey Alder	A
<i>Fraxinus excelsior</i>	Ash	A
<i>Acer pseudoplatanus</i>	Sycamore	F
<i>Betula pendula</i>	Silver Birch	F
<i>Brachythecium rutabulum</i>	Moss species	F
<i>Eurhynchium praelongum</i>	Moss species	F
<i>Quercus robur</i>	English Oak	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Alnus cordata</i>	Italian Alder	O
<i>Alnus glutinosa</i>	Alder	O
<i>Betula pubescens</i>	Downy Birch	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Urtica dioica</i>	Nettle	O
<i>Acer platanoides</i>	Norway Maple	R
<i>Cirsium arvense</i>	Creeping Thistle	R
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	R
<i>Digitalis purpurea</i>	Foxglove	R
<i>Epilobium montanum</i>	Broad-leaved Willowherb	R
<i>Epilobium sp.</i>	Willowherb species	R
<i>Picea abies</i>	Norway Spruce	R
<i>Potentilla reptans</i>	Creeping Cinquefoil	R
<i>Prunella vulgaris</i>	Selfheal	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Senecio erucifolius</i>	Hoary Ragwort	R
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Target Note:	TN15	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Quercus robur</i>	English Oak	D
<i>Betula pendula</i>	Silver Birch	A
<i>Pteridium aquilinum</i>	Bracken	A
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	F
<i>Dryopteris dilatata</i>	Broad Buckler-fern	O
<i>Eurhynchium praelongum</i>	Moss species	O
<i>Holcus mollis</i>	Creeping Soft-grass	O
<i>Mnium hornum</i>	Moss species	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Calluna vulgaris</i>	Heather	R
<i>Chamerion angustifolium</i>	Rosebay Willowherb	R
<i>Crataegus monogyna</i>	Hawthorn	R

<i>Fagus sylvatica</i>	Beech	R
<i>Geranium robertianum</i>	Herb-Robert	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Lonicera periclymenum</i>	Honeysuckle	R
<i>Plagiothecium undulatum</i>	Moss species	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN16	
Habitat:	Semi-natural broadleaved woodland, on lane edge	
Species List:		
Scientific Name	Common Name	Frequency
<i>Quercus robur</i>	English Oak	A
<i>Acer pseudoplatanus</i>	Sycamore	F
<i>Chamerion angustifolium</i>	Rosebay Willowherb	F
<i>Fraxinus excelsior</i>	Ash	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Agrostis capillaris</i>	Common Bent	O
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Galium aparine</i>	Cleavers	O
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Hedera helix</i>	Ivy	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Pteridium aquilinum</i>	Bracken	O
<i>Sambucus nigra</i>	Elder	O
<i>Taraxacum</i> sp.	Dandelion species	O
<i>Urtica dioica</i>	Nettle	O
<i>Arctium minus</i>	Lesser Burdock	R
<i>Artemisia vulgaris</i>	Mugwort	R
<i>Cirsium arvense</i>	Creeping Thistle	R
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Elymus caninus</i>	Bearded Couch	R
<i>Epilobium</i> sp.	Willowherb species	R
<i>Fallopia japonica</i>	Japanese Knotweed	R
<i>Galeopsis tetrahit</i>	Common Hemp-nettle	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Lapsana communis</i>	Nipplewort	R
<i>Poa compressa</i>	Flattened Meadowgrass	R
<i>Polygonum aviculare</i>	Knotgrass	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Senecio jacobaea</i>	Ragwort	R
<i>Silene dioica</i>	Red Campion	R
<i>Sisymbrium officinale</i>	Hedge Mustard	R
<i>Solanum dulcamara</i>	Bittersweet	R
<i>Sonchus asper</i>	Prickly Sow-thistle	R
<i>Stellaria media</i>	Chickweed	R
<i>Teucrium scorodonium</i>	Woodsage	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN17	
Habitat:	Modified neutral grassland, scattered scrub	
Species List:		
Scientific Name	Common Name	Frequency

<i>Potentilla anserina</i>	Silverweed	A
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Agrostis stolonifera</i>	Creeping Bent	O
<i>Alnus glutinosa</i>	Alder	O
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Betula pendula</i>	Silver Birch	O
<i>Brachythecium rutabulum</i>	Moss species	O
<i>Centaureum erythraea</i>	Common Centaury	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Juncus inflexus</i>	Hard Rush	O
<i>Lathyrus pratensis</i>	Meadow Vetchling	O
<i>Odontites verna</i>	Red Bartsia	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Prunella vulgaris</i>	Selfheal	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Acer pseudoplatanus</i>	Sycamore	R
<i>Alnus cordata</i>	Italian Alder	R
<i>Carex otrubae</i>	False Fox-sedge	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Dipsacus fullonum</i>	Teasel	R
<i>Epilobium parviflorum</i>	Hoary Willowherb	R
<i>Quercus robur</i>	English Oak	R
<i>Senecio jacobaea</i>	Ragwort	R
<i>Trifolium dubium</i>	Lesser Trefoil	R
<i>Trifolium repens</i>	White Clover	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN18	
Habitat:	Tall ruderal herb, scattered scrub	
Species List:		
Scientific Name	Common Name	Frequency
<i>Urtica dioica</i>	Nettle	A
<i>Betula pendula</i>	Silver Birch	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Salix cinerea</i>	Grey Willow	F
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Brachythecium rutabulum</i>	Moss species	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Dryopteris filix-mas</i>	Male-fern	O
<i>Epilobium</i> sp.	Willowherb species	O
<i>Eurhynchium praelongum</i>	Moss species	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Pteridium aquilinum</i>	Bracken	O
<i>Quercus robur</i>	English Oak	O
<i>Ribes uva-crispa</i>	Gooseberry	O
<i>Salix caprea</i>	Goat Willow	O
<i>Sambucus nigra</i>	Elder	O
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Dryopteris dilatata</i>	Broad Buckler-fern	R
<i>Ligustrum ovalifolium</i>	Garden Privet	R
<i>Malus domestica</i>	Apple	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN19	
Habitat:	Semi natural broadleaved woodland, modified neutral grassland	

