BE Brooks Ecological Ltd

Cost effective, grounded advice

BREEAM Ecological Assessment: *Dodworth Medical Centre*, Woodland Drive, Dodworth Barnsley

Report reference: BE-R-1176-01
January 2012

Report Title:	BREEAM Ecological Assessment : Dodworth Medical Centre, Woodland Drive, Dodworth, Barnsley
Report Reference:	BE-R-1176-01
Written by	Tim Outlaw BSc, MIEEM Principal Ecologist
Technical review:	Peter Brooks BSc, MA, MIEEM, CEnv Director
QA review:	Peter Brooks BSc, MA, MIEEM, CEnv Director

All parties involved in the review of our BREEAM 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	Peter James Brooks BSc (Hons) MA MIEEM CEnv Director
Date	20.01.12

Brooks Ecological

High Street House, 2 High Street, Yeadon, Leeds, LS19 7PP
Phone **0113 250 6101**
Fax **0113 250 6944**
Email: pjb@brooks-ecological.co.uk
Web: www.brooks-ecological.co.uk.
Registered in England Number 5351418

Summary Statement

The site is assessed as of very low ecological value and no further studies are required to confirm this assessment.

BREEAM Summary Table

	Potential credits available	Current credits	Likely ultimate score
LE 02	1	1	1
LE 03	2	1	1
LE 04	3	0	1
LE 05	2	0	1 or 2

Part 1 Ecological Assessment

Introduction

Brooks Ecological Ltd was commissioned to produce an ecological scoping and pre-assessment of land at the proposed Dodworth Medical Centre site off Woodland Drive, Dodworth, Barnsley. The site comprises an area of amenity grassland with only very small fragments of additional habitats. The site is heavily used by dog walkers. It is centred at; SE 327 059.

Figure 1.1 Aerial photo of site



The assessment, based upon an extended Phase 1 Habitat Survey and a desk study, was required to assess the existing ecological value of the site and provide the necessary information to determine points available at this stage of the BREEAM assessment framework provided by the Building Research Establishment (BRE).

The assessment was carried out by Tim Outlaw. Tim has over 10 years experience as a professional ecologist and holds a BSc (Hons) in Conservation Management from UEA, he has been a full member of IEEM for 10 years. These qualifications mean that Tim meets the BREEAM criteria as a "suitably qualified ecologist".

The study comprised of the following elements:

- Desk Study
- Ecological Survey
- BREEAM specific evaluation

Desk Study

Given the extremely low value of the habitats on the site, its small size, high disturbance levels and location i.e. being surrounded by residential development it is considered to have negligible potential to support any protected or otherwise designated species and would not form any part of a designated wildlife site. Therefore a scaled down desk study was carried out involving searches for protected sites in the vicinity of the study area.

Designated Sites

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.

There are no SSSI's or Local Nature Reserves (LNRs) designated for ecological interest within 2km of the application site.

English Nature Natural Area

The site falls within Natural *Area 24 Coal Measures*

Based on shale and sandstone deposits natural area 24 is characterized by dense population centres such as Sheffield, Leeds and Wakefield. The area is typified by mixed agriculture, acidic / ancient woodlands, valley wetlands and acidic / neutral grasslands. 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

None of these habitats are present within the application site.

Local Biodiversity Action Plan

The local BAP is 'Barnsley Biodiversity Action Plan'. Under this BAP plans have been created for the species or groups listed in Table 1.

Table 1: Species Action Plans

Species/group	Potentially on site	Likely to be significantly affected?
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	Yes	No
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

With the possible exception of hedgehogs and bats crossing the site on occasion it supports no habitats which would support any populations of the species listed above. The site offers poor foraging habitat for hedgehog and bats.

Action plans have also been produced for the habitats in Table 2:

Table 2: Habitat Action Plans

Habitat	Present on site	Likely to be significantly affected?
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

No valuable examples of these habitats are found within the application site, or within the sphere of influence of any potential re-development.

Ecological Survey

Method

The survey was carried out on 12th January 2012 by an experienced surveyor and Full Member of the Institute of Ecology and Environmental Management (MIEEM).

The survey followed a Phase 1 habitat survey methodology (JNCC, 1993) and was extended to assess faunal potential. This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). Evidence of fauna and faunal habitat is 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).

Results

The site is located in a suburban residential area sandwiched between the M1 motorway (to the west) and Barnsley City (to the east). It comprises of an area of amenity grassland surrounded by housing and gardens on all sides.



Figure 1.2
Majority of site from northern boundary.



Figure 1.3
Southern end of site showing birch tree.

The following habitats were found within the application site:

- Amenity grassland
- Landscaped defunct hedgerow/horticultural shrubs
- Trees

Other than the heavily managed grassland the only additional habitat comprises of poorly connected and gappy garden hedgerows along the eastern and southern boundaries, a lone birch (*Betula* sp.) tree and a flower bed within the grassland at its northern end.

Amenity Grassland

The vast majority of the site comprises tightly mown grassland which, as with much amenity grassland, is typically species-poor and comprises of extremely common species. Its lack of species and structural diversity makes it of very low ecological value.

The dominant species within the sward include: perennial rye-grass (*Lolium perenne*), meadow grasses (*Poa* spp.), cock's-foot (*Dactylis glomerata*) and the forbs; creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum* agg.), daisy (*Bellis perennis*), white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*) and less frequently sorrel (*Rumex acetosa*) and spear thistle (*Cirsium vulgaris*).

Around the edges of the site where mowing is less frequent other equally ubiquitous species occur including: false oat-grass (*Arrhenatherum elatius*), cow parsley (*Anthriscus sylvestris*), nettle (*Urtica dioica*), cleavers (*Galium aparine*) and groundsel (*Senecio vulgaris*).

Landscaped hedgerow/horticultural shrubs

Along the eastern and southern boundaries are hedgerows bordering the site and adjacent gardens. The eastern boundary includes a broken line of young sycamore (*Acer pseudoplatanus*), privet (*Ligustrum ovalifolium*) and elder (*Sambucus nigra*) with some horticultural escapes also along the boundary including firethorn (*Pyracantha* sp.), New Zealand flax (*Phormium tenax* var.) and a small patch of the invasive species montbretia (*Crocosmia X crocosmiiflora*).

The southern boundary comprises a more managed line of privet with a couple of elder plants toward the eastern end.

Within the flower bed cut into the grassland toward the northern end of the site are several *Cotoneaster* sp. and rose (*Rosa* sp.) plants.



Figure 1.4
Horticultural shrubs in bed to north.



Figure 1.5
Southern boundary privet hedge.

Trees

A single semi-mature birch tree is located within the grassland toward the southern end of the site. Although the health of the tree could not be assessed by the ecologist it did not support significant cracks, splits or holes suited to roosting bats.

Species counts are provided to aid the later process of determining the change in habitat value as part of the BREEAM assessment. Figures are not species totals but reflect the ecologists assessment of the species per functional area of this habitat type at this site – the same process will be applied to landscape proposals. Functional area is based upon typical sampling sizes used by ecologists to evaluate 'typical' vegetation assemblages e.g. National Vegetation Survey standard quadrat sizes.

Table 1.1 - Plot type summary for calculating ecological value

Habitat / plot type	Species numbers (assessed by SQE)	Area of habitat / plot type (m^2)
Amenity Grassland	4	6180
Hedgerow/Shrubs	3	85
Tree	1	5

Fauna

Bats

There are no habitats on site associated with roosting bats and it is deemed that this site will be of only very minor value to foraging. The sites possible value to commuting bats would not be impacted upon by the proposed development.

Birds

The site holds extremely limited nesting habitat restricted to the very small amounts of trees, hedges and scrub around the site's eastern and southern boundaries where common species, typical of the habitat and location, may occur in low numbers.

Although loss of nesting on the site will not be significant in terms of the conservation status of bird species, precautions would be required in terms of avoiding impacts on nesting birds during site clearance.

Mammals

The application site does not support any good mammal habitat, beyond occasional foraging for hedgehogs.

Amphibians

The site offers very low value terrestrial habitat for amphibians and no ponds are located within 500m.

Reptiles

The site does not support potential habitat for this group and it is reasonable to assume absence of this group.

Invasive plants

Some *Cotoneaster* species and montbretia are listed on Schedule 9 (Part 2) of the Wildlife and Countryside Act (1981) and it is illegal to cause these species to spread into the wild.

No evidence of any other listed species was found during the survey.

Ecological Evaluation and Recommendations

The site is considered to be of very low ecological value and is unlikely to be of importance to any protected or otherwise important species. All habitats identified are common in a local and national context. On this basis it is

concluded that the development would be unlikely to impact upon important habitats. Re-development of the site would therefore not be contrary to local or national nature conservation policies or objectives though attention needs to be paid to the following issues:

Nesting birds

The scrub/hedges along the eastern and southern site boundaries support limited bird nesting habitat. Nesting birds are protected by law and as such, vegetation clearance should be carried out between the end of August and the end of February. Should clearance be required during the nesting season an inspection should first be undertaken to determine the presence of any active nests. Clearance of vegetation outside of the nesting season is not considered to have any significant ecological impact.

Invasive plant species.

Many of the *Cotoneaster* species which have been used for horticultural and landscape planting in the past and also monbretia, are now listed on Schedule 9 (Part 2) of the Wildlife and Countryside Act (1981) as "invasive species". It is illegal to cause the spread of these species into the wild. Therefore care should be taken if and when either of these plants are removed to ensure they are disposed of appropriately based on current guidance.

For more detailed information about removal of invasive species the appropriate Environment Agency Guidelines should be consulted.

Part 2: BREEAM Evaluation

Evaluation of the site is presented under the following headings to aid BREEAM assessment process, compliance tables are provided to show the current picture in relation to this process and the evidence which the developer will need to provide.

LE 02 Ecological Value of the Site and Protection of Ecological Features

The site is assessed as of "low ecological value" containing no valuable natural habitat. No "features of ecological value" are present within the wider site boundary.

Table 2.1 - LE 02 compliance summary

Criteria	*Compliance*	*Evidence*
SQE has stated that land within the construction zone is of 'low ecological value'	Yes	This report Part 1
All features of ecological value are protected during development	Yes (no such features occur on the site)	This report Part 1
Ecological Protection is to be in place before any site works.	Yes (none required at this location)	This report Part 1

Anticipated score for LE 02	**1** **credit from 1 available**

LE 03 – Mitigating Ecological Impact

Plot type / habitat species scores and areas are provided above, calculations have been worked out in accordance with BREEAM guidance and are provided below for illustrative purposes – these will require confirmation by the BREEAM assessor.

Table 2.2 – Ecological value calculations before development:

Habitat Type	*Area of habitat type (m^2)**	*Number of species per habitat type*	*Ecological Value Score*
Amenity Grassland	6180	4	3.94
Hedgerow/Shrubs	85	3	0.04
Tree	5	1	0.0
Total	6270		3.98.

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 measurement tools on Promap.

Calculations for the site post development have not been possible at this stage as a detailed landscape scheme and planting schedules are not yet available.

Table 2.3 - LE 03 Compliance summary

Criteria	*Compliance*	*Evidence required*
Ecological Value has been calculated by the SQE based on a site survey.	Yes	This report this will require confirmation by the BREEAM assessor.
Change in Ecological Value is negative but less than minus 9. (this achieves 1 credit)	Yes Guaranteed due to low initial value.	This report this will require confirmation by the BREEAM assessor. Assessors completed Ecology Calculator 2
There will be no negative Change in Ecological Value. (for 2 credits)	Not yet assessed. Possibly achievable at this site providing new development includes significant areas of species rich habitat.	This report this will require confirmation by the BREEAM assessor. A landscape plan of the site identifying (with areas) the vegetation plot types and associated planting. Assessors completed Ecology Calculator 2.

Anticipated Credits for LE 03	**1 credit from 2 available**

LE 04 – Enhancing Site Ecology

The following three **general recommendations** are made in relation to enhancing and protecting the site's ecology:

Recommendation 1

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

Produce a landscaping plan which maximises the use of locally sourced native plant species, to strengthen and create connectivity around the southern and eastern boundaries of the site.

This planting should include no less than 7 woody species in order to create an ecologically valuable habitat within the application site. Species could include: hawthorn, dogwood, field maple, blackthorn, guelder rose, elder and hazel.

Recommendation 2

Bats are an important part of the functioning of ecosystems eating huge numbers of small insects. The design of modern buildings can prevent them from roosting close to sources of insects but this can be remedied by erecting alternative roosting sites.

Incorporate 3 artificial roosting sites suitable for bats in suitable locations beneath the eaves of buildings or within the structure of the buildings themselves; (Suggest Envisage code 0612 or equivalent*). These roost sites should be located in positions overlooking the eastern and southern boundaries so that bats can utilise linear habitats to disperse into the wider area after emergence.

Recommendation 3

Modern buildings rarely offer communal nesting sites for the declining bird species such as the house sparrow, starling, house martin and swift.

Erect 2 of each of Envisage code 0107* (house martin), Envisage code 0902* (sparrow), Envisage code 0904* (starling), communal bird nesting units in suitable locations beneath the eaves of buildings.

* Products specified are for information and are available from Envisage Wildcare http://www.wildcareshop.com/ – other similar products are available elsewhere.

Table 2.4 - LE 04 Compliance summary

Criteria	*Compliance*	*Evidence*
SQE has been appointed to provide recommendations on enhancing and protecting the site's ecology	Yes	This report.
These recommendations are implemented. (for one credit)	Yes (assuming implementation)	This report. Landscaping plans incorporating specification of recommendations. Assessors completed Ecology Calculator 2
The ecologist confirms that ecological value of the site will increase by up to 5.9 actual species. (for two credits)	Unlikely on the site due to loss of existing habitat to built environment.	Landscaping plans incorporating specification of recommendations. Assessors completed Ecology Calculator 2
The ecologist confirms that ecological value of the site will increase by more than 6 actual species. (for three credits)	Not likely to be achievable	

Anticipated credits for LE 04	**Currently 0** **Likely 1 out of 3 available**

LE 05 – Long term impact on biodiversity

The site's long term impact on biodiversity will not be significant and based on current proposals all UK and EU legislation in relation to ecology will be complied with.

One credit in this category can be achieved by meeting the mandatory criteria and two of the additional criteria in table 2.5 below. Two credits are achievable if a single further additional criteria is committed to.

The compliance table below summarises information on credits achieved or achievable by this project. This table merely outlines these criteria and the developer is referred to relevant BREEAM assessment guidance also.

Brooks Ecological are able to provide further assistance in this area in terms of providing training for key staff, writing management plans, liaison with nominated staff or provision of further surveys required.

Table 2.5 – LE 05 compliance summary

Criteria	*Compliance*	*Evidence*
	Mandatory criteria	
SQE has been appointed prior to commencement of activities at the site	Yes	This report.
It is confirmed that the project complies with EU and UK legislation in relation to biodiversity.	Yes assuming precautions in relation to nesting birds and removal of Invasive plants are enacted.	This report. Evidence of relevant precautions.
A suitable habitat management plan is produced for the site.	Achievable	A landscape and habitat management plan for the site or evidence that one has been specified and commissioned.
	Additional criteria	
Nomination of a 'biodiversity champion' for the site.	Not relevant at this site	
Provision of relevant training for site workforce.	Not relevant at this site	
Record keeping in relation to biodiversity is carried out.	Achievable in terms of recording the enactment of precautions relating to birds and recording the	Confirmation of reporting criteria and availability, or relevant specification clause.

Criteria	*Compliance*	*Evidence*
	installation / implementation, and management of the recommendations *outlined in LE 04.*	
Ecologically valuable habitat is created on the site.	Achievable – Planting of native species-rich boundary features and sowing of species-rich grassland.	Landscaping plan and management plans specifying this habitat.
Site activities are timed to avoid disturbance to wildlife.	Achievable - See recommendations in part 1 in relation to nesting birds.	Contractors schedule of works

Anticipated credits for LE 05	**Currently 0** **Potentially 2**

References

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.

BREEAM 2011 Manual for New Construction BRE.