

Ecological Assessment of
Proposed Landscape Planting Plots and
Riparian Mammal Pre-construction Survey at;
BSF Foulstone and Wombwell, Barnsley

Report Title: Ecological Assessment Broomhead Estate,
Wombwell, Barnsley

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Reviewed and approved for issue
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Summary Statement

No evidence of protected or notable, including riparian species was found: works can go ahead with little risk of affecting such species.

Introduction

Brooks Ecological Ltd was commissioned to produce an Ecological Assessment of 2 plots of land near the proposed BSF Foulstone and Wombwell site, Wombwell, Barnsley. In addition, following the recommendations of a previous ecological survey from 2007 by Tim Outlaw Freelance Ecologist; Ref/TWO0044/005, a pre-construction survey of the banks of the River Dove at side of the location of the existing and proposed new bridge was undertaken to check for any protected species.

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. Due to a lack of a consolidated ecological records centre for the area the previous ecological assessment along with its additional survey results have been used to help inform the baseline for this assessment.

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 1km of the application site. A single record of whiskered bat from found from c.1km beyond the site boundary. There are records of water voles from no closer than 200m north of the application site in an adjacent km square within the grid square 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.

Three ponds are located within 500m of the site. Two of these are large fishing ponds located c. 85 and 250m from Plot 2 respectively and a single entirely shaded woodland pond immediately to the south side of Pitt Street between the 2 plots. These ponds were included within an amphibian survey as part of the previous assessment and no important amphibian populations, particularly great crested newts were recorded.

As the suitability of these pools for great crested newts has not improved since these surveys were undertaken i.e. high fish populations and heavy shading etc., along with the poor potential terrestrial habitat offered by both plots (i.e. heavily managed grassland both cut near to turf during the site visit), it is considered reasonable to discount their presence in both areas.

The creation of woodland blocks in both sites would only increase habitat connectivity in the area and their creation would not result in any severance of existing wildlife corridors.

Part 2: Extended Phase 1 Habitat Survey

Introduction

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

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 (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 2 plots, one immediately north of Pitt Street adjacent to a bridleway (plot 1) and the other to the south of the Dove Valley Trail a couple of hundred metres to the south (plot 2). Both plots are dominated by grassland habitat and are subject to extensive management.

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

Plot 1;

- Improved Grassland
- Plantation Woodland

Plot 2;

- Semi-improved amenity grassland

Plot 1

This plot consists almost entirely of one recently cut improved hay field and a strip of an adjacent field, to the west running alongside the hedge bordering Pitt Street consisting of apparently identical habitat.

Whilst the recent cut has made it more difficult to assess the exact species survey of the remnant of the sward plus investigation of the margins meant that an accurate assessment of the field's value was possible.

The sward was dominated by common grass species including: perennial ryegrass (*Lolium perenne*), meadow foxtail (*Alopecurus pratensis*), timothy grass (*Phleum pratense*), Yorkshire fog (*Holcus lanatus*) and cock's-foot (*Dactylis glomerata*). Herb species were extremely limited with occasional creeping thistle (*Cirsium arvensis*), dandelion (*Taraxacum* agg.), ragwort (*Senecio jacobaea*), common vetch (*Vicia sativa*), common sorrel (*Rumex acetosa*) and hairy tare (*Vicia hirsuta*).

Additional species found only in the uncut margins included: false oat-grass (*Arrhenatherum elatius*), stinging nettle (*Urtica dioica*), cleavers (*Galium aparine*), hogweed (*Heracleum sphondylium*) and bindweed (*Calystegia* sp.).

In one small area at the base of the slope is an area that is partially bare and clearly becomes regularly waterlogged which included a small amount of marsh foxtail (*Alopecurus geniculata*) in the sward, although no other damp condition indicators were present.

In the south-east corner of the field is a small section of plantation woodland extending into a hedge line along Pitt Street, forming the boundary of the field to the road. This woodland area is immature with a poorly developed ground flora.

