



**Code for Sustainable Homes (CSH) - Ecology Appraisal
Land off Lamb Lane,
Monk Bretton**

Report reference: R-1652-01
July 2013

Report Title:	Code for Sustainable Homes Land off Lamb Lane, Monk Bretton
Report Reference:	R-1652-01
Written by	Christopher Shaw BSc (Hons) ACIEEM Assistant Ecologist
Technical review:	Robert Weston BSc (Hons) MSc MIEEM Technical Director
QA review:	Sarah Rochelle BSc (Hons)MSc Graduate Ecologist

All parties involved in the review of our CSH reports are sufficiently qualified and experienced to comply with the Code's definition of a Suitably Qualified Ecologist.

The above named confirm that in their opinion this report:

- represents sound industry practice,
- reports truthfully, objectively and appropriately to site conditions
- avoids invalid, biased or exaggerated statements

Approved for issue	Robert Weston BSc (Hons) MSc MIEEM Technical Director
Date	16.07.13



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



Summary Statement

The habitats on site are of low ecological value and its re-development need not be contrary to any national or local conservation policy or guidelines.

The current situation in relation to CSH assessment is as follows:

Category 9 – Ecology

Eco 1: The land has been assessed as being of very low ecological value by a suitably qualified ecologist. One credit can be awarded.

Eco 2: Suitably designed key and additional recommendations have been made for the site. Assuming incorporation of these, one credit is anticipated.

Eco 3: There are no ecological features which require protection during development and one credit can be awarded by default.

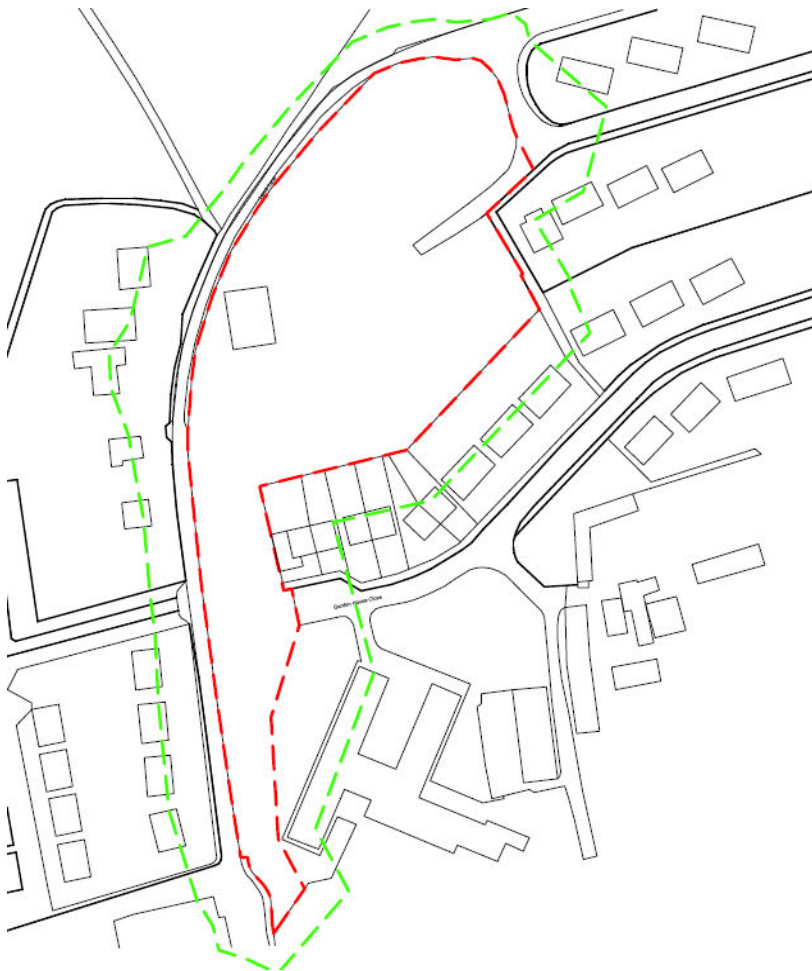
Eco 4: This part of the assessment is not possible yet as details of the site's landscaping plans are not yet available. Based on the absence of any good quality habitat on the site, improving the ecological value of the site is a possibility. Recommendations in relation to this are made at the end of the report. 2 credits are anticipated based on a likely neutral change in the site's ecological value.

Part 1: Ecological Assessment

Introduction

1. Brooks Ecological Ltd was commissioned to produce an ecological scoping and pre construction assessment report for the development of a piece of land off Lamb Lane, Monk Bretton, Barnsley, S71 2DX (SE361080). The assessment is based upon an extended Phase 1 Habitat Survey and desk study.
2. The application site comprises of Monk Bretton Library and its surrounding land. The Site lies within the centre of Monk Bretton town, surrounded by a mix of housing, industrial units and green space. Habitats of value in the vicinity include three woodlands c.125m northwest, c.275m northeast and 1km south.

Figure 1 Red line boundary (approximate)



3. The assessment was required to provide the necessary information to determine points available at this stage of category 9 (Ecology) of the Code for Sustainable Homes (CSH) assessment framework provided by the Building Research Establishment.
4. The assessment was directed by Rob Weston BSc (Hons) MSc, MIEEM. Rob has over 10 years experience of professional Ecology. His credentials ensure that he meets the criteria of a "suitably qualified ecologist" as required for CSH assessment.

Extended Phase 1 Habitat Survey

Survey Method

5. The survey was carried out on the 10th July 2013 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

6. The following habitats, arranged in order of area can be described within the application site and on its boundaries:
 - Buildings & hard-standing;
 - Amenity grassland;
 - Rough grassland & scrub;
 - Hedgerow; and
 - Trees.

Buildings & hard-standing

7. Two buildings are present on Site; Monk Bretton Library and a group of connected outbuildings.
8. Monk Bretton Library is a small single-storey red-brick and partially rendered building with a double-pitched plastic tile roof. The east and west elevations are solid brick, whilst the north and south have cavity walls. The brickwork is in a good state of repair with the exception of a small masonry gap in the northeast corner of the eastern aspect. On closer inspection this gap was observed to be covered by cobwebs and showed no signs of bat activity.
9. The roof overhangs the eastern wall top by around 30cm and the western wall by around 1m. The eaves are completely sealed with no opportunities for roosting bats.
10. The roof is in an excellent condition and is constructed of moulded plastic tiles, with no opportunities for roosting bats.



Figure 2

A view of the libraries eastern elevation.



Figure 3

Masonry gap on the libraries eastern elevation.

11. A group of connected outbuildings are located towards the eastern end of the site, situated within a compound enclosed by a tall brick wall. All outbuildings are single storey solid brick wall buildings, with flat bitumen felt roofs. These buildings supported no features suitable for roosting bats.



Figure 4

Out buildings.

12. A mix of tarmac, concrete and compacted gravel hard-standing is present around the site. This is largely un-vegetated with the exception of a small amount of red valerian (*Centranthus ruber*), dandelion (*Taraxacum agg.*), nettle (*Urtica dioica*), mugwort (*Artemisia vulgaris*), cocks-foot (*Dactylis glomerata*), pineapple weed (*Matricaria discoidea*) and greater plantain (*Plantago major*).

Amenity grassland

13. A large proportion of the site is covered in grassland, most of which is regularly mown amenity grassland. This comprises primarily of perennial rye (*Lolium perenne*), red fescue (*Festuca rubra*), rough meadow grass (*Poa trivialis*) and Yorkshire fog (*Holcus lanatus*), with small amounts of cocks-foot. Forbs are spread sparsely throughout the grassland and include ragwort (*Senecio jacobaea*), hop trefoil (*Trifolium campestre*), dandelion, ribwort (*Plantago lanceola*), white clover (*Trifolium repens*) and perennial daisy (*Bellis perennis*).



Figure 5

Amenity grassland located towards the eastern end of the Site.

