Brooks Ecological
Grounded advice

Ecological Appraisal
Land off Bamford Close, Dodworth
Barnsley

Report reference: BE-R-1295-01
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Report Reference:	BE-R-1295-01
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Summary Statement

The site has been found to be of generally low ecological value, based on it supporting a very limited range of common species-poor habitats.

A single tree within the site has moderate bat roost potential. Recommendations are made in terms of further survey of this tree.

General recommendations in terms of preventing impacts on nesting birds and enhancing the site's biodiversity are also made in the report.

Introduction

1. Brooks Ecological Ltd was commissioned by Strata Homes Limited to carry out an ecological assessment of a site off Bamford Close, Dodworth, South Yorkshire (SE 311 051).

Figure 1 Survey site boundary



Site Proposals

2. The proposals are development to occupy the surveyed application site.

Potential impacts

3. The following potential impacts are highlighted and the report which follows sets out the significance of these impacts relative to the ecological value of the site and the potential presence of protected or notable species:

- Clearance of vegetation
- Loss of areas currently occupied by habitat to built development
- Effects on adjacent habitats

4. 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.

Designated Sites

5. A search of the MAGIC website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Scientific Interest [SSSI's]) as well as many non-statutorily listed habitats (e.g. Ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats.

6. There are no statutory designated sites within 2km of the application site.

7. There are five areas of ancient semi-natural woodland and three areas of ancient replanted woodland within the search area, the closest being c. 1km from the site. These would not be expected to be impacted by the proposed development.

8. Local records holders Sheffield Biological Records Centre have confirmed that there is one non-statutory designed site within the 2km search area, Silkstone Falls Wood Natural Heritage Site approximately 1km west of the site. Due to its distance from the site and the lack of any habitat links this site would not be expected to be affected by the proposed development.

Natural England Natural Area

9. The site falls within *Natural Area 24 Coal Measures*

Based on shale and sandstone deposits natural area 24 is characterized by dense population centres such as Sheffield, Leeds and Wakefield. The area's ecology reflects the changing geology which underlies it and is typified by mixed agriculture, acidic / ancient woodlands, valley wetlands and acidic / neutral grasslands.

There are no nationally important conservation priorities. Local Conservation priorities for the area are:

- Acid Grassland;
- Fen, Marsh and Swamp;
- Lowland Heathland;

- Neutral Grassland;
- Rivers and Streams;
- Standing and open water;
- Wet Woodland.

The application site largely comprises improved agricultural grassland and an evaluation of this is made later in this report. No other priority habitats are to be found within the site or land within the applicant's control.

Local Biodiversity Action Plan

10. Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the 'Barnsley Biodiversity Action Plan'.

11. Table 1 lists the local Species Actions Plans and, with reference to the field study presented later in this report, assesses a) whether the species potentially have any degree of dependence on the site, and b) if so whether development would be likely to have a significant bearing on the objectives of the UK/LBAP.

Table 1: Species Action Plans

Species/group	Potentially on site	Would development impact significantly on BAP objectives
Hedgehog	Yes	No
Bats	Yes	No
Water Vole	No	N/A
Otter	No	N/A
Grey Partridge	No	N/A
Bittern	No	N/A
Kestrel	Yes	No
Little Ringed Plover	No	N/A
Lapwing	No	N/A
Barn Owl	No	N/A
Skylark	No	N/A
Tree Sparrow	No	N/A
Twite	No	N/A
Great Crested Newt	No	N/A
Salmon	No	N/A
Bullhead	No	N/A
White-clawed Crayfish	No	N/A
Glow Worm	No	N/A
Dingy Skipper	No	N/A
Bluebell	No	N/A

12. Table 2 lists local Habitat Action Plans and assesses a) whether habitats on site could represent valuable examples of the habitat type within the spirit of the BAP and b) whether loss of the habitat would have a significant bearing on the objectives of the BAP.

Table 2: Habitat Action Plans

Habitat	Valuable examples present on site?	Would development impact significantly on BAP objectives
Upland Oakwood	No	N/A
Lowland Mixed Deciduous Woodland	No	N/A
Wet Woodland	No	N/A
Wood Pasture and Parkland	No	N/A
Hedgerows	No	N/A
Arable Field Margins	Yes	No
Floodplain Grazing Marsh	No	N/A
Lowland Meadows	No	N/A
Lowland Dry Acidic Grassland	No	N/A
Lowland Heathland	No	N/A
Upland Heathland	No	N/A
Blanket Bog	No	N/A
Purple Moor Grass and Rush Pasture	No	N/A
Reedbeds	No	N/A
Ponds	No	N/A
Rivers	No	N/A
Open Mosaic Habitats on Previously Developed Land	No	N/A

Aerial Photography and Detailed Map Study

13. 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.

14. The site comprises an area of arable land on the edge of the village of Dodworth. It is bounded on three sides (north-east, north-west and south-east) by residential development. The south-western boundary is bordered by a cemetery with arable fields beyond. Fields in the area retain a relatively small size and a network of remnant hedgerows.

15. There are no water bodies shown on mapping or visible from aerial photographs within 500m of the site, the nearest being a farm pond at Home Farm some c. 660m south west of the site and a large pond within the golf course some 800m to the north-west of the site.

Records

16. The local Data holder is Sheffield Biological Records Centre. An application for records was made to provide information on protected or notable species and locally designated sites within 2km of the application site. The records include the following:

- A range of common and ubiquitous bird species.
- Two records of bird species listed on the Barnsley LBAP (English partridge and lapwing, however the most recent records were from 2007. Due to the fragmented nature of the site it is extremely unlikely that these species would find important habitat within the application site.
- A number of bat records with only one species (pipistrelle) defined. None of the records have good detail or resolution, and the most recent record was made in 2006 at Strafford Walk (SE 318 048). Bats potential use of the site is discussed later in the report.

Survey Method

17. The survey was carried out on the 18th June 2012 by an experienced field ecologist.

18. 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

19. The application site comprises a single field currently supporting hay/silage grass species, with limited unmanaged field margins containing occasional tree species. To the north-east, north-west and south-east the site is bounded by gardens. To the south-west it immediately borders a footpath with a cemetery separating it from further arable farmland and pasture. The following habitat types are present:

- Arable - improved grassland
- Field margins
- Defunct hedgerow

Arable – improved grassland

20. This is the predominant habitat type (Fig.1) within the application site, consisting of a sown perennial rye grass (*Lolium perenne*) dominated grassland, with frequent fescues (*Festuca* spp.) and occasional Yorkshire fog (*Holcus lanatus*), annual meadow grass (*Poa annua*), field poppy (*Papaver rhoeas*), red clover (*Trifolium pratense*) white clover (*T. repens*) and shepherd's purse (*Capsella bursa-pastoris*).



Figure 1

Looking north-west across the application site through arable grassland.

Field margins

21. Field margins to the north-east and south-east are dominated by rank grasses false oat grass (*Arrhenatherum elatius*), cocksfoot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*, with frequent perennial rye grass (*Lolium perenne*). Common forbs are frequent throughout, with ragwort (*Senecio jacobea*), nettle (*Urtica dioica*), cleavers (*Galium* aparine), cow parsley (*Anthriscus sylvestris*), greater willowherb (*Epilobium hirsutum*), broad leaved dock (*Rumex obustifolius*), common sorrel (*Rumex acetosa*), charlock (*Sinapis arvensis*), hedge mustard (*Sisymbrium officinale*), creeping buttercup (*Ranunculus repens*), cut-leaved crane's bill (*Geranium dissectum*), smooth sow thistle (*Sonchus oleraceus*), prickly sow thistle (*S. asper*), spear thistle (*Cirsium vulgare*), creeping thistle (*C. arvense*), red clover (*T. pratense*) and white clover (*T. repens*). Occasional forbs include wood avens (*Geum urbanum*), honesty (*Lunaria annua*) and sun spurge (*Euphorbia helioscopia*). Garden escapees also feature along these boundaries, with yellow iris (*Iris pseudacorus*), red valerian (*Centranthus ruber*), red-hot poker (*Kniphofia* sp.), snowberry (*Symphoricarpos albus*), honeysuckle (*Lonicera* sp.) and lilac (*Syringa vulgaris*) present.



Figure 2

North-eastern boundary with ash, and hawthorn interspersed with garden hedging and scrub vegetation.

Garden hedges are interspersed with hawthorn (*Crataegus monogyna*) (Fig.2) and scrub vegetation bramble (*Rubus fruticosus* agg.), buddleia (*Buddleia davidii* immature ash (*Fraxinus excelsior*), elder (*Sambucus* nigra), and dog rose (*Rosa canina*) along the north-east and south-east boundaries. The north-western boundary is bordered by recent garden fencing with a species-poor field margin (Fig.3).



Figure 3

North-western boundary with species-poor field margins.

Defunct hedgerow

22. Along the south-western border of the proposal site lies species-poor defunct hedgerow overgrowing wooden fencing, with a single mature ash tree. Hedge species include hawthorn, elder, field maple (*Acer campestre*), sycamore (*Acer pseudoplatanus*), with frequent ivy (*Hedera* helix) growing through the hedge and covering the mature ash. The field margin here is less diverse but has a similar mix of common forbs as the other boundaries, with more abundant cow parsley and

cleavers. Common field speedwell (*Veronica persica*) was found amongst ground vegetation.



Figure 4

South-western defunct hedge boundary.

Invasive species

23. A *Cotoneaster* species was found at the field margin/residential garden interface on the north-eastern boundary. Several species of this genus are included under the amended (2010) Schedule 9 of the Wildlife & Countryside Act.

Fauna

Bats

24. There is suitable bat foraging and commuting habitat around the application site in the form of hedgerows and the cemetery. The single mature ash tree situated on the south-western hedge boundary has a number of suitable holes and fissures that may be suitable for bat roosting (Figs.5 and 6). With reference to Table.1 the single tree is defined as having moderate bat roost potential.



Figure 5

Single mature ash tree on south-western boundary.



Figure 6

Some of the features noted on the mature ash tree, south-west boundary.

Table 1: Bat Roost Potential Criteria for Trees

Roosting potential	Criteria
Good	Trees that have many areas suitable for roosting with a large number of potential roosting features such as fissures, holes and flaking bark. These are normally in areas of good habitat such as close to water or in a landscape with well connected linear features. Trees with good potential could be used for a whole range of roosts including maternity and hibernation roosts.
Moderate	Trees with a smaller range of features suited to roosting in less valuable habitat, but still supporting features that could be attractive to bats and potentially support maternity roosts.
Limited	Trees with limited range or quality of roosting features in poor habitat. They could be used as occasional or transient roosts, but are unsuitable for maternity roosts.
Very Limited	Trees that have few places for bats to roost located in poor foraging habitat, but due to superficial features such as flaked bark etc. could be used on an occasional basis for solitary or small groups of bats.

None	Trees which appear unsuitable for roosting bats due to clear lack of roosting spaces such as voids etc and/or absence of suitable access points.

25. There are a number of bat records within the surrounding areas. It is therefore likely that bats will utilise the site's boundaries for foraging but they are unlikely to find much value within the site itself at present.

Amphibians

26. There is no amphibian breeding habitat in, or within 500m of, the application site. This means that the site will be of limited value to amphibians and (especially in the case of great crested newt) they are very unlikely to be present at the site.

Birds

27. Bordering an agricultural landscape, the site is likely to support a range of common farmland species. However, given the location of the site bounded by residential development on three sides, the open nature of the south-western boundary to frequent disturbance from traffic to the cemetery and dog walkers along the footpath, the value of the site to birds would be limited and very much restricted to its boundary hedgerows and trees.

Protected mammals

28. No evidence of badgers could be found on the site. The site does not support suitable habitat for any other protected mammal species.

Reptiles

29. The site does not currently present good reptile habitat. This coupled with the site's previous use, lack of connectivity to good well established habitat and the absence of records in the area suggests that it is highly unlikely to be of value to this group.

30. The site supports a small range of common species-poor habitats reflecting the present agricultural nature of the site.

31. The proposed development presents minimal risk of significant impacts on important, protected or designated sites.

32. The proposed development presents minimal risk of significant impacts on legally protected or otherwise valued species.

33. The following precautions are considered necessary in relation to the site's development:

Bats

34. The single mature ash tree located on the south-western boundary of the site has been classed as having moderate bat roost potential due to the presence of holes and fissures. If development of the site is likely to affect this tree, either through felling, pruning or significantly increased lighting, further survey work will be required to avoid impact on this protected species.

Nesting birds

35. To prevent the proposed works impacting on nesting birds, clearance of any other trees (other than the ash discussed above) and scrub on site will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance that is required during the breeding bird season should be preceded by a nesting bird survey to ensure that the Wildlife and Countryside Act (1981) is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.

Invasive species

36. Care should be taken in the clearance or movement of any *Cotoneaster* species that straddle the garden boundaries into the proposal site as it is an offence to plant or otherwise cause these species to grow in the wild (which could result from cutting and removal) under Schedule 9 of the Wildlife and Countryside Act. A suitably experienced contractor should be sourced for this work.

Site Enhancement

37. In line with planning guidance now outlined in the National Planning Policy Framework (NPPF) development should take account of the value of ecosystem services and enhance ecological networks. It is recommended that the hedgerows around the application site be retained and that new boundaries produced as part of the development be planted with native species such as hawthorn (*Crataegus monogyna*), ash (*Fraxinus excelsior*), oak (*Quercus* sp), holly (*Ilex aquifolium*) and hazel (*Corylus avellana*). This will serve to bring wildlife into the development and provide long term habitat for nesting and foraging.

38. The site could be enhanced in terms of bats as the majority of trees on site (with the exception of the ash tree identified above) do not hold features which could support a bat roost. Features providing artificial bat roosting could be incorporated into the south-east and south-western facing elevations of new builds.

References

IEA. (1995). *Guidelines for Baseline Ecological Assessment*. Chapman and Hall

Nature Conservation Committee (1990). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*. NCC