Tree and shrub species present include: ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), alder (*Alnus glutinosa*), white willow (*Salix alba*), willow (*Salix* sp.), field maple (*Acer campestre*), dogwood (*Cornus sanguinea*) and hazel (*Corylus avellana*). The ground flora is dominated by ash seedlings with bramble (*Rubus fruticosus*), hogweed, cow parsley (*Anthriscus sylvestris*) dandelion and willowherb (*Epilobium* spp.).

Plot 2

This plot forms part of a larger amenity area and includes a single habitat type; semi-improved amenity grassland.

The grassland is subject to frequent and close mowing throughout summer months at least leaving a sward of just a few millimetres in height. As with the previous plot the assessment of the habitat was undertaken from the remnant sward and uncut margins.

The sward is dominated by meadow grasses (*Poa* sp.), perennial ryegrass, fescues (*Festuca* sp.), Yorkshire fog and common bent (*Agrostis capillaris*). The herb content includes daisy (*Bellis perennis*), white clover (*Trifolium repens*), plantains (*Plantago lanceolata* and *P. major*), dandelion, hawkbit (*Leontodon*

sp.), common knapweed (*Centaurea nigra*), ragwort and frequent bird's-foot trefoil (*Lotus corniculatus*).

Whilst this grassland is more diverse and has a higher intrinsic value than the other plot it has clearly been relatively recently created from seeding and its heavy management reduces its value.

Fauna

No evidence of important faunal populations was recorded within or adjacent to either plot. The dominance of both sites by heavily managed grassland makes it unlikely that any such populations would occur.

None of the trees in the corner of plot 1 have any potential roosting sites for bats.

No ponds or watercourses occur within the site boundary and neither plot holds potentially valuable terrestrial habitat for amphibians.

Low numbers of common breeding birds may occur within the woodland section of plot 1.

Invasive species

No invasive species were recorded within either plot.

Part 3: Riparian Mammal Survey

The original survey undertaken as part of the ecological assessment by Tim Outlaw found no evidence of protected riparian mammals species water vole and otter but indicated that there was potential both species to occur within the affected section. As a result a recommendation was made to resurvey the site prior to works commencing in order to confirm that neither species had colonized in the intervening period.

The survey was undertaken on both banks for a distance of c.50m either side of the old bridge and new bridge locations.

Evidence searched for included: water vole burrows, latrines and feeding evidence as well as otter spraints, holts, couches or feeding remains.

No evidence of either water vole or otter was located within the surveyed section and it is therefore concluded that the proposed works (if undertaken in the near future i.e. within 1 year of the date of this report) would not currently impact upon individuals of either species or their local populations.

Overall Evaluation and Recommendations

The application sites hold heavily managed species-poor habitats consisting of common species typical of the area and are considered to be 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 woodland section of Plot 1 may 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, dunnock, 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.

The creation of woodland blocks within the two plots, using native species of local provenance are used, is likely to result in an increased ecological value to the area as it will connect woodland blocks and offer a more disturbed natural habitat in areas currently subject to high levels of human activity. In time mature woodland in these areas has the potential to provide habitat for a range of protected species including badgers, bats and designated bird species.

No protected riparian mammal species are currently present with the locations of the existing and proposed bridges over the River Doole. The works involving these bridges would not therefore result in impacts upon either water vole or otter. The findings of this survey are considered valid for 1 year from the date of this report after which an additional update survey should be undertaken to again confirm that neither species has since colonised the area.

Figures



Figure 1.

Part of Plot 1 field with hedgerow leading to small woodland section to right.



Figure 2.

Majority of Plot 1. Looking south from near northern edge. Woodland section in far left corner with hedgerow along Pitt Street running right from it.



Figure 3.

Plot 2 from north-east corner. Plot extends to distant trees in centre of picture but only includes short mown grass area.



Figure 4.

Riparian habitat west of existing bridge near proposed location of new bridge.



Figure 5.

Riparian habitat east of existing bridge.