Rough grassland & scrub

14. Some areas of grassland have been left unmanaged and have grown rough. The most abundant grasses are false oat (*Arrhenatherum elatius*) and cocks-foot, with smaller amounts of barren brome (*Bromus sterilis*), Yorkshire fog and smooth meadow grass (*Poa pratensis*). Scattered throughout are a small number of forbs, including curly dock (*Rumex crispus*), broad leaved dock (*R. obtusifolius*), cow parsley (*Anthriscus sylvestris*), nettle, creeping cinquefoil (*Potentilla reptans*), red clover (*Trifolium rubrum*) and ragwort.
15. A small amount of scrub vegetation is also present within this rougher grassland. Scrub includes ivy (*Hedera helix*), elder (*Sambucus nigra*), bramble (*Rubus fruticosus*), rose (*Rosa sp.*), lilac (*Syringa vulgaris*), *Berberis sp.* and cherry laurel (*Prunus laurocerasus*).



Figure 6

Rough grassland towards the southern end of the Site.

Hedgerow

16. A small section of mixed hedgerow is located along the eastern boundary between the site and adjacent residential garden. The hedge is managed to around 3m high and comprises of hawthorn (*Crataegus monogyna*), elder, sycamore (*Acre psuedoplatanus*) and bramble, with an understorey of rough grassland plus cleavers (*Galium aparine*).



Figure 7

Hedgerow along part of the eastern boundary.

Trees

17. A small number of broadleaf trees have been planted around the Site, mostly semi-mature sycamore and wild cherry (*Prunus avium*).



Figure 8

Line of semi-mature sycamore along part of the western boundary.

Table 1: Habitats / plot types prior to development

Habitat	Number of species	Area* m ²
Buildings and hard-standing	2	1030
Amenity grassland	3	5620
Rough grassland and scrub	7	880
Hedgerow	4	30
Trees	2	160
Total		7720

*Scaling from plans is not always accurate and we cannot offer precise measurement of the site. Figures presented are all used to calculate proportions of the site thus anomalies in scaling are not significant in these calculations. All taken are from provided plans using area measurement tools on Promap.

Fauna

Amphibians

18. No amphibian breeding habitat is present on Site and majority of the terrestrial habitat is of low value for amphibians (amenity grassland & hard-standing).
19. A single pond is present within a 500m search radius; situated c.90m northwest within Monk Bretton Park. This pond represents apparently very good amphibian breeding habitat and is connected to an area of excellent terrestrial habitat to the north (rough grassland, scrub & woodland).



Figure 9

The pond within Monk Bretton Park to the northwest.

20. The pond is separated from the Site by c.80m of amenity grassland (low value habitat) followed by a tarmac road and a 2m stone wall which runs along the site boundary. These barriers to movement combined with the low value terrestrial habitat within the site, point to it being very unlikely that amphibians will access the site from this pond, especially in the case of great crested newt. If great crested newt are breeding in the pond off site, it is thought much more likely that they would forage within the connected and much higher value habitat to the north.



Figure 10

Tarmac road and stone wall acting as an effective barrier between the pond and Site.

Figure 11 Amphibian habitat suitability plan



Reptiles

21. The Site does not represent suitable habitat for reptiles and their absence from this Site can be reasonably concluded.

Bats

22. The buildings on Site are considered to have a very limited bat roost potential and none of the trees supports any features suitable for roosting bats.

Protected mammals

23. The Site does not contain any habitat likely to be of significant value to any other protected mammal species. Their absence from this site can be reasonably concluded.

Nesting birds

24. The hedgerow, trees and significant scrub vegetation all have the potential to support common nesting birds such as blackbird and pigeon.

Desk Study

25. Desk studies look for records of protected or listed wildlife sites and protected or locally important species that could be impacted by development. They can also identify local conservation priorities and when assessed against the baseline established through field survey build a more complete picture of the site's existing and potential ecological value.

Designated Sites

26. 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.
27. No statutory designated sites are highlighted within a 2km search radius.
28. Not all locally listed (non-statutory) sites are available on MAGIC. Those not found are normally held at local Biological Record Centres. A request for locally listed sites has been made to the record holder, which in this case is Barnsley Biological Records Centre.
29. Records have not yet been returned, but should records affecting this assessment be provided a report addendum will be produced immediately.

Natural England Natural Area

30. The site falls within *Natural Area 24 Coal Measures*
31. Based on shale and sandstone deposits natural area 24 is characterized by dense population centres such as Sheffield, Leeds and Wakefield. The area's ecology reflects the changing geology which underlies it and is typified by mixed agriculture, acidic / ancient woodlands, valley wetlands and acidic / neutral grasslands.
32. There are no nationally important conservation priorities. Local Conservation priorities for the area are;
- Acid Grassland
 - Fen, Marsh and Swamp

- Lowland Heathland
- Neutral Grassland
- Rivers and Streams
- Standing and open water
- Wet Woodland

The site does not support good examples of any of these habitats.

Local Biodiversity Action Plan

33. Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the 'Barnsley Biodiversity Action Plan'.
34. Table 1 lists the local Species Actions Plans and, with reference to the field study presented later in this report, assesses a) whether the species potentially have any degree of dependence on the site, and b) if so whether development would be likely to have a significant bearing on the objectives of the UK/LBAP.

Table 1 Species Action Plans

Species/group	Potentially on site	Would development impact significantly on BAP objectives
Hedgehog	Yes	No
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
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

35. Hedgehogs are listed under the local BAP due to historic and continued population declines. The aims of the BAP relevant to this report are to:

- Encourage the provision of Hedgehog-friendly environments in suburban gardens and schools;
- Promote the provision of Hedgehog boxes at suitable sites.

36. 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

37. 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 plus scale maps for this purpose.

38. The Site is surrounded by a mix of housing, agricultural fields and urban green space. Monk Bretton Park is situated immediately northwest and comprises primarily of amenity grassland. A pond is located within the park, approximately 90m from the application site boundary. This is immediately surrounded by a margin of trees, scrub and tall ruderal vegetation and is connected to a large area of broadleaf woodland to the north and northwest (Spring Wood). Spring Wood contains several springs which join together in a stream and flow out to the wood to the northeast.
39. Other than this, the site is surrounded by land of low ecological value.

Records

40. Barnsley Biological Records Centre has been asked to provide information on protected or notable species and locally designated sites within 2 km of the application site.
41. Records have not yet been returned, but should records affecting this assessment be provided a report addendum will be issued immediately.

Evaluation and Recommendations

42. The site has been assessed as being of low ecological value for the purposes of CSH. There appears to be little risk that development would impact upon any specially protected species and no further surveys are thought necessary to demonstrate this.
43. The pond within Monk Bretton Park represents apparently very good amphibian habitat. Records have not yet been returned to confirm whether the pond is used by great crested newt, however, even if great crested newt are found to be breeding here it is considered unlikely that they would enter the Site. This assessment is based on the presence of high value terrestrial habitat being present immediately north of the pond, low value habitat being present on Site and a barrier to movement present between the pond and Site.
44. The trees on Site are primarily semi-mature non-native sycamores and are not considered to be a feature worthy of retention for CSH.

General precautions

Nesting birds

- To prevent the proposed works impacting on nesting birds, site clearance 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.

Part 2: Code for Sustainable Homes Assessment

45. The CSH assessment requires the following information from the Ecologist to demonstrate compliance:

Table 2.1: Compliance evidence from ecologist

Criteria	Criteria fulfilled?	Evidence presented
A site visit was carried out prior to construction	Yes	This report
Drawings or specification detailing how features will be protected	No features requiring protection were identified	This report
Confirmation that the ecologist is suitably qualified	Confirmed	This report
The features on site are low ecological value or there are no features present	Confirmed	This report
Area of species per habitat or feature type	Confirmed	This report Table 3

46. To help with the planning of the project each CSH category is presented below showing either the points anticipated or those which may be achieved if recommendations are taken on board and evidence for such can be demonstrated.

Eco 1	Assessment Criteria	Credits available	Credits anticipated
	A suitably qualified ecologist assesses the site prior to development as being of low value. The site has been assessed as being of low ecological value.	1	1

Eco 2	Assessment Criteria	Credits anticipated
	The developer must adopt all of the key recommendations made below and at least 30% (in this case 1) of the additional recommendations	1
Note: Confirmation is required that these have or will be incorporated and should be provided to the assessor. Recommendations suitable for this site are set out in the section below this table. Recommendations carried out to comply with CSH must be in addition to the <u>requirement of the project to comply with UK and EU wildlife legislation.</u> No further action is required at this site in any other respect.		

Key recommendations (all of these should be incorporated)

Recommendation 1

47. Hedgehogs are in decline and act as important predators, ensuring a healthy ecosystem. They are also listed under the local BAP. Lack of suitable shelter in modern tidy gardens and connectivity between gardens are major factors that contribute to scarcity of this species.
48. Simply connecting gardens by creating one small hole (at least 15cm in diameter) in each boundary fence line will greatly increase the amount of habitat available for foraging.
49. In addition to this, at least 1 hedgehog box should be installed in a discreet location among the landscaping (i.e. Hedgehog Nest Box #179141)*.
50. Please see the hedgehog street website for further information: <http://www.hedgehogstreet.org>.

Recommendation 2

51. Wherever possible, landscaping should select large native broadleaf trees such as lime (*Tilia spp.*) or oak (*Quercus spp.*). Ideally, trees would be planted in rows so that they form linear features, adding to the sites connectivity. Smaller native trees could be selected for planting in gardens, with suitable examples including field maple, rowan and hawthorn.

Additional recommendations (Chose at least 1 of these)

Recommendation 3

- 52. Modern houses do not offer communal nesting sites for the declining bird species such as the house sparrow, swifts and starling.
- 53. Erect at least box for each of these species; suitable boxes include 1SP Schwegler Sparrow Terrace, No. 17B Schwegler Swift Nest Box (Single Cavity) and Traditional Wooden Bird Nest Box (starling). These should be positioned in suitable locations beneath the eaves of buildings or in appropriate positions on other permanent features within the site boundary.

Recommendation 4

- 54. Bats are an important part of the functioning of ecosystems eating huge numbers of small insects. The design of modern houses can prevent them from roosting close to sources of insects but this can be remedied by erecting alternative roosting sites.
- 55. Incorporate at least 2 artificial bat roosting boxes suitable in suitable locations beneath the eaves of buildings or within the structure of the buildings themselves.

Recommendation 5

- 56. A suitably profiled pond, planted with a selection of native aquatic, submerged and emergent vegetation has the potential to benefit local wildlife.

* Products specified are for information and are available from <http://www.nhbs.com/>– other similar products are available elsewhere.

Eco 3	Assessment Criteria	Credits available	Credits anticipated
	Where all existing features of ecological value on site potentially affected by works are managed and protected. The site does not support any features of ecological value – this credit can be awarded by default.	1	1

Eco 4 Calculations

Table 2.2 Calculations of ecological value pre-development

Habitat Type	Number of species	Area (m ²)	Species score
Buildings and hard-standing	2	1030	0.27
Amenity grassland	3	5620	2.18
Rough grassland and scrub	7	880	0.80
Hedgerow	4	30	0.02
Trees	2	160	0.04
Total			3.31

Table 2.3 Calculations of ecological value post-development*

Habitat Type	Number of species	Area (m ²)	Species score

*Post development layout and planting schemes not available at time of writing.

Eco 4	Assessment Criteria	Credits available	Credits anticipated
	The ecological value before and after development is measured and the overall change in species per hectare is: Minor negative (-9 to -3) Neutral (>-3 to +3) Minor positive (>+3 to +9) Major enhancement (>+9)	1 2 3 4	(2)
The site's previous ecological value has been calculated as 3.31 We do not have a post development plan for the site and can not at this stage calculate post development scores. However given the low value of pre-development habitats the site is likely to achieve a neutral rating and 2 credits. A landscape plan with planting schedules will be needed to calculate the post development score.			

References

I.E.A. (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

HMSO (1998) *Digest of environmental Statistics No. 20*, DEFRA, HMSO.

Department for Communities and Local Government (2008), *Code for Sustainable Homes - Technical Guide*, Communities and Local Government Publications.

Department for Communities and Local Government (2008), *Code for Sustainable Homes - Technical Guide*, Communities and Local Government Publications.

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



- Red line boundary
- Amenity grassland
- Rough grassland
- Hard-standing
- Scrub
- Trees
- Hedge
- Buildings
- Pond within Monk Bretton Park

Brooks
Ecological
Grounded advice

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

T: 01943 884451

Project: Land off Lamb Lane,
Monk Bretton

Title: Ecological Features Plan

Drawing Number: D-1652-01.1

Scale: Do not scale Date: July 2013

Revision: