Preliminary Ecological Appraisal
Land off Barnsley Road, Penistone

Report reference: R-2371-01.2
October 2015

Report Title:	Preliminary Ecological Appraisal Land off Barnsley Road, Penistone
Report Reference:	R-2371-01.2
Written by:	Joshua Birchall BSc (Hons) Graduate Ecologist
Technical review:	Peter Brooks BSc (Hons), MA, MCIEEM, CEnv Managing Director
QA review:	Karl Fisher BSc (Hons) Grad CIEEM Graduate Ecologist
Approved for issue:	Peter Brooks BSc (Hons), MA, MCIEEM, CEnv Managing Director
Date:	30.10.15

Brooks Ecological
Grounded advice

Unit A, 1 Station Road, Guiseley, Leeds, LS20 8BX
Phone: **01943 884451**
01943 879129
Email:admin@brooks-ecological.co.uk
www.brooks-ecological.co.uk
Registered in England Number 5351418

smas worksafe consultant
www.smasltd.com
SSIP

Summary Statement

The application site supports a small range of common species-poor habitats of generally low ecological value.

Significant impacts on local fauna, habitats or designations would not be expected with standard precautions. Further bat survey has been recommended for the old mill along Barnsley Road.

General recommendations are made in regards to the enhancement of the site for wildlife as part of the new development.

Introduction

1. Brooks Ecological Ltd was commissioned by Duchy Homes to carry out a Preliminary Ecological Appraisal[1] of land off Barnsley Road, Penistone, Sheffield (SE 244 038).

2. The application site 'the site' encompasses several barns, an old mill building, amenity grassland, rank grassland and trees of varying maturity. The location of the site is shown in Figure 1 below.

Figure 1 Site Boundary

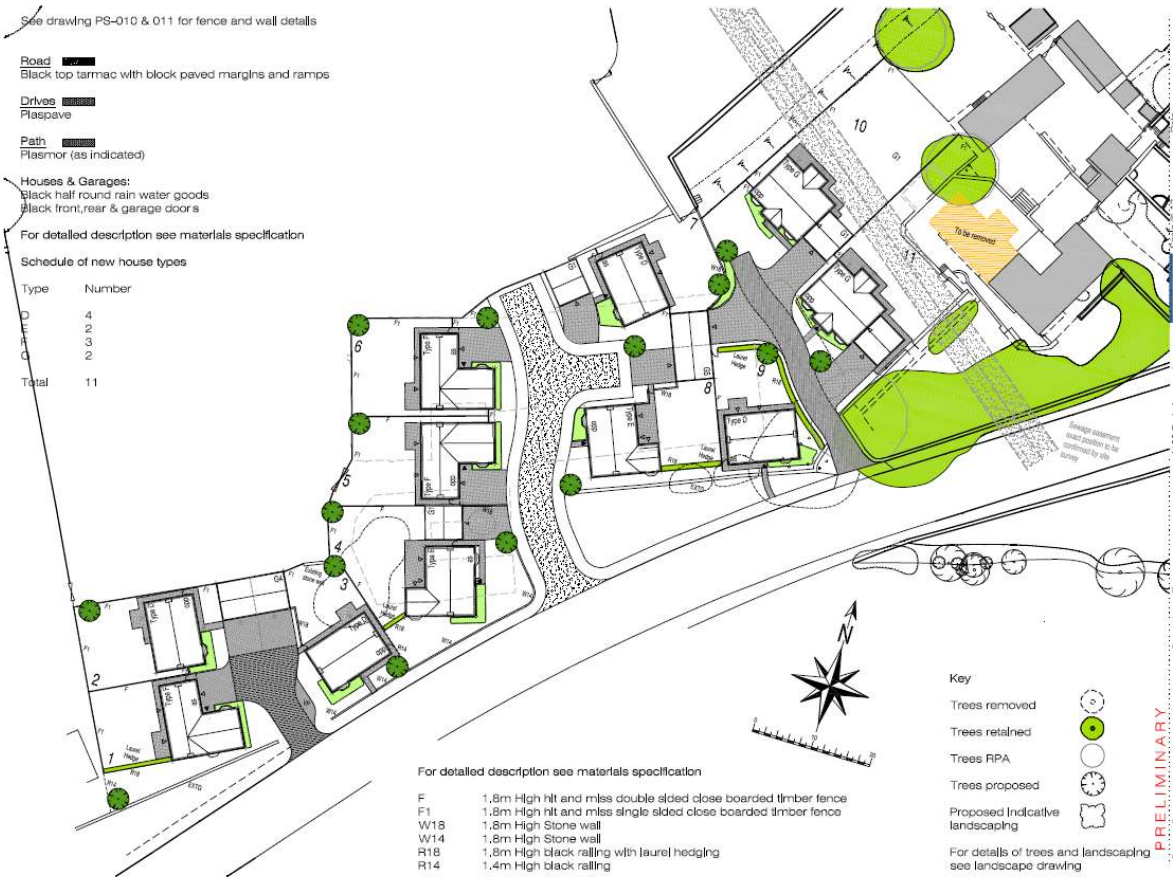


[1] This Report has been prepared on 23.10.15 following visits to the site in October 2015 and our findings are based on the conditions of the site that were reasonably visible and accessible at that date. We accept no liability for any areas that were covered, unexposed or not reasonably visible or accessible, nor for any subsequent alteration, variation or deviation from the site conditions which affect the conclusions set out in this report.

Proposals

3. The proposals plan (below) shows construction of 11 detached houses, with a new associated road network.

Figure 2 Indicative proposals taken from Duchy Homes drawing PE-001



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 found to the north western edge of Penistone, which is located c. 9km west of Barnsley.

6. Immediate boundaries include:

- Grazing pasture immediately to the north.
- To the west buildings and the B6462 which transects the area north to south.
- The A628 runs along the southern boundary of the site separating it from the River Don which runs roughly parallel to the road in this area.
- Immediately to the east a small collection of cottages and farm buildings lie between the site and the A628.

7. Beyond these immediate boundaries the local landscape is a mixture of residential development and amenity parkland areas of Penistone (mainly to the south and east). To the north and west a limited amount of development lies between the site and mixed use farmland scattered with several large water bodies situated along Scout Dike, a small stream flowing roughly north to south through the area, this includes Scout Dike Reservoir.

Wildlife corridors

8. The River Don flowing roughly west to east is found c. 30m south, though separated by the A628 and a high retaining wall; this constitutes the most significant wildlife corridor in the area.

9. Scout dike forms a second habitat corridor flowing northwest to southeast through the area and into the River Don c. 150m to the east of the site. The stream flows through Scout Dike Reservoir c. 1.3km northwest of the site and another smaller water body 450m north of the site, both of which are surrounded by woodland. There is a large fishery pond also located c.160m north; adjacent though not directly connected to Scout Dike. Scout Dike is loosely connected by open field of grazing pasture to the site.

Water bodies

10. There are three still water bodies shown on mapping within 500m of the site.

- The closest is a fishery 160m north.
- The second is a garden pond c.220m south east of the site, separated from the site by the River Don and A628.
- The final waterbody in the area is Scout Dike Reservoir a mid – sized reservoir c. 452m to the north.

Figure 3 Local habitat / connectivity features



Statutory Designations

11. 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. In addition information from the local record holders has been requested on locally designated sites.

12. There are no statutorily designated sites within 2km of the site. The nearest sites, both of which are c. 3km away, are Pye Flatts Meadows SSSI to the northeast and Spring Meadows, Alderman's Head & Cow Croft Meadows SSSI to the southwest.

SSSI Impact Risk Zones

13. The site falls within the 3km SSSI impact risk zone for Spring Meadows, Alderman's Head and Cow Croft Meadows SSSI. However, the development does not fall into any of the categories which triggers the need for the Local Planning Authority to consult with Natural England.

Non-Statutory Designations

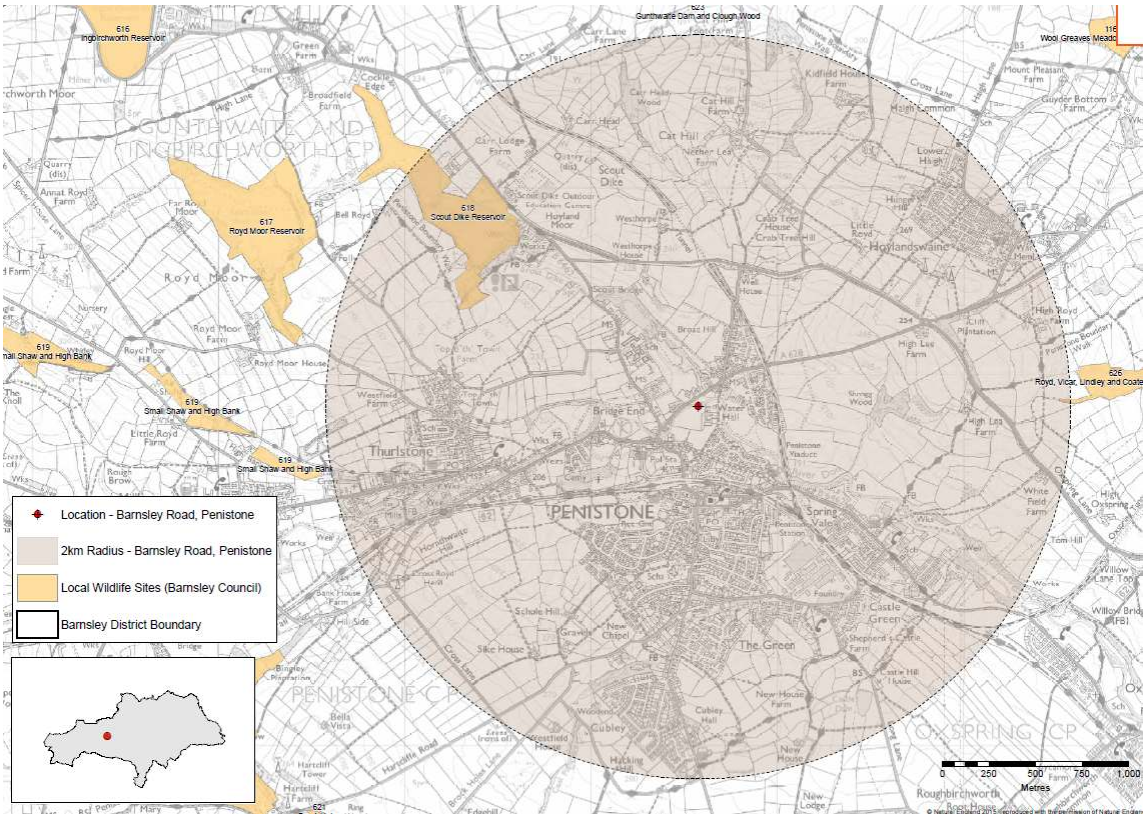
14. Sheffield Biological Records Centre (SBRC) has provided information on locally designated sites. Only two Barnsley Local Wildlife Sites (LWS) are found within 2km of the application site. These sites are designated based on amenity value as urban green spaces, or as sites of local ecological value.

15. The nearest is Scout Dike Reservoir LWS c. 1km northwest of the site, within the boundaries of which are the reservoir and small areas of fragmented woodland and grazing pasture running up to the water's edge.

16. The second is Royd, Vicar, Lindley and Coates Great Woods LWS c. 2km east of the site covers a large area comprised of several small, linked woodlands.

17. No impacts would be expected on these sites due to their distance from the application site.

Figure 4 Locally designated sites provided by Sheffield Biological Records Centre.



Method

18. The survey was carried out on the 19th October 2015 and followed Phase 1 habitat survey methodology (JNCC, 2010). 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

19. The following habitats can be described within the application site and on its boundaries:

- Buildings
- Hard-standing
- Amenity grass
- Tall ruderal
- Rough neutral grassland
- Trees

Buildings

20. Several buildings are found on site and include an old stone built mill and small housing extension along Barnsley Road, as well as several open barn type structures which are contiguous and hence are referred to as one building set back from the road.