Species List:		
Scientific Name	Common Name	Frequency
<i>Epilobium hirsutum</i>	Great Willowherb	F
<i>Fraxinus excelsior</i>	Ash	F
<i>Alnus cordata</i>	Italian Alder	O
<i>Alnus glutinosa</i>	Alder	O
<i>Alnus incana</i>	Grey Alder	O
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Centaurea nigra</i>	Knapweed	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dipsacus fullonum</i>	Teasel	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	O
<i>Odontites verna</i>	Red Bartsia	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	O
<i>Pseudoscleropodium purum</i>	Moss species	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Trifolium repens</i>	White Clover	O
<i>Achillea millefolium</i>	Yarrow	R
<i>Agrostis stolonifera</i>	Creeping Bent	R
<i>Calystegia silvatica</i>	Large Bindweed	R
<i>Carex otrubae</i>	False Fox-sedge	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Cytisus scoparius</i>	Broom	R
<i>Epilobium sp.</i>	Willowherb species	R
<i>Ligustrum ovalifolium</i>	Garden Privet	R
<i>Medicago lupulina</i>	Black Medick	R
<i>Rosa rubiginosa</i>	Sweet Briar	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Senecio erucifolius</i>	Hoary Ragwort	R
<i>Vicia sativa</i>	Common Vetch	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN20	
Habitat:	Tall ruderal herb, scattered scrub	
Species List:		
Scientific Name	Common Name	Frequency
<i>Cirsium arvense</i>	Creeping Thistle	A
<i>Epilobium hirsutum</i>	Great Willowherb	A
<i>Alnus glutinosa</i>	Alder	F
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Alnus cordata</i>	Italian Alder	O
<i>Epilobium parviflorum</i>	Hoary Willowherb	O
<i>Epilobium sp.</i>	Willowherb species	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Galium aparine</i>	Cleavers	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rosa rubiginosa</i>	Sweet Briar	O
<i>Senecio jacobaea</i>	Ragwort	O
<i>Tussilago farfara</i>	Colt's-foot	O
<i>Urtica dioica</i>	Nettle	O

<i>Alnus incana</i>	Grey Alder	R
<i>Artemisia vulgaris</i>	Mugwort	R
<i>Carex otrubae</i>	False Fox-sedge	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Cytisus scoparius</i>	Broom	R
<i>Dipsacus fullonum</i>	Teasel	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Leucanthemum vulgare</i>	Oxeye daisy	R
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	R
<i>Medicago lupulina</i>	Black Medick	R
<i>Odontites verna</i>	Red Bartsia	R
<i>Rosa canina</i> agg.	Dog Rose	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Trifolium repens</i>	White Clover	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Management Issues:

The character of the extensive plantations of mature beech indicates quite intense historic management. However, neither the plantations nor the semi-natural woodlands appear to have undergone significant management input for many decades, either for reasons of improving the forestry crop or enhancing ecological diversity. The main area exhibiting current management is the ride created below the power-lines that cross the site, where trees have been cleared for safety reasons (TN1).

Considering that these woodlands occupy land that is classified as ancient woodland, the groundflora is generally impoverished. There is a small suite of characteristic woodland groundflora species which does survive (four ancient woodland indicator species were identified, predominantly to the south of the site at TN3 and TN4, although bluebells were also noted further north). The areas with highest potential for improvement of ecological diversity are the beech plantations.

Diversity:

A total of 140 species of vascular plants was recorded from this large area during the course of the 2010 fieldwork. Whilst the majority of them are grasses, herbs and trees that are locally native, a large proportion of trees are not native to this part of Yorkshire, for example: beech, sycamore (*Acer pseudoplatanus*), sweet chestnut (*Castanea sativa*) and grey alder (*Alnus incana*).

Whilst a large total of species has been recorded, this site covers very large area and much of it is rather lacking in diversity compared with most other ancient woodland sites. As well as lacking in species-diversity, the various woodlands and plantation areas lack structural diversity from stand to stand, generally being quite uniform in age and also height over most of the site. This is partly because of the fairly uniform topography and the underlying acidic bedrock throughout.

Naturalness:

The oak-birch woodlands form the vegetation community that would naturally be expected over the local ground conditions.

Large plantations of beech create the major unnatural elements within this area, which otherwise appears to have been left to grow and develop naturally with minimum management intervention.

Rare or Exceptional Features:

The large extent of semi-natural woodland on this site appears to be its major feature of interest. At the northern end, there is evidence of past quarrying with some rocky hollows and other exposures of the local grit-stone.

Fragility:

The fishing ponds (TN5) form the only standing water within the site. There is no system of watercourses through this area that could carry contaminants from outside the site. The woodland and plantation cover is robust and the former is actively spreading into the very few spaces on site that remain available for such spread.

Typicalness:

This large site is covered in woodland vegetation that is typical of the coalfield geology and landscape of much of the Barnsley area.

Recorded History & Cultural Associations:

Records of previous management of this ancient woodland site may well exist and should ideally be used to inform future management of the woodlands. There appear to be no ancient buildings, or other artefacts relating to the woodland, extant on site.

Connectivity within the Landscape:

The land immediately around the site remains in agricultural use and a network of hedgerows provides good linkage. The well-wooded disused railway along the northern boundary also provide links directly from the site into the wider countryside. The River Dove flows west/east to the north of the disused railway, further strengthening this connectivity, although no watercourses actually impinge on the site or its boundaries. On the western side there has been some open-cast coal mining and restoration has included large areas of plantation what will eventually merge with the existing woodland cover. Another railway line travels north-south offsite to the east of the site.

Value for appreciation of Nature and Learning:

The woodlands are easily accessed via a minor road that meanders along the northeast site boundary. There is also access on the west side, leading into a recently constructed car park. There is a railway station just beyond the east extremity of the site, so there is good access to the site by train also.

Local public footpath connections are very sparse, with only two coming in from the west and none from the east. However, there is a good network of informal paths throughout the woodland and the range of access possibilities makes this a good site to bring groups for appreciation of wildlife and natural processes.

