Brooks Ecological
Grounded advice

# Ecological Appraisal
# Whites Bakery Site,
# Hardwick Close, Worsbrough

R-2032-01
October 2014

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| Report Title: | Ecological Appraisal<br>Whites Bakery Site,<br>Hardwick Close, Worsbrough |
| Report Reference: | R-2032-01 |
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## Summary Statement

The site has been found to contain common, species poor habitats of low value. No potential constraints in relation to protected or notable species, habitats or designated sites have been identified.

General recommendations are made in avoiding potential impacts on nesting birds and enhancement measures are proposed.

# Introduction

1. Brooks Ecological Ltd was commissioned by LDA (Civils & Transportation) Ltd to carry out an Ecological Appraisal of the Whites Bakery site, off Hardwick Close, Worsbrough, South Yorkshire (SE 353 038).

2. The application site 'the site' is comprises the bakery building which is still in use and a small stores building as well as an area of scrub habitat located in the centre of the small town of Worsbrough.

**Figure 1** Site boundary - (Red Line)



**Proposals**

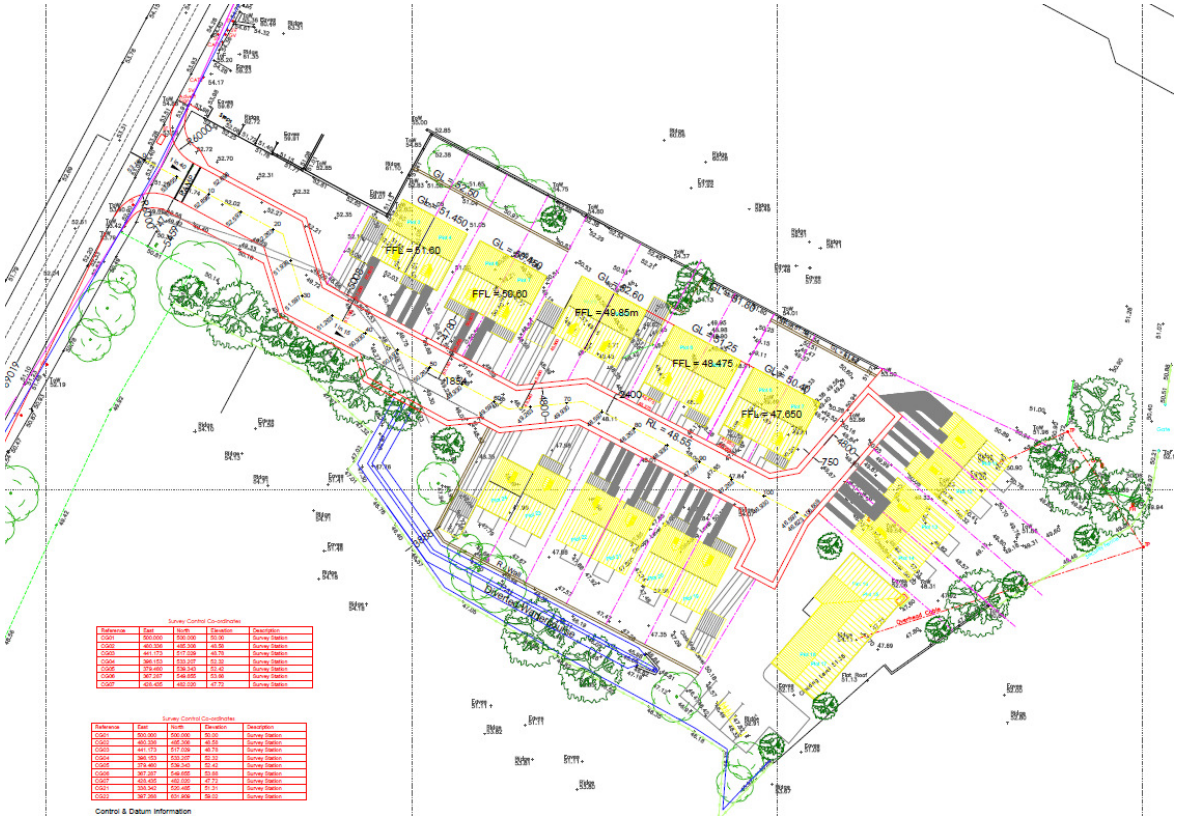
3. The proposals for the site inform an outline planning application for residential use and are shown in figure 2 below.

