



**Ecological Appraisal
Land off Higham Lane
Dodworth**

Report reference: BE-R-1349-01
August 2012

Report Title:	Ecological Appraisal Land off Higham Lane, Dodworth
Report Reference:	BE-R-1349-01
Written by	Ed Turner BSc(Hons) Ecologist
Technical review:	Peter Brooks BSc (Hons), MA, MIEEM, CEnv Managing Director
QA review:	Peter Brooks BSc (Hons), MA, MIEEM, CEnv Managing Director
Approved for issue	Peter Brooks BSc (Hons), MA, MIEEM, CEnv Managing Director
Date	31.08.12



High Street House, 2 High Street, Yeadon, Leeds, LS19 7PP
Phone **0113 250 6101**
Fax **0113 250 6944**
Email: pjb@brooks-ecological.co.uk
Registered in England Number 5351418
www.brooks-ecological.co.uk

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.

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 Redrow Homes Ltd to carry out an ecological assessment of a site off Higham Lane, Dodworth, South Yorkshire (SE 314 056).

Figure 1 Approximate survey site boundary



Site Proposals

2. The proposals are for a residential development of c.41 units to occupy the 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:
 - Demolition of buildings
 - Clearance of vegetation
 - Loss of areas currently occupied by habitat to built development
 - Effects on adjacent habitats

Desk Study

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 replanted or semi-natural woodland within the search area, the closest of which is an ancient and semi-natural area of wood land c.950m north of the site. None of these areas would be expected to be impacted by the proposed development.
8. Local records holders, Barnsley Biological Records Centre (BBRC), have confirmed that there are no non-statutory designed sites within a 1km search area. Two natural heritage sites lie just beyond this boundary but would not be affected by the development.

Natural England Natural Area

9. The site falls within *Natural Area 24 Coal Measures*
10. The topography of the Natural Area is gently undulating and the network of towns and cities is characterised by a matrix of acidic ancient and secondary woodlands, valley wetlands, neutral and acid grasslands, and mixed agriculture. Canals, mill-ponds and natural rivers are also important features.
11. National conservation priorities within this natural area are;
 - Earth heritage
12. Local Conservation priorities within this natural area are;
 - Acid grassland

- Fen, marsh and swamp
- Lowland heathland
- Neutral grassland
- Rivers and streams
- Standing open water and canals
- Wet woodland

13. The application site does not present any good examples of these habitat types. A small watercourse running through the site is described later in the report.

Local Biodiversity Action Plan

14. Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the 'Barnsley Biodiversity Action Plan'.
15. Table 1 lists the local Species Action 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
Barn owl	No	N/A
Skylark	No	N/A
Tree sparrow	Yes	No
Twite	No	N/A
Great crested newt	No	N/A
Salmon	No	No
Bullhead	No	N/A
White-clawed crayfish	No	N/A
Glow worm	No	N/A
Dingy skipper	No	N/A
Bats	No	N/A
Bluebell	No	N/A
Water vole	No	N/A
Otter	No	N/A
Grey partridge	No	N/A
Bittern	No	N/A
Kestrel	No	N/A
Little ringed plover	No	N/A
Lapwing	No	N/A

16. 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 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	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	No	N/A
Floodplain grazing marsh	No	N/A
Lowland meadows	No	N/A
Lowland dry acidic grassland	No	N/A

Aerial Photography and Detailed Map Study

17. 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.
18. The site comprises an area of land of approximately 1.15 hectares. The greater portion of the site is currently used as grazing pasture for a small number of sheep, and is located on the edge of Dodworth, Barnsley. It is bounded on two sides (south and east) by residential development, with the southern boundary bordering residential gardens. The northern boundary is bordered by chain-link fencing to the

railway above. Beyond the railway, the A628 runs east-west, with industrial buildings to the west and an area of woodland to the north. In the wider context, open habitat to the north and west include a golf course and arable land.

19. There are no water bodies shown on mapping or visible from aerial photography within 500m of the site. Several issues and drains flow within this area, one of which runs through the site north-south.

Records

20. The local data holders, Barnsley Biological Record Centre (BBRC), have provided information on protected or notable species within 1km of the application site. The records include the following:
- Several birds of the red and amber BoCC lists as well as birds also featuring in the UK BAP such as house sparrow and lapwing.
 - Bat species including common pipistrelle and brown long eared bats. The closest of which are the brown long eared records, some 800m north east of the site.
21. The development of the site is unlikely to have any effect on these species.

Phase 1 Habitat Survey

Survey Method

22. The survey was carried out on the 22nd August 2012 by an experienced field ecologist.
23. 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

24. The application site comprises a detached residential dwelling located within an area of land of approximately 1.15 hectares. To the east of the site, the house sits within a large garden, with lawns, shrubs and trees. To the west of the garden area,

there are three small grassland paddocks currently grazed by a small number of sheep. The following habitat types are present:

- buildings
- semi-improved grassland
- tall ruderal vegetation
- garden
- watercourse

Buildings

25. Buildings comprise the detached house and garage, a double stable block, and two small sheds.
26. The main house is a brick-built bungalow with boxed eaves below a double-pitched tiled roof. The building is in good repair throughout; all pointing, roof tiles and eaves are intact offering no opportunity for bat roosting (Figs. 2 and 3). The brick-built garage is similarly in good repair, offering no bat roost potential.



Figure 2

Gable end of main residential building.



Figure 3

Boxed eaves of house in good repair.

27. The stable building is of breezeblock construction, rendered to the exterior, with a timber framed and boarded roof, covered with roofing felt. The roof sits above the wall tops, offering no sheltered cavities or gaps that bats could use for occasional roosts (Fig.4).



Figure 4

Internal view of the stable block showing exposed wall tops.

28. The two sheds on site are both of single brick wall construction, with flat roofs of corrugated galvanised steel. These structures lack any features that would render

them suitable to bat roosting, such as cavity wall spaces, deep crevices or roof spaces (Fig.5).



Figure 5

Brick-built shed with flat corrugated steel roof.

Semi-improved grassland

29. This habitat type forms the greater portion of the application site of approximately 8400 m². The three small paddocks have been previously grazed by horses, and are currently sheep grazed, with a relatively short sward height (Fig.6). Grasses common throughout include crested dog's tail (*Cynosurus cristatus*), perennial rye grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*). Forbs common in the field layer include ragwort (*Senecio jacobea*), common sorrel (*Rumex acetosa*), meadow buttercup (*Ranunculus acris*), creeping thistle (*Cirsium arvense*), red and white clover (*Trifolium pratense*, *T. repens*), ribwort plantain (*Plantago lanceolata*), common mouse ear (*Cerastium fontanum*) and broad leaved dock (*Rumex obtusifolius*). Where vegetation has been less prone to grazing, species such as cut-leaved cranesbill (*Geranium dissectum*), red bartsia (*Odontites vernus*), lesser stitchwort (*Stellaria graminea*), smooth hawksbeard (*Crepis capillaris*), meadow vetchling (*Lathyrus pratensis*) and chickweed (*Stellaria media*) are locally dominant.
30. Wavy hair grass (*Deschampsia flexuosa*) and sheep's sorrel (*Rumex acetosella*) can be found in places indicating locally acidic conditions.
31. Occasional areas of disturbed land are present within the grassland paddocks, with vegetation typical of this habitat such as pineapple weed (*Matricaria discoidea*), redshank (*Persicaria maculosa*), scentless mayweed (*Tripleurospermum inodorum*) and common knotgrass (*Polygonum aviculare*).



Figure 6

Semi-improved grassland (looking east from the western boundary).