There is no interpretation on site but it is most suitable for outdoor learning use and very accessible from schools within the three surrounding residential areas.

Recommendations:

The greater proportion of Wombwell Wood is recognised as ancient woodland on the Natural England Ancient Woodland Inventory, although only four of South Yorkshire's ancient woodland indicator species were seen during the survey. This maybe due to the season, however the woodland structure does little to promote the spread or colonisation by ground-flora.

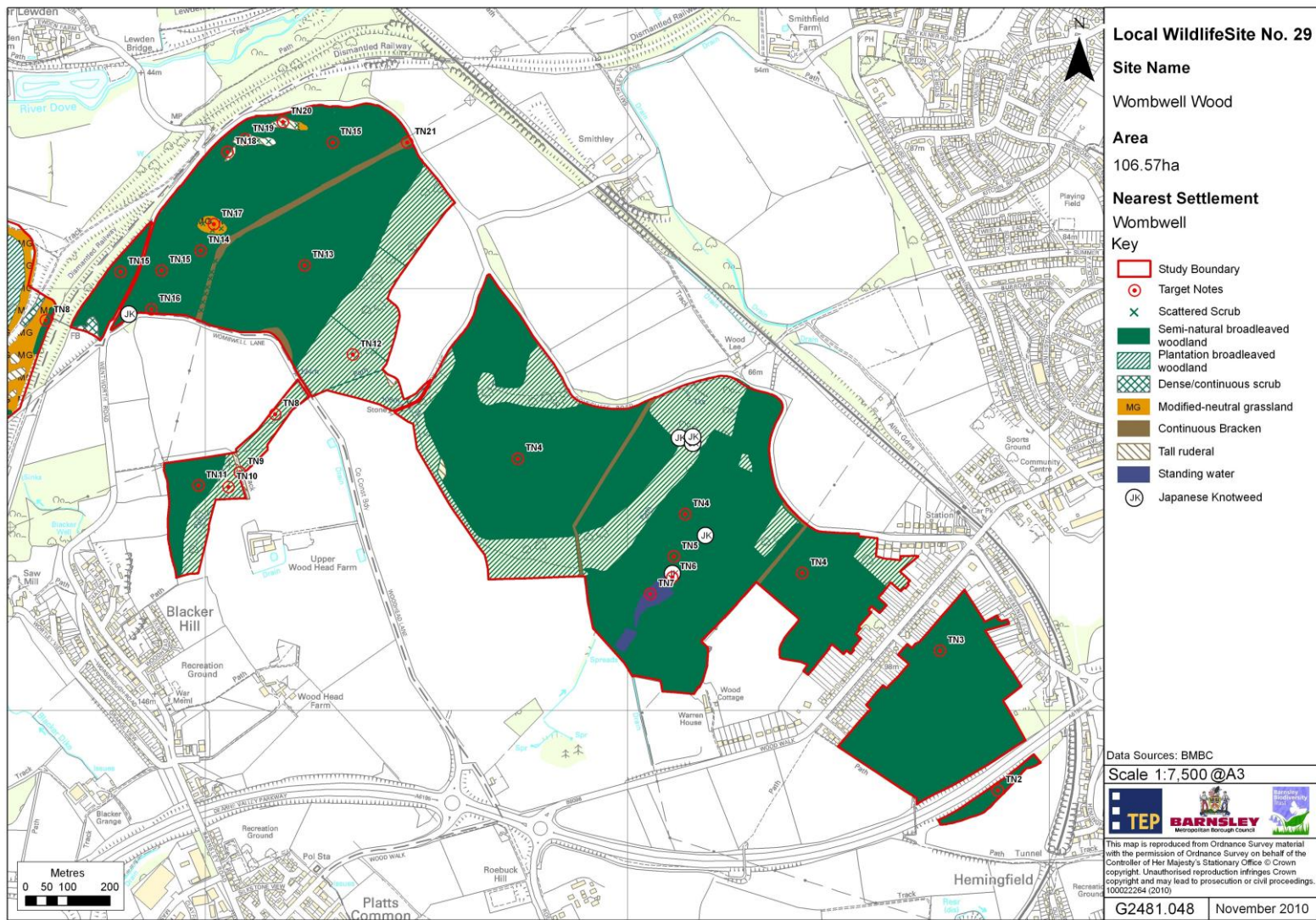
An increase in management is needed to enhance the biodiversity value of the site.

This aside the site's size, community function and location mean that Wombwell Woods should be retained with the Local Wildlife Sites register and effort made to increase its wildlife value.

Action:

Retain as a Local Wildlife Site

Work with landowners/managers to manage the woodlands to increase biodiversity and woodland structural diversity.





55. Parkhill Nature Reserve

LWS Assessment and Phase 1 Survey

Prepared by
TEP

for

Barnsley Metropolitan Borough Council

January 2011
(Edited December 2011)

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Site Name:	Parkhill Nature Reserve
Site Area:	9.8ha
Survey Date:	September 2010
Nearest Settlement:	Wombwell
Grid Reference at Centre:	SE40658, 03153
Surveyor(s)	PG

Site Description:

This is a former brickworks on the eastern edge of the residential area of Wombwell. Parts of the kiln still remain to the north of a flooded clay pit (TN4), towards the south of the site (TN6). Since closure of the brickworks there has been little management intervention. This has allowed the grass/herb and wetland habitats initially developing over the site to gradually become colonised by dense natural regeneration of scrub/woodland habitat. Much of the western side of the site (TN1, TN5, TN7, TN20 and TN21) is now dominated by tall and dense willow-dominated scrub/woodland, often with abundant hawthorn (*Crataegus monogyna*). There is also some mixed broadleaved plantation between TN1 and TN19 areas.

Some areas of unmanaged neutral grasslands still survive within the expanding woodlands (TN6, TN8, TN19), but scrub development is evident, particularly in TN19 area. Surviving parts of these neutral swards indicate that they may once have been diverse and rich in herb species. Broad areas of open, but still unmanaged, grassland are found in the northeast of the site (TN11, TN12, TN15) where scrub development is still scant. However, these northeast swards tend to be dense, very grassy and fairly uniform.

