

**Ecological Assessment:
Broomhead Estate,
Wombwell, Barnsley**

Report Title: Ecological Assessment Broomhead Estate,
Wombwell, Barnsley

Report Reference: BE-R-0742-01

Reviewed and approved for issue
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Summary Statement

The site is ecologically poor and no protected or notable species have been found or are suspected. No further survey has been recommended.

Two stands of Japanese knotweed have been found and these need to be controlled in accordance with EA guidelines.

Standard precautions are recommended with regard to clearing the site during the bird nesting season.

Introduction

Brooks Ecological Ltd was commissioned to produce an Ecological Assessment by Persimmon Homes on land either side of the A633, Wombwell, Barnsley.

The assessment presented here was based upon an Extended Phase 1 Habitat Survey of the plot and nearby habitat and a desk study encompassing the wider area. The purpose of the assessment was to identify potential for the site to contain important habitats or species, and consider if development would have a significant impact upon local biodiversity.

Part 1: Desk Study

A desk study was carried out to identify species or habitats that are considered important in a local context and to identify any species recorded locally that may be associated with the application site. This information can be used to help target groups that need to be considered in more detail in order to identify the ecological baseline for the application site.

MAGIC search

A search of the MAGIC website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Special Scientific Interest [SSSI's]) as well as some non-statutorily protected habitats (e.g. Sites of Importance for Nature Conservation [SINCs]). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats.

Biodiversity Action Plan (BAP)

The local BAP is the Barnsley Biodiversity Action Plan

The following priority species are listed

- Great Crested Newt (*Triturus cristatus*)
- Skylark (*Alauda arvensis*)
- Bittern (*Botaurus stellaris*)
- Linnet (*Carduelis cannabina*)
- Corn bunting (*Miliaria calandra*)
- Song Thrush (*Turdus philomelos*)
- White-clawed Crayfish (*Austropotomobius pallipes*)
- Grey Partridge (*Perdix perdix*)

- Twite (*Carduelis flavirostris*)
- Little Ringed Plover (*Charadrius dubius*)
- Bluebell (*Hyacinthoides non-scripta*)
- Glow Worm (*Lampyrus noctiluca*)
- Barn Owl (*Tyto alba*)
- Lapwing (*Vanellus vanellus*)
- Water Vole (*Arvicola terrestris*)
- Brown Hare (*Lepus europaeus*)
- Otter (*Lutra lutra*)
- Pipistrelle Bat (*Pipistrellus pipistrellus*)

The following priority habitats are listed:

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

Data Search

The National Biodiversity Network was searched for records of protected or notable species within 2km of the application site. A single record of whiskered bat from found from c.2km beyond the site boundary. There are records of water voles from c.600m north of the application site by the River Dove at grid ref SE3904.

Aerial Photography and Detailed Map Study

Aerial photographs published on commonly used websites were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This approach can be very useful in determining if a site is potentially a key part of a wider wildlife corridor or an important node of habitat in an otherwise ecologically poor landscape. It can also identify potentially important faunal habitat (in particular ponds) which could have a bearing on the ecology of the application site. Ponds may sometimes not be apparent on aerial photographs so we also refer to close detailed maps that identify all ponds issues and drains. We use Promap Street + scale maps for this purpose.

Two ponds are located within 500m of the site. Both of these are large fishing ponds over 300m north of the site. The fact that these are known to hold fish populations, that they are located over 300m from the site and that the site holds poor terrestrial habitat for amphibians (including great crested newt) makes it highly unlikely that this species would occur on the site and it is therefore reasonable to conclude their absence.

The site is bordered to the north by an immature semi-natural landscape of plantation woodland and amenity grassland areas. To the south lies an urban residential and industrial environment. As such, and given the low value of the habitat dominating the site (i.e. arable fields). The development is not thought to significantly threaten any existing wildlife corridors nor impacts upon any important habitats for notable faunal communities.

Part 2: Extended Phase 1 Habitat Survey

Introduction

The survey was carried out on the 9th of June 2010 by an experienced field ecologist and full member of the Institute of Ecology and Environmental Management (IEM).