Tall ruderal vegetation

32. Toward field boundaries to the north and south, taller ruderal vegetation is locally dominant, such as nettle (*Urtica dioica*), spear thistle (*Cirsium vulgare*), and hogweed (*Heracleum sphondylium*) indicating localised nutrient enrichment, together with occasional scrubby tree species hawthorn (*Crataegus monogyna*) and elder (*Sambucus nigra*).



Figure 7

Tall ruderal vegetation to southern site boundary.

Garden

33. To the east of the application site, the land becomes a well-tended mature garden, with regularly mown lawn, mature shrubbery and a mixture of native and non-native trees including hawthorn, cherry (*Prunus* sp.), silver birch (*Betula pendula*), beech (*Fagus* spp.), alder (*Alnus* spp) and Swedish whitebeam (*Sorbus intermedia*) (Fig.8). All trees lack crevices or rot holes suitable for bat roosts.



Figure 8

Typical garden vegetation.

34. To the west of the garden, there are several small vegetable and fruit beds (Fig.9), and small areas of less managed grassland which are being colonised by competitive ruderals such as nettle and creeping thistle.



Figure 9

Vegetable and fruit beds to the western edge of the garden.

Watercourse

35. A small watercourse runs north-south through the garden, beginning as an issue several hundred metres north of the site. The drain lacks emergent vegetation and the bed is heavily silted.

Fauna

Bats

36. There is suitable bat foraging and commuting habitat around the application site along the paddock boundaries and mature gardens. The site does not present any roosting opportunities for this group with trees being in good condition with no holes, rot cavities or areas of peeling bark. The buildings on site are either of a construction which makes them unsuitable for roosting, or are in good repair offering no roosting opportunities.

Amphibians

37. The watercourse running through the site has a constant flow, being more of a drain than a true stream, and lacks features attractive to spawning amphibians such as pools. 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

38. Set within a residential landscape with open spaces within the local area, the site has the potential to support a limited range of common species. The value of the site to birds would be limited to the boundary scrub and mature trees within the garden, though no evidence of nests was observed during the survey. Given the setting of the site within the wider context, where abundant more suitable habitat is available, the development of the site would not be expected to make a significant impact on bird species.
39. The stable building and sheds on site provide potential nest sites for swallow. These will be lost to the proposed development and recommendations are made in this respect later in the report. There was no evidence of use in any building by barn owl.

Protected mammals

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

White clawed crayfish

41. The watercourse on the site does not present suitable habitat for this species in terms of water quality, channel substrate and depth or availability of refuges. Coupled with a lack of any local records of this species, its presence on or near the site can effectively be ruled out.

Reptiles

42. 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.

Invasive Plants

43. Several *Cotoneaster* plants were found on site within the garden, some species of which are listed on Schedule 9 (Part 2) of the Wildlife and Countryside Act (1981).

Evaluation and Recommendations

44. The site supports a small range of common species poor habitats reflecting the current use of the land.
45. The proposed development presents minimal risk of significant impacts on important, protected or designated sites.
46. The proposed development presents minimal risk of significant impacts on legally protected or otherwise valued species.
47. The following precautions are considered necessary in relation to the site's development:

Nesting birds

48. To prevent the proposed works impacting on nesting birds, clearance of the trees and scrub on site will need to be undertaken outside of the breeding bird season which is nominally 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.
49. Loss of potential swallow nest sites should be mitigated by provision of alternatives in the developed site. Swallow nest sites can be easily incorporated into garages, bin stores or other open fronted outbuildings.

Invasive species

50. Care should be taken in the clearance or movement of any *Cotoneaster* species off-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.

Enhancement

51. 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 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.

52. The site could be enhanced in terms of bats as the majority of trees on site 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.
53. Hedgehogs are in decline and act as important predators, ensuring a healthy ecosystem. Lack of suitable shelter in modern tidy gardens contributes to scarcity of this species. Hedgehog boxes could be installed in discreet locations among the landscaping.

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