The northern boundary is marked by Bulling Dike. This watercourse has no noteworthy wetland vegetation but dense neutral grassland overhanging the southern banks. In the southern half of the site there is a large waterbody and fringing swamp habitat (TN4), presumably developed from a former clay pit. Areas of swampy vegetation survive in this area (TN16, TN18), located to the north of the former kilns (TN6), with much reed present.

A well-vegetated ditch system impinges into the broad grassland swathe across the north and northeast part of the site (TN9, TN14). There is also a well-established pond with fringing reedbed (TN10) and a newer-looking pond, or scrape (TN13), with a rich collection of wetland plants. Around pond TN13 there is a population of the invasive alien plant, New Zealand pygmyweed (*Crassula helmsii*). Near the centre of the site there is an extensive area of tall ruderal herb development (TN17), dominated by nettle (*Urtica dioica*) and rosebay willowherb (*Chamerion angustifolium*).

Important Species:

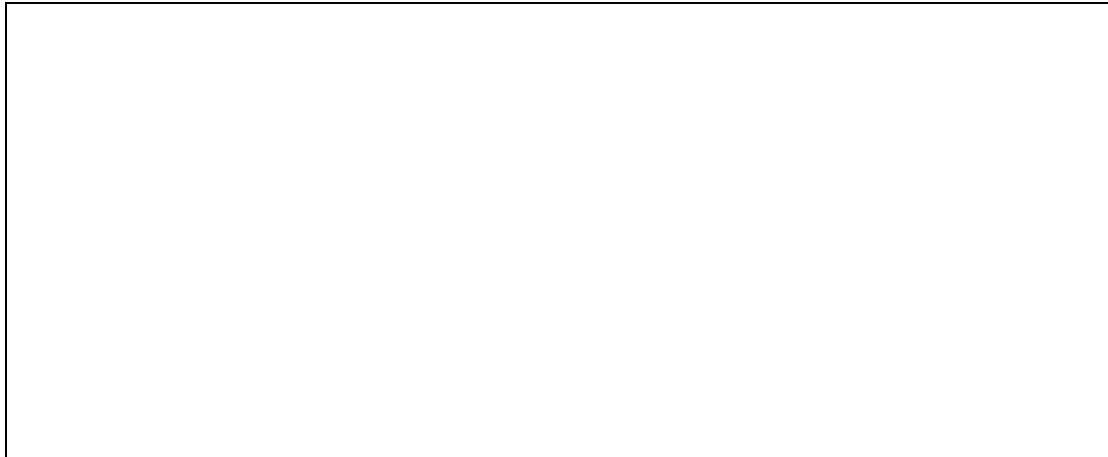
This site contains New Zealand pygmyweed, Japanese knotweed (*Fallopia japonica*) - both are invasive alien plant species.

UKBAP Priority species water vole (*Arvicola terrestris*) and grass snake (*Natrix natrix*) has been recorded on this site within the last five years.

UKBAP breeding bird species recorded are reed bunting (*Emberiza schoeniclus*), grasshopper warbler (*Locustella naevia*), willow tit (*Poecile montanus*), dunnock (*Prunella modularis*) and song thrush (*Turdus philomelos*).

Target Note:	TN1	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Urtica dioica</i>	Nettle	A
<i>Alnus glutinosa</i>	Alder	F
<i>Betula pendula</i>	Silver Birch	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Acer campestre</i>	Field Maple	O
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Agrostis capillaris</i>	Common Bent	O
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Artemisia vulgaris</i>	Mugwort	O
<i>Brachythecium rutabulum</i>	Moss species	O
<i>Calystegia silvatica</i>	Large Bindweed	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Corylus avellana</i>	Hazel	O
<i>Epilobium</i> sp.	Willowherb species	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Medicago lupulina</i>	Black Medick	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus idaeus</i>	Raspberry	O
<i>Salix caprea</i>	Goat Willow	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Sambucus nigra</i>	Elder	O
<i>Symphytum x uplandicum</i>	Russian Comfrey	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Trifolium repens</i>	White Clover	O
<i>Vicia sepium</i>	Bush Vetch	O
<i>Achillea millefolium</i>	Yarrow	R
<i>Anthyllis vulneraria</i>	Kidney Vetch	R
<i>Arctium minus</i>	Lesser Burdock	R
<i>Armoracia rusticana</i>	Horse-radish	R
<i>Brachypodium sylvaticum</i>	False Brome	R
<i>Carex hirta</i>	Hairy Sedge	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Crepis capillaris</i>	Smooth Hawk's-beard	R
<i>Daucus carota</i>	Wild Carrot	R
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	R
<i>Dryopteris filix-mas</i>	Male-fern	R
<i>Fallopia japonica</i>	Japanese Knotweed	R
<i>Hieracium</i> sp.	Hawkweed species	R
<i>Lapsana communis</i>	Nipplewort	R
<i>Lathyrus latifolius</i>	Broad-leaved Everlasting-pea	R
<i>Lathyrus pratensis</i>	Meadow Vetchling	R
<i>Leucanthemum vulgare</i>	Oxeye daisy	R
<i>Linaria vulgaris</i>	Common Toadflax	R
<i>Odontites verna</i>	Red Bartsia	R
<i>Prunus avium</i>	Wild Cherry	R
<i>Quercus robur</i>	English Oak	R
<i>Senecio jacobaea</i>	Ragwort	R
<i>Tragopogon pratensis</i>	Goat's-beard	R
<i>Trifolium pratense</i>	Red Clover	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare



Target Note:	TN2	
Habitat:	Standing water (small shaded pond)	
Species List:		
Scientific Name	Common Name	Frequency
<i>Urtica dioica</i>	Nettle	F
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Sparganium erectum</i>	Branched Bur-reed	O
<i>Tussilago farfara</i>	Colt's-foot	O
Carex remota	Remote Sedge	R
<i>Dryopteris filix-mas</i>	Male-fern	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Juncus inflexus</i>	Hard Rush	R
<i>Scrophularia nodosa</i>	Common Figwort	R
<i>Solanum dulcamara</i>	Bittersweet	R
<i>Typha latifolia</i>	Greater Reedmace	R
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Target Note:	TN3	
Habitat:	Standing water & swamp along partially shaded ditch-line	
Species List:		
Scientific Name	Common Name	Frequency
<i>Epilobium hirsutum</i>	Great Willowherb	A
<i>Typha latifolia</i>	Greater Reedmace	F
<i>Urtica dioica</i>	Nettle	F
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Juncus effusus</i>	Soft Rush	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Callitriche</i> sp.	Water Starwort species	R
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	R
Fallopia japonica	Japanese Knotweed	R
<i>Lycopus europaeus</i>	Gypsywort	R
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Target Note:	TN4	
Habitat:	Standing water with fringing swamp, flooded clay pit	
Species List:		
Scientific Name	Common Name	Frequency
<i>Epilobium hirsutum</i>	Great Willowherb	A
<i>Typha latifolia</i>	Greater Reedmace	F
<i>Urtica dioica</i>	Nettle	F

<i>Calystegia silvatica</i>	Large Bindweed	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Juncus effusus</i>	Soft Rush	O
<i>Lemna minor</i>	Common Duckweed	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Salix fragilis</i>	Crack Willow	O
<i>Solidago canadensis</i>	Canadian Goldenrod	O
<i>Tussilago farfara</i>	Colt's-foot	O
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Juncus inflexus</i>	Hard Rush	R
<i>Lemna trisulca</i>	Ivy-leaved Duckweed	R
<i>Lycopus europaeus</i>	Gypsywort	R
<i>Nuphar lutea</i>	Yellow Water-lily	R
<i>Nymphaea alba</i>	White Water-lily	R
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup	R
<i>Sparganium erectum</i>	Branched Bur-reed	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN5	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Betula pendula</i>	Silver Birch	F
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	F
<i>Epilobium hirsutum</i>	Great Willowherb	F
<i>Juncus conglomeratus</i>	Compact Rush	F
<i>Juncus effusus</i>	Soft Rush	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Salix caprea</i>	Goat Willow	F
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Juncus inflexus</i>	Hard Rush	O
<i>Phalaris arundinacea</i>	Reed Canary-grass	O
<i>Populus nigra</i>	Black Poplar agg.	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Senecio erucifolius</i>	Hoary Ragwort	O
<i>Tussilago farfara</i>	Colt's-foot	O
<i>Typha latifolia</i>	Greater Reedmace	O
<i>Urtica dioica</i>	Nettle	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Lathyrus pratensis</i>	Meadow Vetchling	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN6	
Habitat:	Modified neutral grassland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Festuca rubra</i>	Red Fescue	A
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Betula pendula</i>	Silver Birch	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Trifolium repens</i>	White Clover	F
<i>Tussilago farfara</i>	Colt's-foot	F

<i>Artemisia vulgaris</i>	Mugwort	O
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Leontodon autumnalis</i>	Autumn Hawkbit	O
<i>Lolium perenne</i>	Ryegrass	O
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	O
<i>Medicago lupulina</i>	Black Medick	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Pteridium aquilinum</i>	Bracken	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Senecio jacobaea</i>	Ragwort	O
<i>Symphytum x uplandicum</i>	Russian Comfrey	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Urtica dioica</i>	Nettle	O
<i>Vicia hirsuta</i>	Hairy Tare	O
<i>Achillea millefolium</i>	Yarrow	R
<i>Corylus avellana</i>	Hazel	R
<i>Dryopteris filix-mas</i>	Male-fern	R
<i>Festuca arundinacea</i>	Tall Fescue	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN7	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Salix caprea</i>	Goat Willow	A
<i>Urtica dioica</i>	Nettle	A
<i>Brachythecium rutabulum</i>	Moss species	F
<i>Salix fragilis</i>	Crack Willow	F
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Betula pendula</i>	Silver Birch	O
<i>Calystegia silvatica</i>	Large Bindweed	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Dryopteris dilatata</i>	Broad Buckler-fern	O
<i>Elytrigia repens</i>	Common Couch	O
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Epilobium sp.</i>	Willowherb species	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Poa annua</i>	Annual Meadow-grass	O
<i>Quercus robur</i>	English Oak	O
<i>Rosa canina agg.</i>	Dog Rose	O
<i>Rubus idaeus</i>	Raspberry	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Sambucus nigra</i>	Elder	O
<i>Solanum dulcamara</i>	Bittersweet	O
<i>Stachys sylvatica</i>	Hedge Woundwort	O
<i>Agrostis stolonifera</i>	Creeping Bent	R
<i>Alliaria petiolata</i>	Garlic Mustard	R
<i>Artemisia vulgaris</i>	Mugwort	R

<i>Corylus avellana</i>	Hazel	R
<i>Dipsacus fullonum</i>	Teasel	R
<i>Dryopteris filix-mas</i>	Male-fern	R
<i>Geranium robertianum</i>	Herb-Robert	R
<i>Ligustrum ovalifolium</i>	Garden Privet	R
<i>Plantago lanceolata</i>	Ribwort Plantain	R
<i>Polystichum aculeatum</i>	Hard Shield-fern	R
<i>Taraxacum officinale</i> agg.	Dandelion	R
<i>Vicia cracca</i>	Tufted Vetch	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN8	
Habitat:	Modified neutral grassland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Arrhenatherum elatius</i>	False Oat-grass	D
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Betula pendula</i>	Silver Birch	O
<i>Carex hirta</i>	Hairy Sedge	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Urtica dioica</i>	Nettle	O
<i>Conium maculatum</i>	Hemlock	R
<i>Galium aparine</i>	Cleavers	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Hieracium</i> sp.	Hawkweed species	R
<i>Lathyrus pratensis</i>	Meadow Vetchling	R
<i>Linaria vulgaris</i>	Common Toadflax	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Sanguisorba officinalis</i>	Great Burnet	R
<i>Stellaria graminea</i>	Lesser Stitchwort	R
<i>Typha latifolia</i>	Greater Reedmace	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN9	
Habitat:	Ditch with swamp	
Species List:		
Scientific Name	Common Name	Frequency
<i>Apium nodiflorum</i>	Fool's Watercress	A
<i>Glyceria fluitans</i>	Floating Sweet-grass	A
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Salix cinerea</i>	Grey Willow	F
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Juncus effusus</i>	Soft Rush	O
<i>Lemna minor</i>	Common Duckweed	O
<i>Phalaris arundinacea</i>	Reed Canary-grass	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Typha latifolia</i>	Greater Reedmace	O
<i>Urtica dioica</i>	Nettle	O
<i>Callitriche</i> sp.	Water Starwort species	R

<i>Galega officinalis</i>	Goat's-rue	R
<i>Lythrum salicaria</i>	Purple Loosestrife	R
<i>Scrophularia auriculata</i>	Water Betony	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN11
Habitat:	Modified neutral grassland
Species List:	
This unmanaged neutral grassland is generally species-poor and very similar to the TN12 sward to the east.	
No species list compiled for this area	

Target Note:	TN12	
Habitat:	Modified neutral grassland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Arrhenatherum elatius</i>	False Oat-grass	D
<i>Agrostis capillaris</i>	Common Bent	O
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Hypochaeris radicata</i>	Common Cat's-ear	O
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Trifolium repens</i>	White Clover	O
<i>Achillea millefolium</i>	Yarrow	R
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	R
<i>Betula pendula</i>	Silver Birch	R
<i>Centaurea nigra</i>	Knapweed	R
<i>Cichorium intybus</i>	Chicory	R
<i>Cirsium palustre</i>	Marsh Thistle	R
<i>Cynosurus cristatus</i>	Crested Dog's-tail	R
<i>Hieracium sp.</i>	Hawkweed species	R
<i>Lactuca serriola</i>	Prickly Lettuce	R
<i>Leontodon autumnalis</i>	Autumn Hawkbit	R
<i>Odontites verna</i>	Red Bartsia	R
<i>Plantago lanceolata</i>	Ribwort Plantain	R
<i>Sanguisorba officinalis</i>	Great Burnet	R
<i>Senecio jacobaea</i>	Ragwort	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN13	
Habitat:	Swamp, standing water, marshy grassland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Phragmites australis</i>	Reed	D
<i>Crassula helmsii</i>	New Zealand Pygmyweed	F
<i>Alnus glutinosa</i>	Alder	O
<i>Betula pendula</i>	Silver Birch	O
<i>Carex flacca</i>	Glaucous Sedge	O
<i>Eleocharis palustris</i>	Common Spike-rush	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Lythrum salicaria</i>	Purple Loosestrife	O
<i>Mentha aquatica</i>	Water Mint	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Salix cinerea</i>	Common Sallow	O
<i>Achillea ptarmica</i>	Sneezewort	R
<i>Alisma plantago-aquaticum</i>	Water-plantain	R
<i>Centaureum erythraea</i>	Common Centaury	R
<i>Iris pseudacorus</i>	Yellow Flag Iris	R
<i>Juncus articulatus</i>	Jointed Rush	R
<i>Juncus conglomeratus</i>	Compact Rush	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Lychnis flos-cuculi</i>	Ragged Robin	R
<i>Pulicaria dysenterica</i>	Fleabane	R
<i>Ranunculus flammula</i>	Lesser Spearwort	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN14	
Habitat:	Swamp along broad ditch with standing water	
Species List:		
Scientific Name	Common Name	Frequency
<i>Lemna minor</i>	Common Duckweed	A
<i>Typha latifolia</i>	Greater Reedmace	A
<i>Apium nodiflorum</i>	Fool's Watercress	F
<i>Sparganium erectum</i>	Branched Bur-reed	F
<i>Alisma plantago-aquaticum</i>	Water-plantain	O
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Juncus conglomeratus</i>	Compact Rush	O
<i>Carex otrubae</i>	False Fox-sedge	R
<i>Cirsium palustre</i>	Marsh Thistle	R
<i>Lycopus europaeus</i>	Gypsywort	R
<i>Lythrum salicaria</i>	Purple Loosestrife	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN15	
Habitat:	Modified neutral grassland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Arrhenatherum elatius</i>	False Oat-grass	D
<i>Agrostis capillaris</i>	Common Bent	F
<i>Achillea millefolium</i>	Yarrow	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Lolium perenne</i>	Ryegrass	O
<i>Rubus fruticosus</i> agg.	Bramble	O

<i>Rumex acetosa</i>	Common Sorrel	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Trifolium repens</i>	White Clover	O
<i>Carex hirta</i>	Hairy Sedge	R
<i>Chamerion angustifolium</i>	Rosebay Willowherb	R
<i>Cirsium palustre</i>	Marsh Thistle	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Festuca rubra</i>	Red Fescue	R
<i>Galeopsis tetrahit</i>	Common Hemp-nettle	R
<i>Hieracium</i> sp.	Hawkweed species	R
<i>Holcus lanatus</i>	Yorkshire-fog	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Lathyrus pratensis</i>	Meadow Vetchling	R
<i>Leontodon autumnalis</i>	Autumn Hawkbit	R
<i>Odontites verna</i>	Red Bartsia	R
<i>Sambucus nigra</i>	Elder	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN16	
Habitat:	Swamp, reedmace-dominated	
Species List:		
Scientific Name	Common Name	Frequency
<i>Typha latifolia</i>	Greater Reedmace	D
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Juncus conglomeratus</i>	Compact Rush	O
<i>Juncus effusus</i>	Soft Rush	O
<i>Salix cinerea</i>	Common Sallow	O
<i>Urtica dioica</i>	Nettle	O
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Cirsium palustre</i>	Marsh Thistle	R
<i>Epilobium hirsutum</i>	Great Willowherb	R
<i>Galium palustre</i>	Marsh Bedstraw	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN17	
Habitat:	Tall ruderal herb	
Species List:		
Scientific Name	Common Name	Frequency
<i>Urtica dioica</i>	Nettle	D
<i>Chamerion angustifolium</i>	Rosebay Willowherb	D
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Rubus idaeus</i>	Raspberry	O
<i>Fallopia japonica</i>	Japanese Knotweed	R