Survey Method

The extended Phase 1 survey is a description of habitats based upon the plant species present and also includes evidence of or potential for the presence of legally protected or notable faunal species/groups (e.g. invertebrates). The survey followed a Phase 1 habitat survey methodology (JNCC, 1993) and was extended to assess faunal potential. This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). Evidence of fauna and faunal habitat is also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the Guidelines for Baseline Ecological Assessment (IEA, 1995).

Results

The application site consists of two arable fields either side of the A633 (Mitchell's Way). The site also includes some allotment gardens and large sheds along with a very short section of plantation woodland and patch of scrub.

The following range of habitats was found within the application site:

- Arable
- Buildings
- Scrub
- Amenity grassland
- Plantation woodland
- Defunct hedgerows

Arable

The fields are surrounded by extremely narrow margins and beyond by variously; buildings, gardens, sections of hedgerow and strips of largely immature plantation woodland.

The fields on both sides of the road at the time of survey held near mature oil-seed rape crops. The crop was heavily managed and held no valuable plant communities or other ecological features of note with frequent poppy (*Papaver rhoeas*) being the only other regularly occurring species.

The margins around both fields are generally less than 1m in width and are species poor communities dominated by false oat-grass (*Arrhenatherum elatius*) with some cleavers (*Galium aparine*), bramble, rosebay willowherb and nettle.

The allotment gardens at the western end of the field south-west of the road are a mix of active and overgrown plots. The active plots held no features of significant ecological value, whilst the overgrown plots held species poor stands of herbs and scrubby trees dominated by nettle (*Urtica dioica*) beneath hawthorn (*Crataegus monogyna*), willow (*Salix* sp.) and elder (*Sambucus nigra*) with occasional additional species including: docks (*Rumex* sp.), cock's-foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), burdock (*Arctium minus*), hedge bindweed (*Calystegia sepium*), rosebay willowherb (*Chamerion angustifolium*) and rose (*Rosa* sp.). A section of heavily managed privet (*Ligustrum* sp.) hedge separates the allotments from the track at the rear of the house to the south.

Buildings

On the edge of the allotments are a group of small shed buildings of red brick with corrugated roofs. These buildings hold no features with significant potential to hold roosting bats.

Scrub

In the far southern corner of the same field is a small block of scrub dominated by raspberry (*Rubus idaeus*) with bramble (*Rubus fruticosus* agg.), rosebay willowherb, elder and hawthorn.

At the base of a bank sloping from buildings along the north-eastern side of Rimmington Road and the arable field are a number of scrubby plants amongst stands of bramble and nettles including scattered hawthorn, elder and lilac (*Syringa vulgaris*).

Scrubby areas also occur within the overgrown allotments as described above.

Amenity Grassland

Leading to the track mentioned above and forming a connection between the site and Barnsley Road is an area of short mown amenity grassland dominated by perennial rye-grass (*Lolium perenne*) which holds 2 semi-mature silver birch trees (*Betula pendula*).

Plantation Woodland

A narrow strip of land, c.30m long and 5m wide, at the south-eastern end of the site connects the field to Littlefield Lane. This strip lies within the landscape planted woodland along the A633. The section holds young sycamore (*Acer*

pseudoplatanus), birch (*Betula* sp.) and elder with an understorey of nettle, cleavers, false-oat grass and bindweed or bareground on the slope below the buildings, beyond the site, immediately south of the boundary line.

The plantation woodland running along the north-western boundaries of both fields is immature and dominated by a mix of native and non-native tree species including: birch, oak (*Quercus* spp.), acacia (*Acacia* sp.), cherry (*Prunus* sp.) and pine (*Pinus* sp.) with a poor and sporadic understorey dominated by bramble, hogweed (*Heracleum sphondylium*) and Yorkshire Fog (*Holcus lanatus*).

