Brooks Ecological
Grounded advice

Code for Sustainable Homes (CSH) - Ecology Appraisal
Saltersbrook, Goldthorpe

Report reference: R-1910-01
May 2014

Report Title:	Code for Sustainable Homes Saltersbrook, Goldthorpe
Report Reference:	R-1910-01
Written by	Robert Weston BSc(Hons) MSc MCIEEM Technical Director
Technical review:	Joanna Cornfield BA (Hons) MSc MCIEEM CEnv Senior Ecologist
QA review:	Daniel Ross BSc (Hons) 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 MCIEEM Technical Director
Date	22.05.14

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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
as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT

Summary Statement

The habitat on this small site is 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 low ecological value by a suitably qualified ecologist. One credit is anticipated.

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

Eco 3: A number of trees have been highlighted as ecological features and require protection during development. Assuming this is put in place one credit is anticipated.

Eco 4: This part of the assessment is not possible yet as details of the site's landscaping plans are not yet available. 1 or 2 credits are anticipated based on a likely minor negative or 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-assessment of land off Saltersbrook, Goldthorpe, Rotherham, South Yorkshire, S63 9AR (SE 455 044).

2. The site is a vacant health centre building and surrounding landscaped grounds on the northern fringe of the town of Goldthorpe.



Figure 1

Application site (solid red boundary)

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 carried out by Robert 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.

Site Proposals and Impacts assessment

5. Our assessment of impacts is based on the proposals plan provided by Willmott Dixon which shows a row of residential units, lawned gardens and associated infrastructure. Impacts considered 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 and pollution
- Operation effects on wildlife such as noise and light disturbance

Site context

6. 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.

7. The site is found on the northern border of the ex-mining town of Goldthorpe. As such it is surrounded to the south, east and west by residential and industrial development including areas of amenity grassland. To the north the site is separated from the busy A635 by an area of recently planted woodland.

Wildlife corridors

8. These are provided by used railway tracks, a used railway lying 110m to the east of the site and a disused railway line a further 85m distant. These offer some limited connectivity to more open countryside and local regenerated sites.

Water bodies

9. There are no still water bodies within 500m of the site.

10. The nearest watercourse is Thurnscoe Dyke which is found 300m to the north and is separated from the site by the A635.

Records

11. Given the low value of the site and surrounding habitats and the subsequent lack of potential for protected species to occur, a specific species based records search was considered unnecessary for this assessment.

Designated Sites

12. 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.

13. No statutory designated sites were identified within 2km of the proposal site, the nearest being Denaby Ings SSSI over 5km to the south east. Given the existing site and surrounding habitats impacts on any designated sites would not be expected.

English Nature Natural Area

The site falls within *Natural Area 24 Coal Measures*

14. 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.

15. 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

16. These habitats do not occur at or near the site.

Local Biodiversity Action Plan

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

18. Table 1 lists the local Species Actions Plans and, with reference to the field study earlier in this report, assesses a) whether the species potentially have any degree of dependence on the site, and b) if so whether development could 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
Bats	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
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

19. 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 Mixed Deciduous Woodland	No	N/A

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

Results

20. The survey was carried out on12th May 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).

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

- Buildings and hard standing;
- Amenity grassland;
- Landscape planting; and
- Trees.

Buildings and hard standing

22. Buildings are described in detail in the bat roost potential section of the report.

23. Hard standing is present in the form of recently trafficked bitmac access and parking as well as concrete paver paths. In parts these support common ruderal species such as prickly lettuce (*Lactuca serriola*), american willowherb (*Epilobium ciliatum*) and groundsel (*Senecio vulgare*).

Amenity Grassland

24. This comprises lawns surrounding the centre which were, until recently, mown and managed. These are dominated by seeded grasses - perennial rye grass (*Lolium perenne*) and smooth meadow grass (*Poa pratensis*) as well as a range of common forbs including daisy (*Bellis perennis*), dandelion (*Taraxacum vulgare* agg.), common mousear (*Cerastium fontanum*), creeping buttercup (*Ranunculus repens*), creeping cinquefoil (*Potentilla reptans*), hop trefoil (*Trifolium campestre)* and ragwort (*Senecio jaccobea*).



Figure 2

Typical site view looking north from the site entrance and showing hard standing, buildings and amenity grassland.

Landscape Planting

25. There are a few beds and borders around the site planted with a range of shrubs and herbaceous species such as *Cotoneaster*, gorse (*Ulex* sp.), *Hebe, Lonicera, Hosta and* rose (*Rosa* sp.). Beds are being colonised in parts by some of the ruderal species discussed earlier.



Figure 3

Planted areas to the rear of the building.

Trees

26. A variety of young trees are found around the site. These comprise planted examples of oak (*Quercus sp*), alder (*Alnus* sp.), birch (*Betula* sp.) maple (*Acer* sp.), cherry (*Prunus* sp.) and rowan (*Sorbus acuparia*) as well as some self seeded elder (*Sambucus nigra*).



Figure 4

Planted oak trees

27. Species counts are provided to aid the later process of determining the change in habitat value as part of the BREEAM / CSH assessment. Figures are not species totals but reflect the ecologists' assessment of the species per functional area of this habitat type at this site in arriving at this figure we take into account the BREEAM guidance area used of 200m^2. In some more complex habitats an assessment based on functional area i.e. based upon typical sampling sizes used by ecologists to evaluate 'typical' vegetation assemblages e.g. National Vegetation Survey standard quadrat sizes will be more useful. The same process will be applied to landscape proposals.

Table 3: Habitats / plot types prior to development

Habitat	Number of species	Area* m^2
Buildings and Hard standing	0	2570
Amenity Grassland	4	514
Landscape Planting	3	32
Trees	6	97
Total		**3213**

*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

28. The site does not contain any ponds and there are none nearby. The site presents marginal terrestrial habitat and is surrounded by similarly low value habitats for this group. It is considered highly unlikely that the protected great crested newt or any other important amphibian populations will be found here.

Birds

29. The site has limited value to nesting birds due to the habitats present and current disturbance levels. Any nesting will be confined to the use of shrub borders and trees by common garden species.

Bats

30. Buildings at the site comprise of a single, multi winged 1980's style health centre. The walls of the building are of brick construction and are in excellent repair; all windows and doors are tightly sealed to the brickwork.

31. The roof of the building is of concrete tile construction and is again in very good repair, with no slipped tiles, moved ridges or loose flashing apparent. The building has been designed to limit access for bird, bats or insects and the slightly overhanging eaves are sealed to the wall with a plastic mesh screen - a feature which is repeated beneath the ridge tiles. All of the verges are sealed with intact mortar.



Figure 5

General good repair of the building



Figure 6

Mesh screening at eaves of the building.

32. A large canopy at the entrance way comprising of a loft section on a steel frame is similarly sealed.

33. Due to the lack of any apparent access to this building for bats it is assessed as providing no bat roost potential.

34. The site provides very limited foraging opportunities and is unlikely to be of significant value to local bat populations.

Other Protected Species

35. The site does not support any suitable habitat which would support any other protected or notable species.

Invasive species

36. The site supports two invasive species as listed on Schedule 9 (Part 2) of the Wildlife and Countryside Act (1981). These are Japanese rose (*Rosa rugosa*) and *Cotoneaster horizontalis* - both present within the site's landscaping. It is illegal to cause the spread of these species and therefore care should be taken to prevent their spread beyond the site boundary or with the disposal of these plants if cleared from the site.

Ecological Evaluation and Recommendations

37. The site supports a range of common and species poor habitats and is evaluated as being of low ecological value for the purposes of the CSH assessment.

38. Some of the young trees are well established native species and are considered to be of some value in the local context - these are highlighted for protection in Figure 7 later in the report.

39. No mitigation is recommended based on the extremely low potential for significant faunal groups to occur and the lack of value of the habitats.

40. If removed form the site Japanese rose (*Rosa rugosa*) and *Cotoneaster horizontalis* should be dealt with carefully. We are not aware of any guidelines for the appropriate disposal of either species having been issued to date, but common sense suggests plants should either be disposed of by burning or tipping at an approved waste disposal facility. Plants or berries/hips 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. More detailed information on the species can be found on the NNSS website at https://secure.fera.defra.gov.uk/nonnativespecies/index.cfm?sectionid=47

Part 2 Code for Sustainable Homes Assessment

41. 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	See Figure 7 below which shows trees to be protected to BS 5837.	This report
Confirmation that the ecologist is suitably qualified	Confirmed	This report
The features on site are of low ecological value or there are no features present	Confirmed with the exception of trees shown in Figure 7 below.	This report
Area of species per habitat or feature type	Confirmed	This report Table 3



Figure 7

Trees requiring protection as features of ecological value. (In orange).

It is assumed that these can be excluded from the construction zone.

42. 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 requirement of the project to comply with UK and EU wildlife legislation. • A Recommendation is made in the main body of the report requiring the careful removal and disposal of invasive species.		

Key recommendations (all of these should be incorporated)

Recommendation 1

43. Modern houses do not offer communal nesting sites for the declining bird species such as the house sparrow, house martin and starling.

44. Erect 2 of 'sparrow' and 2 of 'starling' nesting units in suitable locations beneath the eaves of buildings or in appropriate positions on other permanent features within the site boundary.

Recommendation 2

45. 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.

46. Incorporate 2 artificial bat roosting boxes suitable for bats in suitable locations beneath the eaves of buildings or within the structure of the buildings themselves; (Suggest Envisage codes 0606 or 0608 or equivalents*).

Additional recommendations (Chose at least 1 of these)

<u>Recommendation 3</u>

47. Landscape plans often fail to provide sufficient structure, connectivity or recognisable food sources for our native wildlife.

48. Produce a landscaping plan which maximises the use of native or beneficial plant species, provides a variety of structures and uses linear features to create connectivity through the site. Tree or hedging species should seek to provide connectivity and planting of field maple, holly or hawthorn trees of local provenance should be carried out wherever possible.

<u>Recommendation 4</u>

49. Hedgehogs are in decline and act as important predators, ensuring a healthy ecosystem. Lack of suitable shelter in modern tidy gardens contributes to scarcity of this species.

50. Two hedgehog boxes could be installed in discreet locations among the landscaping (Suggest Envisage code 0501 or equivalent*).

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. Trees highlighted in Figure 7 should be protected to BS 5837. This requirement should be cross referenced to the Arboriculture Report.	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	0	2570	0
Amenity Grassland	4	514	0.6
Landscape Planting	3	32	0
Trees	6	97	0.2
Total		3213	**0.8**

Table 2.3 Calculations of ecological value post-development*

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

*Post development 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)	 1 2 3	 (1) or; (2)

	Major enhancement (>+9)	4	
The site's previous ecological value has been calculated as **0.8** We do not have a post development planting scheme for the site and can not at this stage calculate post development scores. Despite the low value of pre-development habitats the site will be dominated by built environment and amenity grassland and therefore either a neutral or minor negative change is anticipated resulting in either 1 or 2 credits. A landscape plan with planting schedules will be needed to calculate the post development score.			

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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