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note:	TN18	
Habitat:	Swamp and tall ruderal mix	
Species List:		
<i>Phragmites australis</i>	Reed	D
<i>Chamerion angustifolium</i>	Rosebay Willowherb	A

Target Note:	TN19	
Habitat:	Modified neutral grassland with scrub	
Species List:		
Scientific Name	Common Name	Frequency
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Calystegia silvatica</i>	Large Bindweed	F
<i>Chamerion angustifolium</i>	Rosebay Willowherb	F
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Festuca rubra</i>	Red Fescue	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Solidago canadensis</i>	Canadian Goldenrod	F
<i>Urtica dioica</i>	Nettle	F
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Armoracia rusticana</i>	Horse-radish	O
<i>Artemisia vulgaris</i>	Mugwort	O
<i>Carex hirta</i>	Hairy Sedge	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dipsacus fullonum</i>	Teasel	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Hieracium</i> sp.	Hawkweed species	O
<i>Hypericum perforatum</i>	Perforate St John's-wort	O
<i>Linaria vulgaris</i>	Common Toadflax	O
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	O
<i>Symphytum x uplandicum</i>	Russian Comfrey	O
<i>Trifolium repens</i>	White Clover	O
<i>Tussilago farfara</i>	Colt's-foot	O
<i>Vicia sepium</i>	Bush Vetch	O
<i>Arctium minus</i>	Lesser Burdock	R
<i>Conium maculatum</i>	Hemlock	R
<i>Crepis capillaris</i>	Smooth Hawk's-beard	R
<i>Lysimachia punctata</i>	Dotted Loosetrife	R
<i>Rosa canina</i> agg.	Dog Rose	R
<i>Sambucus nigra</i>	Elder	R
<i>Stachys palustris</i>	Marsh Woundwort	R
<i>Tragopogon pratensis</i>	Goat's-beard	R
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Target Note:	TN20	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
This is an area of natural regeneration dominated by goat willow (<i>Salix caprea</i>) and grey willow (<i>Salix cinerea</i>).		
No species list compiled for this area		

Target Note:	TN21	
Habitat:	Semi-natural broadleaved woodland	
Species List:		
Scientific Name	Common Name	Frequency
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Urtica dioica</i>	Nettle	A
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Stachys sylvatica</i>	Hedge Woundwort	F
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Epilobium</i> sp.	Willowherb species	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Plantago major</i>	Greater Plantain	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	O
<i>Salix caprea</i>	Goat Willow	O
<i>Tussilago farfara</i>	Colt's-foot	O
<i>Acer campestre</i>	Field Maple	R
<i>Acer pseudoplatanus</i>	Sycamore	R
<i>Arctium minus</i>	Lesser Burdock	R
<i>Centaurea nigra</i>	Knapweed	R
<i>Corylus avellana</i>	Hazel	R
<i>Ligustrum vulgare</i>	Wild Privet	R
<i>Quercus robur</i>	English Oak	R
<i>Rubus idaeus</i>	Raspberry	R
<i>Vicia sepium</i>	Bush Vetch	R
D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare		

Management Issues:

As this site has been declared a LNR, and its diversity is based on initial non-intervention by humans, it now seems appropriate that some management should be carried out to maintain diversity. What seem to have once been quite rich grasslands in the western part of the site have greatly diminished due to spread of scrub/woodland. Most of the areas outside the established canopy already have much scrub colonisation. Spread of scrub and woodland can similarly affect swamp and wetland areas, if allowed to proceed unmanaged.

The north-western neutral grasslands appear to be relatively lacking in diversity and still remain much more open. There are some small stands of Japanese knotweed (*Fallopia japonica*) in the southern fringes of TN1 and New Zealand pygmyweed in TN13, as these are both invasive species some control is advised.

Local naturalists are concerned about illicit fishing in the main waterbody (TN4).

Diversity:

This is quite a rich site, being diverse both in terms of structure and numbers of species present. During the fieldwork in mid-September 2010, 150 species of plants were recorded, the majority of them native to this part of Yorkshire. Habitats range from quite large water bodies to naturally developing woodlands, reedbeds, reedbed swamps and neutral grasslands. A range of smaller features such as ponds, ditches and other watercourses are also represented. The variation in species present and the relative heights and densities of the various vegetation communities lends itself to providing suitable niches for a wide range of animal life, both vertebrate and invertebrate.

Naturalness:

This site has undergone intense modification by human activity, with establishment of the brick kilns and storage yards, as well as excavation of extensive clay pits. However, since abandonment of brick-making, the re-establishment of vegetation has largely been by processes of natural succession and a large number of locally native plant species has found niches here. If allowed to continue unmanaged this site would become a mix of dry and damp native woodland types with some open water and native swamp habitats.

Rare or Exceptional Features:

The large flooded clay pit is a valuable diverse habitat, especially so close to houses and schools. The developing woodlands may well increase in ecological value (and extent) over time.

Fragility:

Generally this site has quite robust vegetation communities, but there is always the potential for tipping of rubbish along the boundaries shared with the back gardens of houses, causing some peripheral deleterious effects.

The wetland areas could also suffer loss of diversity and diminution of naturalness due to spread of New Zealand pygmyweed from its current stronghold on TN13 area.

With its suite of open water-bodies, ditch-lines and wet swamps there is potential for water pollution incidents to cause problems for the ecological value of this site.

Typicalness:

Barnsley has a large suite of post-industrial sites and much of the woodland, grassland and swamp elements developed here are fairly typical for the area. The habitats that have developed here are much as would be expected for such a site in this location - its proximity to residential areas adds value by making it an easily accessible wild space.