Defunct hedgerows

The hedgerows running along parts of the boundaries of both fields and the A633 (probably outside of the development footprint), particularly toward the roundabout at the western end, have poor connectivity to surrounding habitats. They appear to have been relatively recently planted (i.e. not ancient or holding any mature trees) and include: field maple (*Acer campestre*), maple (*Acer* sp.), elder, ash (*Fraxinus excelsior*), hawthorn, rowan (*Sorbus aucuparia*), plum (*Prunus* sp.), alder (*Alnus* sp.), sycamore, dogwood (*Cornus sanguinea*) and sea buckthorn (*Hippophae rhamnoides*).

Occasional isolated hawthorns, elder and willow or short fragments of hawthorn dominated hedgerow are also located intermittently along the southern boundary of the southern field. In no areas are these fragments well connected nor do they currently form part of a significant habitat corridor.

Fauna

No evidence of important faunal populations was recorded. The dominance of the site from arable fields and small patches of species poor semi-natural vegetation makes it unlikely that any such populations would occur.

The sheds within the site hold no potential for roosting bats and no evidence of badgers was found.

No ponds or watercourses occur within the site boundary.

Low numbers of common breeding birds are likely to occur in the scrub habitat and surrounding hedgerow and plantation woodland areas.

Invasive species

At the northern end of the bank north of Rimmington Road, both on the edge of the arable field and also at the top of the bank are stands of Japanese Knotweed (*Fallopia japonica*). Those adjacent to the arable field, at least, appear to lie within the site boundary.

Another stand of Japanese Knotweed is located, apparently beyond but adjacent to the site boundary, in the extreme north-western corner of the site next to a short (c.3m) unculverted section of a watercourse running beyond the northern boundary of the site.

Overall Evaluation and Recommendations

The application site holds species-poor habitats consisting of common species typical of the area. The dominance of the site by open arable fields with poor margins makes it of low ecological value.

No sign of any protected species was found within the site and the site has low potential for any such species to occur. The sheds within the site had no potential to hold roosting bats and whilst habitats on the boundary of the site, generally plantation woodland, is likely to offer foraging and commuting habitat for bats development of the proposal site would not sever or inhibit any such routes.

The scrub and overgrown allotment areas along the southern boundary of the site are likely to hold small populations of common breeding bird species but these would not form a significant part of local populations of any of the species likely to occur e.g. wren, blackbird, dunnoek, chaffinch etc.

The findings of this survey and desk study demonstrate that there is little risk of impacting upon protected or notable species assuming standard precautions are followed as set out in the recommendations below:

- Prevent construction runoff entering the culverted watercourse to the north of the site through standard pollution prevention procedure (e.g. Environment Agency Pollution Prevention Guidelines).
- Clear scrub and woody vegetation outside of the bird nesting season or following surveys which demonstrate absence of nests.

Enhancement measures

The boundary hedgerows should be retained and where possible extended using locally prevalent native species such as hazel (*Corylus avellana*), ash, field maple, hawthorn and blackthorn (*Prunus spinosa*) and including occasional standard trees to improve diversity of structure.

The inclusion of a range of roosting opportunities for bats and nest sites for birds should be included within the construction of new buildings or at least in the surrounding landscaping or on buildings or other structures.

Landscape planting and grassland creation should wherever possible makes use of a diverse range of native and locally relevant trees, shrubs and grassland species.

Figures.



Figure 1.

Northern arable field from western end.



Figure 2.

Part of southern arable field from A633. Note narrow margin typical of whole site at bottom of picture.



Figure 3.

Sheds in corner of southern field.



Figure 4.

Small scrubby area in south-east corner of site.



Figure 5.

Small amenity grassland area off Barnsley Road.



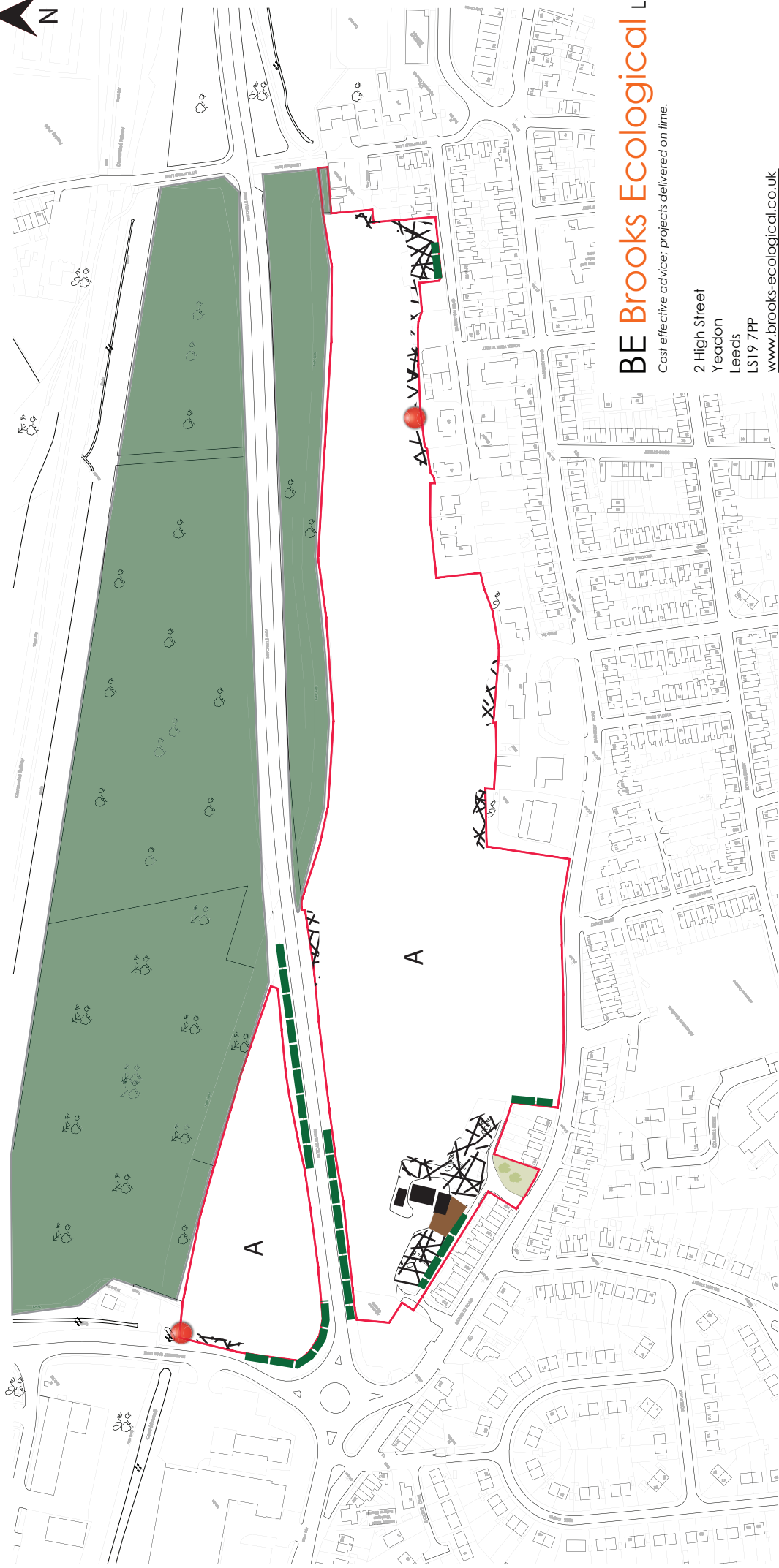
Figure 6.

Strip of land running between arable fields and Littlefield Lane including small section of plantation woodland.



Figure 7.

Hedgerow section along boundary of A633 and southern field.



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Site: **Broomhead Estate, Wombwell**

Title: **Ecological Features Plan**

Drawing Number: **BE/D/0742/01**

Scale: Do not scale Date: July 2010

Revision:

	Amenity Grassland		Defunct hedgerow		Allotment
	Scrub		Survey boundary		Trees
	Arable land		Plantation woodland		Japanese knotweed