**Site context**

4. 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.

**Figure 2** Proposals for the site as provided




5. The site occupies a location in the centre of the small town of Worsbrough, as such it is surrounded on all sides by dense residential development and associated infrastructure. Beyond this urban development the wider area is characterised by a mix of land use including small scale arable fields, grazing pasture and numerous woodlands. Open space of this type is reached to the south beyond c.300m, 700m to the west, and 750m to the east. Small pockets of open amenity space are found to the north before the larger urban area of Barnsley is encountered.

Wildlife corridors

6. The site is found in a densely developed area with connectively being limited to the small water course which runs through the site but connects to no areas of higher value habitat and the sparse network of private gardens, all of limited value to the movement of wildlife. A wooded, dismantled railway and the River Dove are found c.200m and c.400m south of the site respectively. These features provide strong

habitat corridors in the area moving east – west, though are unconnected to the application site. This picture is summarised in figure 3 below.

**Figure 3** Local Habitat / connectivity features. Potential wildlife corridors are shown by dashed lines, with higher value habitat highlighted in orange.



Water bodies

7. A single standing water body is found within 500m of the application site. Worsborough Basin is a large, linear pond resulting from abandonment of the former canal and found within Worsbrough Country Park. It lies approximately 320m south of the site at its closest point. The land between this water body and the application site is primarily occupied by urban development.

8. Beyond this search radius Worsbrough reservoir is located c.570m south west and two small woodland ponds are found approximately 560m south.

Statutory Designations

9. 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 many non-statutory 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. In addition information

from the local record holders, Barnsley Biological Records Centre, has been requested on locally designated sites.

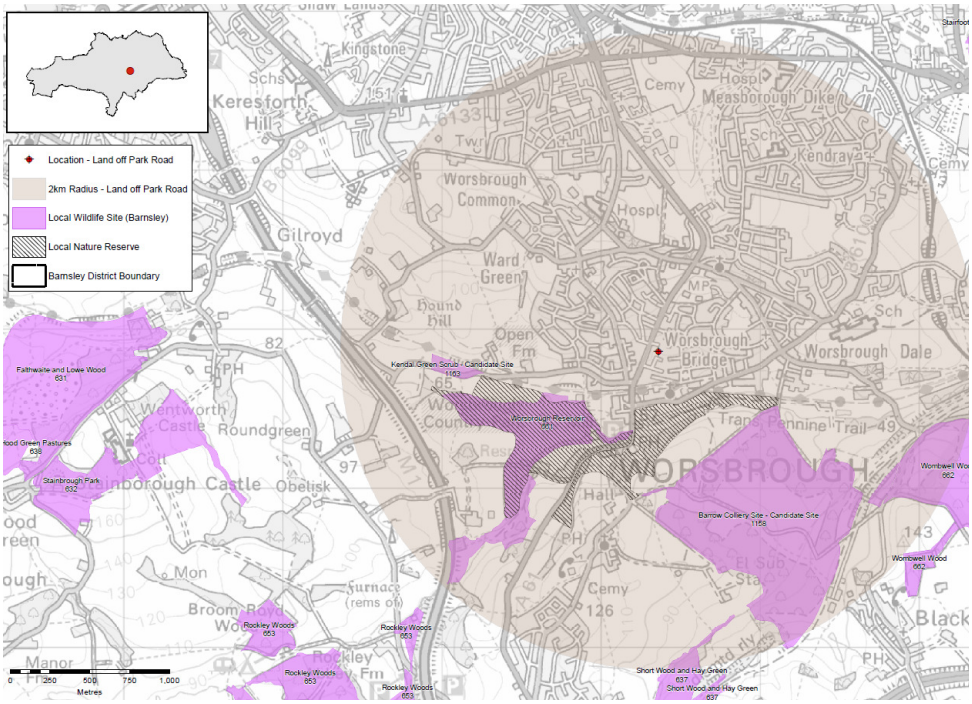
10. A single statutory designated site is found within 2km of the application site, Worsbrough Country Park Local Nature Reserve (LNR) is located c.300m south of the application site. Habitats within the LNR include a reservoir, willow carr, managed grassland/meadowland, reed bed and woodland. Given the lack of similar habitat or any form of connectivity with the site, impacts of development on this LNR can be ruled out.

Non-Statutory Designations

11. There are four Local Wildlife Sites (LWS) and two candidate LWS's witihin 2km of the site. The closest of these sites is the Worsbrough Reservoir site found c.500m south at its closest point. None of these LWS are well connected to the application sitea and all are found beyond the ecological zone of influence of the proposed development.

**Figure 4**

Local designations - Barnsley Local Wildlife Sites



**Method**

12. The survey was carried out on 3rd September 2014 and followed Phase 1 habitat survey methodology (JNCC, 1993). This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). The survey method was "Extended" in that evidence of fauna and faunal habitat was 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) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2012).

**Results**

13. The following habitats, arranged in order of area can be described within the application site and on its boundaries, habitats are shown indicatively on plan D-2032-01.1 provided in appendix.

- Buildings and hard standing
- Scrub
- Rough neutral grassland
- Trees
- Watercourse

*Buildings and hard standing*

14. Approximately two thirds of the site area is occupied by the buildings and hard standing associated with the active bakery. The building is found to be in good condition reflecting its on-going use. The buildings are discussed in detail in the faunal appraisal section of this report.

15. The majority of the hard standing around the site is bitmac surface in good condition and in regular use both by staff vehicles and delivery lorries, and as a storage area, this area supports no vegetation.

16. A small section of compacted gravel hard standing leading to the dis-used western section of the site supports a small range of competitive ruderals such as spear thistle (Cirsium vulgare), creeping thistle (C. arvense), willowherb (Epilobium sp.), mugwort (Artemisia vulgaris), ribwort plantain (Plantago lanceolata),

pineappleweed (Matricaria discoidea), red clover (Trifolium pratense) and the common grass cocksfoot (Dactylis glomerata).



**Figure 5**

Hard standing occupying a large proportion of the site

*Scrub*

17. Dense scrub habitat has developed over much of the western half of the site reflecting its lack of use. Bramble (*Rubus fruiticosus agg*.) is dominant in this section of the site though rosebay willowherb (*Chamerion angustifolium*), broad-lead dock (*Rumex obtusifolius*) and nettle (*Urtica dioica*) are common place. Coarse grasses cocksfoot and false oat grass (*Arrhenatherum elatius*) are also present. A number of young, self-set sycamore (*Acer psuedoplatanus*) and occasional buddleja (*Buddleja davidii*) are also present in this area.

18. The same scrub habitat occupies much of the banks of the watercourse (described below) and is found encroaching on the rough grassland to the south of the site.

*Rough neutral grassland*

19. Rough neutral grassland occupies a small area of the site between the building and the watercourse to the south; this is obviously subject to a relatively relaxed management regime. Grass species typical of this common habitat type are dominant in the sward including perennial rye grass (*Lolium perene*), Yorkshire fog (*Holcus lanatus*), common bent (*Agrostis capillaris*), false oat grass and cocksfoot.

20. A small range of common forbs are also present within the sward, ribwort plantain is abundant with lesser amounts of dandelion (*Taraxacum vulgare agg*.), red and white clover (*Trifolium spp*.), ragwort (*Senecio jacobaea*) and very small amounts of bramble.



**Figure 6**

Rough grassland to the south of the site

*Trees*

21. A small stand of semi-mature trees is found in the site's south western corner, these being sycamore, ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*) and elder (*Sambucus nigra*). In addition to this, a second smaller stand of the same species is found along the sites southern boundary, also with beech (*Fagus sylvatica*) and goat willow (*Salix caprea*) present in this area.

22. Scattered individual trees of birch (*Betula sp.*), willow and sycamore are found on the northern boundary and in the sites south eastern corner.

*Watercourse*

23. A small watercourse is found running along a short length of the sites southern boundary. This emerges from a culvert close to the western boundary, flowing through the site for approximately 90m before re-entering a culvert. The water course is not shown beyond this point on mapping suggesting it flows through a culvert to join the River Dove some 450m south east of the site.

24. At the time of survey the watercourse was seen to have a very low flow. Its banks are approximately 1.5m in height with a maximum width of c.2m, where visible the watercourse appears to have a silty substrate lacking any stones or cobbles. Bramble scrub, as described above, occupies the banks and has grown over the channel along much of its length, no specific aquatic vegetation could be found.



**Figure 7**

Looking west along watercourse towards small stand of trees

## Faunal appraisal

25. This section first looks at the types of habitat found on site or within the sphere of influence of potential development, then considers whether these could support protected , UKBAP or Local BAP (LBAP) priority species (referred to collectively as 'notable species'). A full list of LBAP priority species are provided as appendix 2.

26. Records of notable species supplied from a 2km area of search by Barnsley Biological Records Centre are used to inform this appraisal.

*Bats*

Roosting

27. All buildings on site were assessed for bat roost potential. The principal building on site (the bakery) is of simple construction being built using corrugated metal sheeting around a steel post frame with infill brick curtain walls. This building is found in good condition and well sealed to bats.

28. Two smaller buildings are found on site, the first being a small storage unit constructed entirely from corrugated metal. This type of construction generally fails

to provide the stable environmental conditions required by roosting bats, and in this case the building is also very well sealed.

29. The final building is of brick construction with a double pitched pan-tile roof. Both the roof and walls of this building are found in sound repair. A single small, gap was noted in the south western corner of the eaves of this building where water ingress has caused the wood of the verge guard to rot. The ingress of water reduces the suitability of this feature for use by roosting bats. Despite close inspection no evidence to suggest bats had ever used this feature could be found.

**Figure 8** Bakery building




**Figure 9** Building in north east corner of site



30. All buildings on site are assessed as supporting only *Very Limited Bat Roost Potential*. With this in mind the risk of affecting roosting bats is minimal.

Commuting and Foraging

31. The site provides a small area of habitat suitable for use by foraging and commuting bats. Suitable habitat is focused around the trees and watercourse of the southern boundary, these features will be retained in part through development.

32. Given the small size of the suitable habitat and lack of connectivity to other areas of habitat it is unlikely that the site provides an important contribution to the foraging grounds or commuting routes relied upon by local bat populations.

33. A large number of records have been returned from the BBRC relating to bats within the 2km search radius. Records cover pipistrelle species, noctule, unspecified myotid species as well as a large number of indeterminate 'bats'. The majority of these records relate to either Worsbrough Reservoir, 580m south west at its closest point, and Worsbrough Hall, 1km south, with single records at Ward Green primary School, 650m north west, Park Cottages, 840m south and various other locations supplied without precise information.

*Amphibians*

34. A single standing water body is found within 500m of the application site. This being Worsbrough Basin c.320m south. This is not well linked to the application site and separated by approximately 285m of residential development and roads. Given the lack of accessible suitable breeding habitat the site is unlikely to be of significant value to amphibians and the protected great crested newt is likely to be absent from the site.

35. Three records of great crested newt are held within the search radius. Two relating to Worsbrough Reservoir and a single record associated with Rockley Dyke, c.2km south west of the site. Both locations are over 500m from the site and poorly connected to it.

*Riparian species*

*White clawed crayfish*

36. Given the very low flow and lack of cryptic habitats apparent within its channel, the watercourse on site provides sub-optimal habitat for this species. No records of the species are held within 2km of the application site. Its absence from site can be concluded.

*Water vole*

37. The earth banks provide habitat suitable for burrowing water voles though the relatively shallow grade reduces their suitability somewhat. Despite this, the short section of open watercourse is very isolate, being culverted at either end of the site, making it is highly unlikely that this species could colonise or sustain a viable population in this habitat.

38. Where more detailed search was possible no evidence of water vole such as droppings, grazed lawns or burrows could be found.

39. Seventeen records of water vole are held within the search radius, these records are not provided with precise grid references but are labelled as Worsbrough Reservoir, Worsbrough Country Park Mill Race and Mill Pond, and Rockley Dyke, none of these water courses are well connected to the short section of watercourse within the application site. The absence of watervole from site can be reasonably concluded.

*Birds*

40. The site will support a typical range of urban birds associated with the trees and scrub on site. Given the isolated and urban location of the site it is not likely to

support or provide supporting habitat for any important assemblages or rare bird species.

41. Records show a large number of common species, again associated with Worsbrough Reservoir and Country Park, species which would not find suitable habitat within the application site.

## Invasive Species

42. No species listed on Schedule 9 of the Wildlife and Countryside Act (1981) could be found on site during the initial survey.

43. In evaluating the site the ecologist will take into account a number of factors in combination, such as;

- the baseline presented above,
- the site's position in the local landscape,
- its current management and
- its size, rarity or threats to its integrity.

44. There are a number of tools available to aid this consideration, including established frameworks such as Ratcliffe Criteria or concepts such as Favourable Conservation Status. Also of help is reference to Biodiversity Action Plans in the form of the Local BAP (Appendix 2) and UK BAP to determine if the site supports any Priority habitats or presents any opportunities in this respect.