Recorded History & Cultural Associations:

Before development of the present suite of vegetation communities, the main activity carried out here was brick-making. There is great scope for researching the full history of this activity on this site. Ideally the tall brick chimney and remaining kiln bank would remain to help interpret this aspect of the site.

Connectivity within the Landscape:

There is residential development all along the western edge of the site, with pedestrian links into the site. There is a large reclaimed tip, with similar grassland to that found on site, located immediately along the eastern side, varied by plantings of native shrubs and trees. A council depot and a large sewage works also abut the reclaimed tip to the east. Playing fields lie to the north of the site. There are the wooded banks of a disused railway in the south, with some industrial development beyond that.

The Trans-Pennine Trail forms the southern boundary to the site and is an important link.

Value for appreciation of Nature and Learning:

The pedestrian access from the houses in the west links into a good path system around the inner edges of the site. Paths are linked through the middle of the site and pass the remains of the brick works buildings. The site can be accessed from both a footpath route and a public bridleway along the railway line to the south.

The Broomhill Nature Reserve is accessible about 1.5km to the east and just 1km further east beyond that lies the large RSPB reserve at Old Moor, a LWS. There could be access to the site for school groups via Park Hill Road, in the south-western corner.

There are schools within 1km to both the south and north of this site. The internal paths are in good order and give access to all habitat types, including a waterside stretch by the old brick works. There is currently no interpretive material on site. The site's accessibility, diversity and proximity to population centres give it potential value for ecological education.

Recommendations:

The site is botanically diverse. It is located in proximity to the local community and the Trans-Pennine Trail and it is part of a wider network of wetland sites and Water voles have been recorded here. These factors combined confirm that this site qualifies as a Local Wildlife Site.

The adjacent land to the east should also be considered for surveying and potential for adoption as a LWS, as this site has some wildlife value and would connect Parkhill Nature Reserve with the Broomhill Flash and Wombwell Ings LWS.

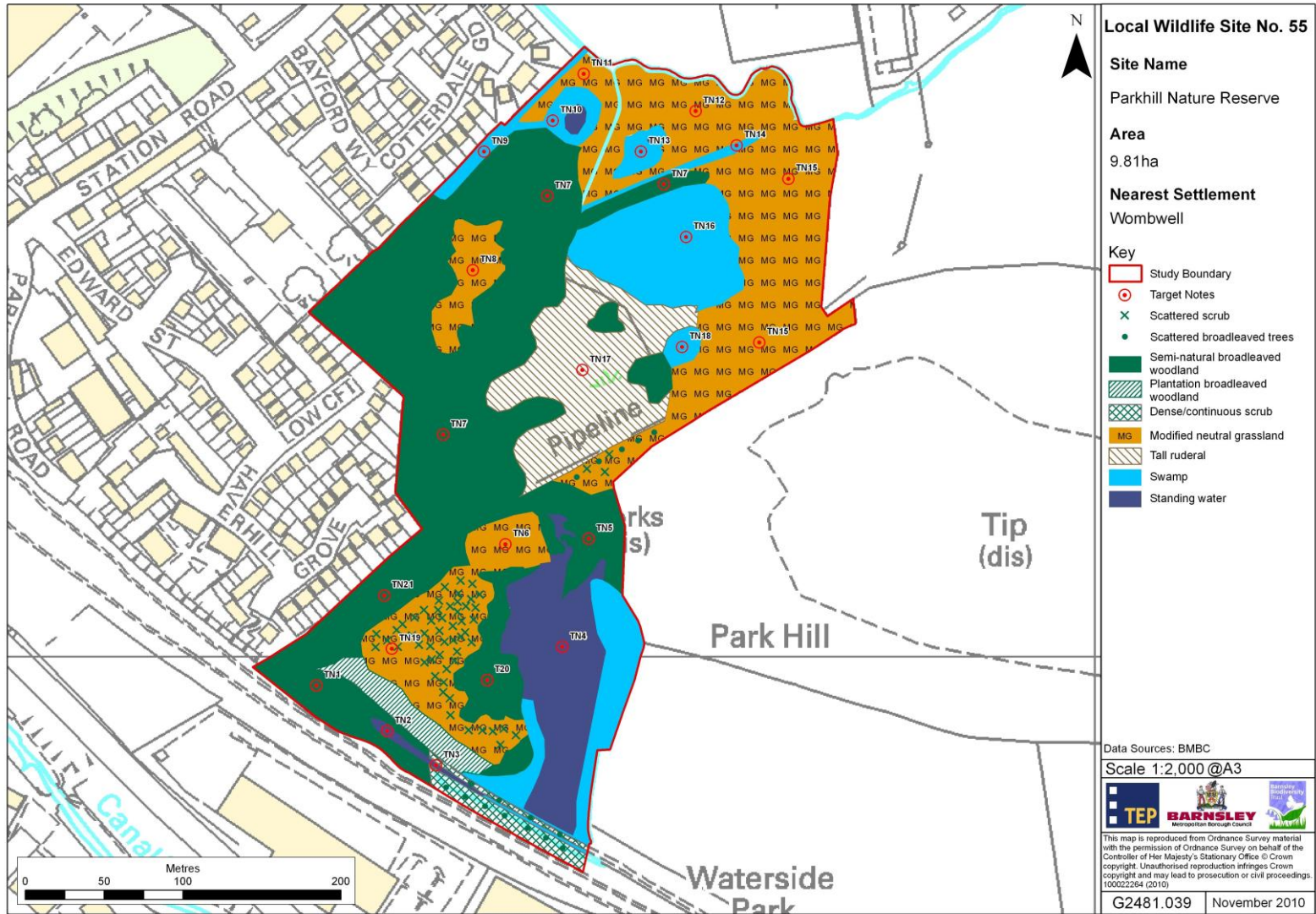
Action:

Adopt as a Local Wildlife Site

Survey adjacent land and consider for LWS adoption

Recommend that a management plan is drawn up and applied

Conduct a further survey to establish the distribution of water vole



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