21. These buildings are described in greater detail in section 2 the Bat Roost Potential section of the report.

Hard-standing

22. Hard-standing is found throughout the site along roads and around the barns.

23. The majority of the hardstanding is bare, with limited amounts of moss cover chiefly (Brachythecium rutabulum) in more sheltered areas of the site and where plants such as bramble (Rubus fruticosus), greater plantain (Plantago major) and grasses such as perennial rye grass (Lolium perenne) and yorkshire fog (Holcus lanatus) have extended on to site from neighbouring verges.



Figure 5

Hard standing and verges.

Amenity grass

24. Two similar, though separate areas amenity grass are found to the south and east of the site. Both are well maintained with the area to the south managed as a large road side verge and the other area to the east a well maintained garden lawn. These areas are dominated by the common grasses; perennial rye grass, yorkshire fog and red fescue (Festuca rubra) with a limited number of ubiquitous forbs chiefly; dandelion (Taraxacum officinale agg.) and common daisy (Bellis perennis) scattered throughout. The lawn associated with the cottage has multiple tree stumps present indicative of former tree planting.



Figure 6

Garden lawn.

Tall ruderal

25. Multiple patches of tall ruderal vegetation has grown up in various areas throughout the site mainly in locations which are difficult to access and so have lacked management. These areas vary in nature but the forbs; nettle (Urtica dioicia), mugwort (Artemisia vulgaris), creeping thistle (Cirsium arvense) and rosebay willowherb (Chamerion angustifolium) are abundant throughout. Also frequently found in these areas are hogweed (Heracleum sphondylium), broad leaved dock (Rumex obtusifolius), bramble (Rubus fruticosus agg.), Canadian goldenrod (Solidago canadensis) and bindweed (Calystegia sepium). Some of these areas have also grown up around small hawthorn (Crataegus monogyna), sycamore (Acer pseudoplanatus) or goat willow (Salix caprea) trees and have started to develop into scrub.



Figure 7

Tall ruderal vegetation

Rough neutral grassland

26. A small area of rank grassland has established to the west of the site apparently from some unmanaged amenity grassland and hardstanding. A limited variety of common grasses are found in this area including cocksfoot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), tufted hair grass (Deschampsia cespitosa) and red fescue, with Yorkshire fog the most abundant.

27. A small number of forbs are also present amongst the sward with dandelion and ribwort plantain (Plantago lanceolata) most abundant and with yarrow (Achillea millefolium), cat's ear (Hypochaeris radicata) and white clover (Trifolium repens) also occurring frequently throughout.



Figure 8

Rough grassland, showing remnant hard-standing in foreground.

Trees

28. To the south east of the site there are two groups of trees one of which is just outside of the site boundary. The group which is within the site consists of three early mature sycamore, two mature silver birch (Betula pendula) and one young sycamore. Just off the site, east of the first group, is a second group comprising of an array early mature beech (Fagus Sylvatica).

29. Stretching out north from these two groups is a row of grown out young beech creating a thin hedge c.20m long.



Figure 9

Beech with shallow pruning wounds just off the south eastern boundary.

30. 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 scarce or NERC Act 2006 section 41 species (referred to collectively as 'notable species').

31. Records of notable species supplied from a 2km area of search by Sheffield Biological Records Centre (SRBC) are used to inform this appraisal.

Bats

32. The site's potential to support roosting bats is described in the bat roost potential section of this report.

33. Good value foraging habitat can be found around trees along the edges of the site, aside from this foraging opportunities for bats are quite limited due to the mostly hard-standing / built nature of the site.

34. However, off site in the local area the River Don, Nethermill fishery, Scout Dike Reservoir and Scout Dike stream alongside associated riparian vegetation, provide some excellent foraging opportunities for a variety of bat species.

Amphibians

35. There are records of common frog and smooth newt; the nearest records of which are from c.800m south within the two of Penistone.

36. No records of the protected great crested newt have been returned.

37. There is a garden pond c. 190m south of the site within private land. This is separated from the site by the River Don making it unlikely that any amphibians from this pond would venture into the application site.

Birds

38. Records have been returned for a range of Amber and Red List birds; these are a mix of countryside, garden and wetland birds representative of the site's location in the wider area.

39. Species recorded in the area which may use the site include: sparrowhawk, starling, house martin, swallow, goldfinch, greenfinch, song thrush, dunnock, wren and green woodpecker; these species are widespread and though small numbers of

individuals may use the site, it is not likely to be important for these birds at a population level.

40. The hedgerows, trees and tall ruderal / scrub on site have the potential to support a range of common nesting birds during spring and summer. Likewise, though no evidence of nesting swallow was noted on site during the survey, there is potential for this species to nest within the barns on site.

Reptiles

41. There are no records of reptiles in the area. Despite the wider area providing some suitable terrestrial habitat and corridors to other areas, no suitable habitat is present on site and the lack of reptile populations within the area mean the site is very unlikely to support this group.

Terrestrial mammals

42. There are records of water vole, hedgehog, brown hare and badger in the area; of these species hedgehog is the only one likely to use the site.

43. No evidence of badger could be found on the site at present and very limited suitable habitat is present. Furthermore the nearest record is c. 800m away as such it is considered highly unlikely this species would be found on site or impacted by development.

44. A single record of water vole has been returned from 1982, consisting of a six figure grid reference from Scout Dike 450m north. Due to the lack of suitable habitat on site no negative impacts would be expected to occur due to development.

45. Hedgehogs are likely to be found on site and recommendations are made later in the report in regards to enhancing the site's value for hedgehogs.

46. Within the scope of the preliminary ecological assessment the bat roost potential of features within the application site were inspected for bat roost potential. This consisted of a large barn complex, an old mill building along Barnsley Road and several trees.

Figure 10 Site buildings.



Box 1 *Legal background*

Bats are afforded full protection under The Wildlife and Countryside Act (1981) plus amendments, and the Conservation of Habitats and Species Regulations 2010. Under these Acts it is an offence among others, to recklessly kill, injure or disturb bats. It is also an offence to destroy or obstruct a roost even if bats are not in occupancy at the time of the action.

There are no defences against contravention of the Conservation of Habitats and Species Regulations 2010 which means that it is important for detailed and well designed bat surveys to be carried out, prior to carrying out activities that may impact upon bat roosts such as demolition of buildings or removal of trees.

Where bats are found within a potential development site, a license from Natural England may need to be secured if works that could otherwise contravene legislation are to be carried out. These licences are only issued where Natural England is satisfied that works are unavoidable and would not have a negative impact on the favourable conservation status of bats. A Natural England license requires that the potential development site has full planning permission and that bats were a material consideration of the planning permission.

Box 2 *Bat roosts*

Bats roost in buildings and trees in different locations depending upon time of year and environmental factors such as position of the sun, proximity to heat sources and feeding grounds. The following types are commonly referred to:

Transitional roosts:

Bats frequently gather early in the season (March to April) before dispersing to summer roosts. Bats can be found in high numbers in these roosts for a very short period. Transitional roosts can also be found shortly before hibernation in August to October when bats (depending upon species) can gather in roosts not used earlier in the season.

Maternity roosts:

These are among the most important roosts and are normally occupied from May to August. Depending on the species involved, some maternity roosts can contain a very significant proportion of the local population.

Summer (non-breeding) roosts

Small groups of non-breeding female and male bats can gather in these roosts or bats from a local population may choose to roost individually. There are normally a large number of suitable locations for summer non-breeding roosts and these may be routinely used or used only on an occasional basis. Irregularly used summer roosts can be very hard to find without unreasonable survey effort.

Mating roosts

Around September bats will gather in roost to mate; these are often in different locations than summer or breeding roosts.

Hibernation roosts

As bats in hibernation roosts are highly vulnerable to disturbance and bats can be present in large numbers these are considered to be among the most important bat roosts. Many species of bats roost in large and nationally important hibernation roosts associated with underground sites, many of which are well known and protected. However, the most common bat in the UK (the common pipistrelle) is largely unaccounted for in winter but thought to disperse and roost individually or in small groups in thermally stable cracks and crevices in thick walls or trees.

Local Status

47. The application site is within the natural range of species of bats listed in Table 1.

Table 1: Bat species recorded within 100km of the application site

Species	National status
Pipistrelles (*Pipistrellus pipistrellus* and *P. pygmaeus*)	widespread/common
Nathusius' Pipistrelle (*Pipistrellus nathusii*)	widespread/rare
Noctule (*Nyctalus noctula*)	widespread/frequent
Leisler's (*Nyctalus leisleri*)	widespread/rare
Brown long-eared (*Plecotus auritus*)	widespread/common
Natterer's (*Myotis nattereri*)	widespread/frequent
Daubenton's (*Myotis daubentonii*)	widespread/common
Whiskered/Brandt's (*Myotis mystacinus* and *M. brandtii*)	widespread/scarce
Alcathoe's (*Myotis alcathoe*)	local/unknown
Serotine (*Eptesicus serotinus*)	south restricted/uncommon

Method

48. A thorough daytime inspection of the site was made in August 2015 in order to look for evidence of bats and assess bat roosting potential. Evidence of bats may take the form of droppings, feeding remains, live bats, dead bats, stains on masonry or timber from the oils in bats' fur and claw marks made by bats regularly roosting in the same location.

49. Bat roosting potential of the building was classified according to the following criteria set out in Table 2, developed with reference to the Bat Mitigation Guidelines (2004), Bat Workers Manual (2004) and the Bat Conservation Trust Good Practice Guidelines (2012).

Table 2: Bat roosting potential in buildings

Roosting potential	Criteria
Good	Buildings that have many areas suitable for roosting with a large number of potential access points. These are normally in sheltered locations, subject to low variation in temperature. Buildings with good potential could be used for a whole range of roosts including maternity roosts.
Moderate	Buildings with a smaller number of areas suitable for roosting, but still supporting features that could be attractive to bats and potentially support maternity roosts.
Limited	Buildings with limited roosting opportunities. These may be in locations that are subject to wide temperature fluctuations and drafts. They could be used as occasional or transient roosts, but are unsuitable for maternity roosts. Buildings that would otherwise be moderate to good potential but have reduced value due to other factors such as exposed location, separation from nearby foraging, or presence of strong lighting.
Very Limited	Buildings that have no obvious places for bats to roost, but could be used on a sporadic or occasional basis for feeding or solitary day roosting.
None	Buildings which appear unsuitable for roosting bats due to clear lack of roosting spaces such as voids etc and/or absence of suitable access points.

Records

50. The local records provider; Sheffield Biological Records Centre (SRBC) was asked to provide all records within 2km of the application site. A total of 35 records have been returned the most recent of which is from 2002, 12 of these records relate to roosts including maternity roosts. Species recorded include common pipistrelle, soprano pipistrelle, daubenton's, whiskered, and brandt's.

51. All of the roost records relate to common pipistrelle, the nearest of which is of an uncertain roost from 1997 c. 300m south east of the site. The most recent roost record is of a maternity roost of an undisclosed sized 1.5km south east of the site.

52. Five larger roost records have also been provided the largest of which is a maternity roost of 76 individuals, with 3 other maternity roosts given for the same six figure grid reference centred 315m south east of the site.

Results

53. The barn complex consists of two large interlinked barns with some smaller annex buildings. All the buildings are of a similar construction typical of modern barns, comprising of a solid block work or concrete single storey with a steel frame and asbestos or wooden panel cladding for the remaining exterior walls and roof. The simple nature of the construction of the barns and the exposure to the elements reduces their value to roosting bats significantly.

54. Attached to the eastern edge of the barns is a block work single storey extension with a sheet metal roof. This building appears to have severe water ingress via the roof and as such the MDF layer over beams in the interior has fallen away, exposing the underside of the metal roof. This structure is also considered unlikely to be used by roosting bats given its open and damp nature.

55. The barn complex is evaluated as having *very limited* bat roost potential.

Figure 11 General view of the eastern barn complex.



Figure 12 Interior view of single storey annex.



56. The old mill building along Barnsley Road is of stone construction with a slate roof, the annex is of a similar construction but with a stone tile roof. The barn section of the building is open and exposed to the elements due to missing windows on the first floor, potentially allowing bats access in and out of the barn.

57. The roof of the barn is generally in a good state of repair though there are gaps beneath the ridge tiles, which could provide potential roosting areas between tiles within and adjacent to the ridge. Access could also be gained to wall tops and gaps in adjacent tiles via multiple cracks in the verges. Roosting elsewhere in the roof is considered unlikely due to the open nature of the interior. The annex roof is also in good state of repair, with all tiles in place, however there are also multiple cracks in the verge. These are more suitable for roosting than in the barn due to the well-sealed nature of the annex.



Figure 13

General view of old mill building and house annex to the right.

58. There are multiple deep horizontal and vertical cracks between the masonry of the barn, mainly located towards the eaves and vertically along windows and doors. These features have some of the better roost potential areas within the building. The stonework of the annex is well sealed in this respect.

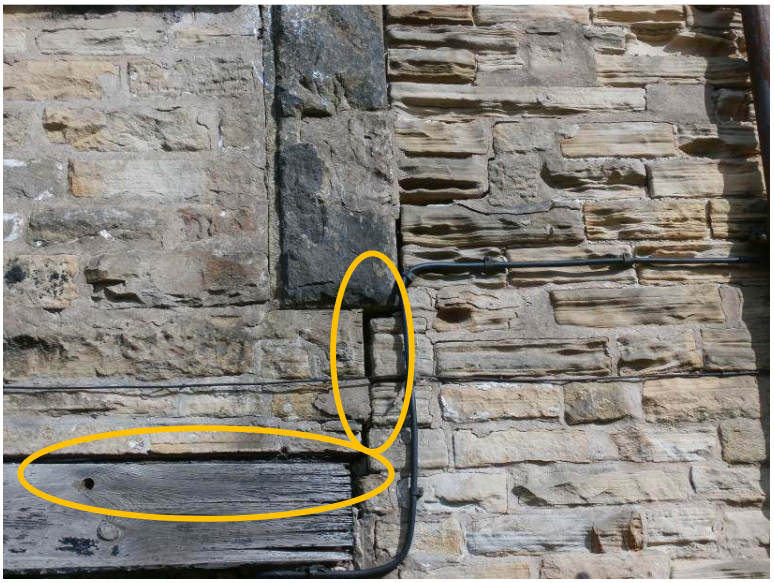


Figure 14

Gaps in masonry.

59. Due to the presence of multiple features, chiefly the gaps in the verges and masonry this building is evaluated as having *moderate* roost potential.

60. A small shed is present to the rear of the old mill it is of a simple steel frame and corrugated metal sheet construction, it has no bat roost potential.

Trees

61. To the southeast of the site there are two groups of trees one of which is just outside of the site boundary. Within the group which is within the site bounds, all of the trees appear in good health with few features suitable for roosting bats. As such these trees are assessed as having *very limited* bat roost potential.

62. Immediately off the site a second group comprising of an array of early mature beech (Fagus sylvatica), these have some shallow pruning wounds evident (see Figure 9), bat roost potential for these trees is considered *limited* and recommendations are made later in this report to reduce potential impacts on possible bat roosts within these features.

63. 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.

64. 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 (see appendices) and Section 41 of the NERC Act (2006) to determine if the site supports any Priority habitats or presents any opportunities in this respect.

65. The assessment of impacts considers the proposals illustrated in Figure 2 from which potential effects include:

- 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

66. The majority of this site comprises hard-standing, buildings, rank grassland and amenity grass land which is considered to be of low ecological value.

67. Trees in various stages of growth represent the most valuable habitat on site mainly located around the site boundaries. These should be retained where possible and though some of these will be lost to development, there is room on site mainly along the road, boundaries of the site and possibly in gardens, to mitigate for this loss.

On site fauna

Bats

68. The bat roost potential survey has assessed a group of beech trees off site as presenting *limited* bat roost potential. As these trees will be unaffected by works it is recommended that to avoid any possible disturbance, lighting; both during and post construction should be directed away from these areas.

69. Should proposals change to include removal of these trees or they be subject to significant remedial works, they should be subject to specific survey in order to determine the presence or likely absence of roosting bats.

70. The old mill building along Barnsley Road is assessed as having *moderate* bat roosting potential and as such two further emergence surveys are recommended to determine the presence / absence of roosts.

71. The barn complex has been assessed as having *very limited* bat roost potential and works can proceed with minimal risk of impacting this group during works in this area.

Nesting birds

72. All significant vegetation, i.e. trees and scrub, as well as buildings, found on site have the potential to support common garden birds during the nesting period (March-August).

73. To prevent the proposed works impacting on nesting birds any clearance of vegetation or demolition of buildings will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance/demolition 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.

Off site

74. No negative impacts associated with on site developments are expected on adjacent habitats.

Enhancement

75. 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.

76. The current proposals (Figure 2) will see most of the site being developed as new housing with associated road network and garden spaces, with the most valuable available landscaping space being restricted to the site boundaries and gardens. However, there is still the potential to design meaningful wildlife enhancement within landscaping. The following potential enhancements could be considered:

- Native species should be used throughout landscaping wherever possible; this includes in gardens and public green spaces such as along Barnsley Road. Where possible, species should be locally sourced. Suitable smaller tree species include silver birch (Betula pendula), rowan (Sorbus aucuparia), alder (Alnus glutinosa) and holly (Ilex aquifolium).

- Hedgerows could be planted around the peripheries and gardens of the site, these should be planted with a variety of native species to maximise benefits to local ecology. Suitable species include blackthorn (Prunus spinosa), hawthorn (Crataegus monogyna), field maple (Acer campestre), Holly (Ilex aquifolium) and hazel (Corylus avellana). Hedgerows will improve habitat connectivity across site as well as create foraging areas for animals such as hedgehog.

- Useful wildlife habitat could be provided in the form of bat boxes and nesting boxes. These would be best targeted at the periphery of the site.

References

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

Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*.

CIEEM. (2013). *Guidelines for Preliminary Ecological Appraisal*. CIEEM

British Standards Institute BS 42020:2013 Biodiversity — Code of practice for planning and development.

Bat Conservation Trust (2012) Bat Surveys – Good Practice Guidelines

English Nature (2004) Bat Mitigation Guidelines. English Nature, Peterborough.

JNCC (2004) The Bat Workers Manual. 3rd Edition.

ODPM circular 06/05 (2005) Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity

Conservation of Habitats and Species Regulations 2010 http://www.legislation.gov.uk/uksi/2010/490/contents/made

H. L. Andrews (2011) A habitat key for the assessment of potential bat roost features in trees.

Ratcliffe, D.A. (1977) *A Nature Conservation Review*, Cambridge University Press

Hedgerow Regulations (1997) http://www.legislation.gov.uk/uksi/1997/1160/contents/made

Appendix 1 Barnsley Local BAP

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

Table 1 lists the local Species Actions Plans.

Table 1 Species Action Plans

Species/group
Hedgehog
Bats
Water Vole
Otter
Grey Partridge
Bittern
Kestrel
Little Ringed Plover
Lapwing
Barn Owl
Skylark
Tree Sparrow
Twite
Great Crested Newt
Salmon
Bullhead
White-clawed Crayfish
Glow Worm
Dingy Skipper
Bluebell

Table 2 Local Habitat Action Plans

Habitat
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

Appendix 2 Ecological Features Plan



N

Amenity Grass

Buildings

Hardstanding

Tall Ruderal

Rough neutral grassland

Hedgerow

Trees

Target notes:

1 Beech Tree Group with BRP

Brooks Ecological
Grounded advice

Unit A, 1 Station Road
Guiseley
Leeds
LS20 8BX
www.brooks-ecological.co.uk

T: 01943 884451

Project: Duchy Penistone

Title: Ecological Features Plan

Drawing Number: D-2171-01.1

Scale: Do not scale Date: October 2015

Revision: