Ecological Appraisal
Former Foulstone School, Darfield

Report reference: R-2037-02
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Report Title:	Ecological Appraisal Former Foulstone School, Darfield
Report Reference:	R-2037-02
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Summary Statement

The site is considered to be of low ecological value and its development need not impact on protected or otherwise important habitats, species or designated sites.

The Bat Roost Potential report (R-2037-01) assessed the single building on site as having *very limited* roosting potential. As such no further survey effort is required with regards to bats.

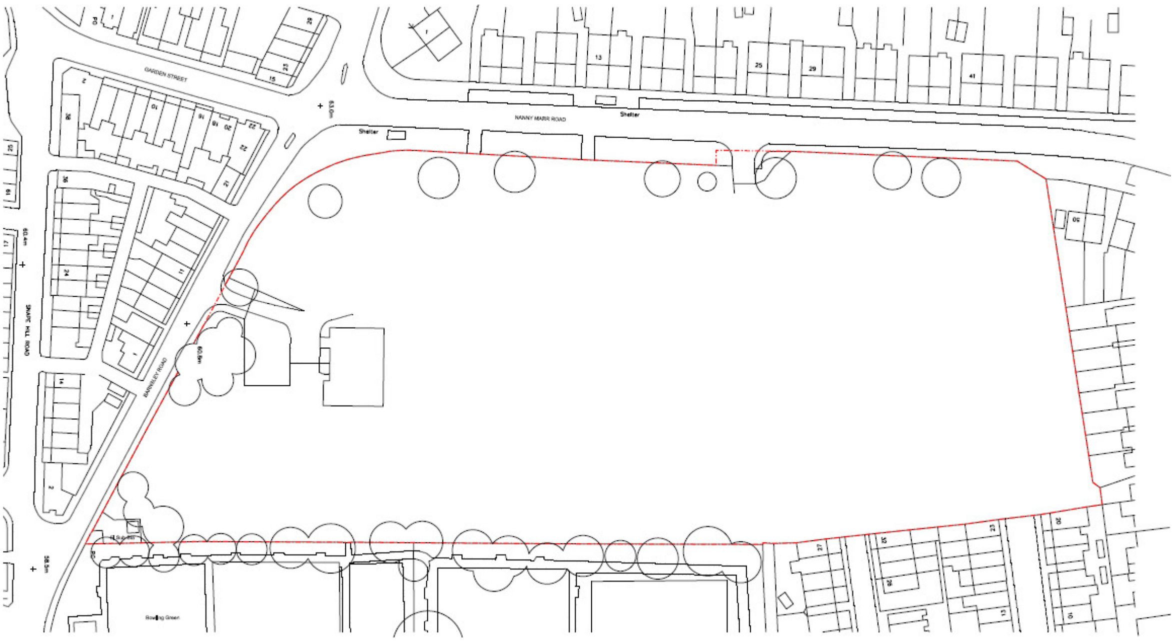
General recommendations are made for enhancing the site for ecology.

Introduction

1. Brooks Ecological Ltd was commissioned by Peveril Securities Ltd. to carry out an Ecological Appraisal of land at the Former Foulstone School, Nanny Marr Road, Darfield (SE 415 044). This report has been reassigned to Partner Construction Ltd.

2. The application site 'the site' is comprised of the former Foulstone School, Darfield, consisting of a single building and plot of recently cleared land.

Figure 1 Site boundary - (Red Line)



Proposals

3. The proposals are to demolish the one remaining building on site to make way for a mixture of residential and commercial units.

Figure 2 Proposed outline site.

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.

5. The site is close to the centre of Darfield and is immediately enclosed by a mixture of residential development, allotments and amenity space. The River Dearne flows roughly north to south, c.450m east, through an area bordered by strips of woodland and arable fields which are separated by a network of hedgerows typical of the rest of the surrounding countryside. To the east and south of the site is combination of arable fields, woodland and wetlands including Wombwell Ings, Dearne Ings and Old Moor, making up some of the best habitat in the wider area. West of the site extends the suburbs of Darfield, after which lies more open

countryside characteristic of the area and some larger woodlands which flank the River Dove.

Wildlife corridors

6. There are four significant wildlife corridors in the area, the nearest of which is the River Dearne located circa. 450m east of the site which flows south through the area, parallel to which also runs a well vegetated disused railway line. Approximately 600m south of the site the River Dove runs east west through the area and is flanked by a mix of woodland further west and grasslands directly south of the site. Further south another disused railway runs from the north-west to the south-east and to the west intersects the River Dove.

7. Despite being close to several substantial wildlife corridors the site does not occupy a location of any importance within the area, does not contribute to these corridors, and shares no similar habitat.

Figure 3 Local habitat / connectivity features. Potential wildlife corridors are shown by dashed lines.

Water bodies

8. There are no ponds shown on mapping within 500m of the site. The nearest ponds are a pair of adjacent ponds, c.570m south-west of the site. These are separated from the site by several streets of housing.

Statutory Designations

9. A search of the MAGIC (Multi-Agency Geographic Information for the Countryside) 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.

10. There are no statutory designations within 2km of the site though the site does lie within the impact zone of Denaby Ings SSSI. However, the site does not fall into any of the development categories which trigger the need for Natural England to be consulted.

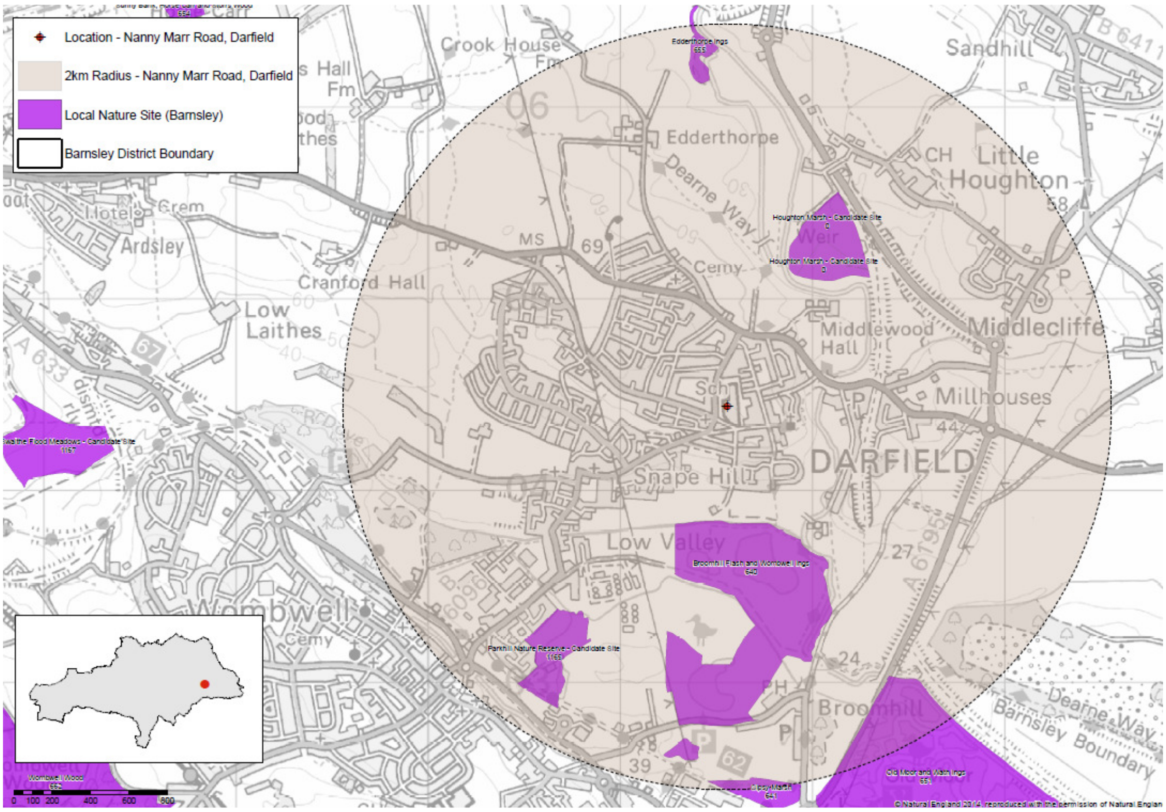
Non-Statutory Designations

11. There are 4 local nature sites, and 2 candidate sites within 2km of the site which are as follows –

- Broomhill Flash and Wombwell Ings Local Nature Site (LNS) located c.600m to the south.
- Gypsy Marsh LNS located c.1.6km to the south.
- Old Moor & Wath Ings LNS located c.1.8km to the southeast.
- Eddenthorpe Ings LNS located c.1.7km to the north.
- Houghton Marsh LNS (candidate site) located c.800m to the northeast.
- Parkhill Nature Resrve (candidate site) located c.1.3km to the southwest.

12. The above sites share no physical / hydrological connections with the application site, nor do they share similar habitats. Therefore development will likley have a negligible impact on these designations.

Figure 4 Local designations



Extended Phase 1 Habitat Survey

Method

13. The survey was carried out on 9th February 2015 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

14. The following habitats, arranged in order of area can be described within the application site and on its boundaries.

- Secondary ephemeral grassland
- Trees
- Buildings

Secondary ephemeral grassland.

15. The site comprises almost entirely of species poor grassland arising on cleared land. Common grass species such as perennial rye grass (*Lolium perenne*), cocksfoot (*Dactylis glomerata*), creeping bent (*Agrostis stolonifera*) and red fescues (*Festuca rubra* agg.) dominate, with a range of forb species colonising from the wider area such as broad leaved dock (*Rumex obtusifolius*), ragwort (*Senecio jacobaea*), spear thistle (*Cirsium vulgare*) and dandelion (*Taraxacum officinale*).

Figure 5

General view of the site.

Trees

16. A number of mature trees are located along the boundaries, as well as scattered trees in the heart of the site. Species include white poplar (*Populus alba*), hornbeam (*Carpinus betulus)*, silver birch (*Betula pendula*), cherry (*Prunus sp.*), and sycamore (*Acer pseudoplatanus).* Additionally a row of trees is located just off site to the east.

Figure 6

Example of boundary trees along north western boundary of site.

Buildings

17. A single building is located at the south of the site, which is described in detail in Bat Roost Potential Report (R-2037-01).

Faunal appraisal

18. 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 1.

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

Bats

Roosting

20. The potential of the building on site to support bats is described in the dedicated Bat Roost Potential report (R-2038-01). The building was classified as having *very limited* roosting potential.

21. None of the trees on site were identified as having features suitable for roosting bats.

Commuting and Foraging

22. The site is likely to be used for foraging by small numbers of common bat species. Given the location of the site, being enclosed by residential development, and the close proximity of large areas of good foraging habitat, the site is unlikely to be of significant importance to local bat populations.

23. Bat records supplied by the South Yorkshire Bat Group have been discussed in detail in report R-2037-01; additional records arising from the BBRC detail daubenton's, Noctule, common pipistrelle, and soprano pipistrelle bats.

24. None of these records originate from the site itself – with the closest being a record of a grounded pipistrelle c.300m to the north. The majority of the records are from local wildlife sites, where recording is likely higher; these are separated from the application site by residential development which encloses the site.

Amphibians

25. No potential breeding ponds are present on mapping within a 500m radius of the site. The site is unlikely to be of significant value to amphibians and the protected great crested newt is likely to be absent form the site.

26. There are no records of great crested newt within 2km of the application site.

Birds

27. The trees located on site have the potential to support small numbers of common urban / garden bird species in the nesting bird season, and standard precautions should be taken.

28. Records show a range of common BAP species - none of which would find suitable breeding habitat on the site.

Reptiles

29. The site supports poor habitat for this group, and shares no strong connections with more valuable habitat.

30. Records were returned of grass snake at Parkhill Nature Reserve (c.1.3km to the southwest), and Wombwell Ings (c.600m to the south) both of which are disconnected from the site by residential development and roads.

Other protected species

31. The site does not appear to have any suitable habitat which would support any other protected or notable species.

Invasive Species

A small amount of cotoneaster (*Cotoneaster* sp.) is present around the single on site building. Five species of Cotoneaster were added to part 2 of Schedule 9 of the Wildlife and Countryside Act (1981) in early 2011 due to the effects they can have on natural vegetation in parts of the UK. Advice for removal outlined in the evaluation.

Evaluation and Recommendations

32. 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.

33. 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 1) and UK BAP to determine if the site supports any Priority habitats or presents any opportunities in this respect.

34. 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

35. The site comprises a large plot of relatively species poor secondary grassland arising as a result of recent site clearance. As such it is considered to be of low ecological value, given the value of habitat in the area surrounding Darfield the loss of this grassland will have a negligible impact on the biodiversity of the area.

36. A number of large mature trees are located on site which should be retained. Small trees within the interior of the site which will be lost as a result of the site's development have a lower intrinsic value; however their loss should be mitigated for by sufficient tree planting in landscaped areas post development.

Invasive species

37. Five species of Cotoneaster were added to part 2 of Schedule 9 of the Wildlife and Countryside Act (1981) in early 2011 due to the effects they can have on natural vegetation in parts of the UK. As such, it is now an offence to cause or allow the spread of these plants in the wild. Due to the difficulties with separating Cotoneaster species, when encountered in the wild it is recommended that all Cotoneaster type plants are treated similarly.

38. We are not aware of any specific guidelines for the appropriate disposal of cotoneaster having been issued to date, but common sense suggests that, plants and their berries or seeds should either be disposed of by tipping at an approved waste disposal facility or burnt on site. Plants or seeds or berries should not be added to rot piles, stock piles or compost heaps or be shredded or mulched. Site contractors should be made aware of this requirement.

39. Detailed information on the species can be found on the NNSS website at https://secure.fera.defra.gov.uk/nonnativespecies/index.cfm?sectionid=47.

Off site

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

General precautions

Nesting birds

41. 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

42. 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.

43. Opportunities should be realised to create connectivity through the site in the form of hedgerows or linear planting. Planting should utilise native species such as holly, oak, hawthorn, blackthorn, crab apple and buckthorn.

44. In order to increase the potential for roosting bats in the area, 4 no. 1FQ Schwegler bat boxes* (or similar) should be incorporated into residential units on site.

*see http://www.nhbs.com

References

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

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Appendix 1 Local BAP - Barnsley Biodiversity Action Plan

Local Biodiversity Action Plan

45. Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the '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 – foraging	No
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
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

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	No	N/A
Floodplain Grazing Marsh	No	N/A
Lowland Meadows	No	N/A
Lowland Dry Acidic Grassland	No	N/A
Lowland Heathland	No	N/A

Habitat	Valuable examples present on site?	Would development impact significantly on BAP objectives
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