45. The assessment of impacts considers residential development shown in figure 2 in light of :

- Site preparation including vegetation and habitat removal
- Direct effects on significant faunal groups or protected species
- Effects on adjacent habitats or species such as disturbance, pollution and severance
- Operation effects on wildlife such as noise and light disturbance

**On site habitats**

46. The site supports a small range of habitats of low ecological value reflecting its current use. The majority of the site is occupied by either built development or scrub habitat on disused land. The re-development of these areas will not be of ecological significance.

47. The small section of watercourse and associated trees along the southern boundary provide some intrinsic value - in comparison to habitat available in the wider site. However, the section of open watercourse is very short being culverted at either end, and isolated from any other similar habitat. This reduces its ecological value in the sense that it does not provide sufficient habitat to support important or protected riparian species. The stream does provide a water source for local fauna, despite being diverted this feature will be retained through development meaning specific mitigation will not be required.

**On site fauna**

48. The site is assessed as providing a small area of potential foraging habitat for local bat populations, but will not support high numbers or rarer species due to its isolated location within an urban area.

49. The buildings on site have been found to be well sealed preventing bats access to any suitable voids or crevices. Similarly, the trees on site have not been found to provide features suitable for use by roosting bats. With this in mind work can proceed on site with minimal risk of affecting bats or their roosts, and without the need for further survey.

50. The short section of open watercourse within the site has been assessed as providing very marginal habitat for both white clawed crayfish and water vole. No evidence could be found during the survey and after analysis of the local landscape and records their likely absence is concluded.

**Off site**

51. Impacts on the nearby wildlife sites would not be expected due to lack habitat connectivity.

General precautions

*Nesting birds*

52. To prevent the proposed works impacting on nesting birds any clearance of vegetation 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.

**Enhancement**

53. In line with planning guidance outlined in the National Planning Policy Framework (NPPF) development should take account of the value of ecosystem services and enhance ecological networks.

54. At present the watercourse supports no specific aquatic vegetation, being dominated by bramble floral diversity is limited. A range of submerged, emergent and marginal vegetation should be planted along the course of the re-routed watercourse increasing its ecological value.

55. The linear feature of the southern boundary could be enhanced through the planting of a species rich native hedgerow, this provide additional habitat and food sources for native wildlife. Species such as hawthorn, blackthorn and hazel should be included. To further increase the value of this corridor, native standard trees could be planted within the hedgerow including species such as oak and lime.

56. The provision of artificial habitat is always beneficial as modern developments often fail to provide such features. Bat, bird and hedgehog boxes can be easily and cheaply incorporated into buildings and landscaping round the site.

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## Appendix 1 Local BAP - Barnsley Biodiversity Action Plan

**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 | No |
| Otter | No | No |
| Grey Partridge | No | No |
| Bittern | No | No |
| Kestrel | No | No |
| Little Ringed Plover | No | No |
| Lapwing | No | No |
| Barn Owl | No | No |
| Skylark | No | No |
| Tree Sparrow | No | No |
| Twite | No | No |
| Great Crested Newt | No | No |
| Salmon | No | No |
| Bullhead | No | No |
| White-clawed Crayfish | No | No |
| Glow Worm | No | No |
| Dingy Skipper | No | No |
| Bluebell | No | No |

1. 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 | No |
| Lowland Mixed Deciduous Woodland | No | No |
| Wet Woodland | No | No |
| Wood Pasture and Parkland | No | No |
| Hedgerows | No | No |
| Arable Field Margins | No | No |
| Floodplain Grazing Marsh | No | No |
| Lowland Meadows | No | No |
| Lowland Dry Acidic Grassland | No | No |
| Lowland Heathland | No | No |
| Upland Heathland | No | No |

| Habitat | Valuable examples present on site? | Would development impact significantly on BAP objectives |
|---|---|---|
| Blanket Bog | No | No |
| Purple Moor Grass and Rush Pasture | No | No |
| Reedbeds | No | No |
| Ponds | No | No |
| Rivers | No | No |
| Open Mosaic Habitats on Previously Developed Land | No | No |



N

Water course

Competitive/tall ruderal

Buildings

Scrub

Rough neutral grassland

Trees

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Project: Whites Bakery, Worsbrough

Title: Ecological Features Plan

Drawing Number: D-2032-01.1

Scale: Do not scale Date: October 2014

Revision: