BE Brooks Ecological Ltd

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Ecological Assessment
Land at former "The Rock" Public House, Green Moor, Sheffield

Report reference: BE-R-1091-01
September 2011

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Written by	Tim Outlaw BSc (Hons) MIEEM Principal Ecologist
Technical review:	Peter James Brooks BSc (Hons) MA MIEEM CEnv Director
QA review:	Peter James Brooks BSc (Hons) MA MIEEM CEnv Director
Approved for issue Peter James Brooks BSc (Hons) MA MIEEM CEnv Director	
Date	29.09.11

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

Summary Statement

The site has been found to be of low ecological value, based on it supporting a very limited range of common species-poor habitats.

The proposed development will not be contrary to any wildlife guidance or legislation.

General recommendations in terms of preventing impacts on nesting birds and enhancing the site's biodiversity are made in the report.

Introduction

Brooks Ecological Ltd was commissioned by Shepherd Homes to carry out an ecological assessment of the site of recently demolished "The Rock" Public House off Green Moor Road, Green Moor, Sheffield (SK 281 994).

Site Proposals

The proposals involve the loss of an area of hard standing and semi-natural vegetation built development.

Potential impacts

The following potential impacts are highlighted and the report which follows sets out the significance of these impacts relative to the ecological value of the site and the potential presence of protected or notable species:

- Clearance of vegetation
- Loss of areas currently occupied by habitat to built development

Desk Study

A desk study was carried out to identify species or habitats that are considered important in a local context and to identify any species recorded locally that may be associated with the application site. This information can be used to help target groups that need to be considered in more detail in order to identify the ecological baseline for the application site.

The 2km search area for this site includes sections within the boundaries of both Barnsley and Sheffield Councils. Barnsley does not have any dedicated ecological records centre. Sheffield Biological Records Centre was contacted for any records they held from within their area of coverage.

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.

The only statutorily designated sites that falls within the 2km search radius is Wharncliffe Crags SSSI located c.1.9km south-east of the application site.

A number of locally designated sites were returned for the area from Sheffield Biological Records Centre, these Local Nature Sites all fall within the Sheffield City Council boundary and include woodlands, grasslands and reservoirs, the closest of which is located c.500m south of the application site.

Neither Wharncliffe Crags SSSI nor any of the Local Nature Sites would face any impacts from the proposed development.

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's ecology reflects the changing geology which underlies it and 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 occur within the application site or its immediate surroundings.

Local Biodiversity Action Plan

The local BAP is the 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?
Great crested newt	No	N/A
Skylark	No	N/A
Grey Partridge	No	N/A
Twite	No	N/A
Bittern	No	N/A
Lapwing	No	N/A
Barn Owl	No	N/A
Little Ringed Plover	No	N/A
Kestrel	No	N/A
Tree Sparrow	No	N/A
White-clawed Crayfish	No	N/A
Hedgehog	Yes	No
Bats	Yes	No
Otter	No	N/A
Water Vole	No	N/A
Bluebell	Yes	No
Salmon	No	N/A
Bullhead	No	N/A
Glow Worm	No	N/A
Dingy Skipper	No	N/A

The application site has potential to support hedgehog and bluebell but its small size and large amount of suitable habitat in the wider area makes it highly unlikely that it would be of significant importance to local populations.

The application site does not have potential to support roosting bats and offers only a small area of potential foraging habitat. The proposed development would have no impact on the sites current value in this respect.

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 Mixed Deciduous Woodland	No	N/A
Wet Woodland	No	N/A
Wood Pasture and Parkland	No	N/A
Hedgerows	No	N/A
Open Mosaic Habitats on Previously Developed Land	Yes	No
Arable Field Margins	No	N/A
Rivers	No	N/A
Ponds	No	N/A
Reedbeds	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

The site could be described as supporting an open mosaic of habitats on previously developed land but its small size and the dominance of non-natural habitat means that it can not be considered to be a valuable example.

None of the other listed habitats occur within the site boundary.

Aerial Photography and Detailed Map Study

The site is a small plot amongst the small village of Green Moor immediately surrounded by a landscape dominated by arable and improved and semi-improved grazing fields. Field boundaries are most commonly formed by dry stone walls.

Numerous small pockets of acid grassland and/or heath are scattered across the wider area along with plantation and semi-natural woodlands strips and blocks.

The nearest watercourse is the River Don flowing over 300m north of the application site. No ponds or other waterbodies are located within 500m.

Records

Sheffield Biological records Centre provided a large number of records of protected, notable and undesignated animal and plant species from the section of the 2km search area which falls within the Sheffield City Council boundary to the south but also up to 1km north of the application site.

No records were received from the site or within 200m of the site.

Records of designated species included; a range of Schedule 1 (Wildlife and Countryside Act 1981), red/amber list and UKBAP bird species were received. Of these the only ones considered to potentially occur on the site are the common species: song thrush, mistle thrush, dunnock, goldfinch, linnet, starling, house sparrow, willow warbler and fieldfare (winter only). The small size of the site means that no locally important populations of any of these species would be likely to occur and retained habitat on site means impacts are likely to be negligible.

Herpetile records included; common toad, common frog and grass snake. The site holds very limited habitat for any of these species, especially due to the lack of any potential amphibian breeding sites within more than 500m.

Bat records involved eight records of three species; noctule, common pipistrelle and Daubenton's. The closest of which was located c.200m north of the site.

Several records of badger were recorded, the closest from c.500m of the site.

Records of water vole and white-letter hairstreak were also received. No suitable habitat for either species occurs within the application site.

Phase 1 Habitat Survey

Survey Method

The survey was carried out on the 15th September 2011 by an experienced field ecologist who is a full member of the Institute of Ecology and Environmental Management (IEEM).

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 consists of an area of hard standing and made ground formed by the former car park and footprint of the since demolished public house, surrounded by the overgrown amenity grasslands and other semi-natural habitats.

The site was found to include the following habitat types:

- Built environment
- Bare rock
- Rough grassland
- Tall herb/scrub
- Trees

Built environment

The majority of the site comprises of this habitat formed by the tarmac carpark, the compacted rubble of the footprint of the demolished building and also a small building adjacent to the boundary with Green Moor Road which covers Green Moor Well.

The tarmac and compacted rubble are largely unvegetated although ruderal plants are beginning to colonise in cracks and gaps across the habitat. Species present include: pineappleweed (*Matricaria discoidea*), white clover (*Trifolium repens*), fat hen (*Chenopodium album*), ragwort (*Senecio jacobaea*) and black meddick (*Medicago lupulina*).



Figure 1

Carpark area; looking north-west from south-east corner of site.



Figure 2

Footprint of demolished pub from north-east corner of site.

The small building adjacent to the boundary wall is made of stone with a stone flag roof. It appears to have been recently restored and covers a restored well. Pointing is all intact and the front door and window are formed by wrought iron work making it open to light, draughts and in certain conditions, rain. The highly exposed interior and lack of potential roost sites makes it of negligible value for roosting bats and the building is due to be retained within the development.



Figure 3

Small building covering Green Moor Well.

Bare Rock

The western boundary of the site is marked by a c.7m high rock face. The small ledges on the rock face have been colonised by a variety of scrub and herb plants such as ferns (*Dryopteris* spp.) and willow (*Salix* sp.) and only small areas of sheer, bare rock remain.

Rough grassland

Sections of the site to the north and south which would formerly have been amenity grassland areas associated with the pub have become somewhat overgrown due to lack of recent management. As a result of this lack of management and the generally poor soils beneath they have a higher diversity than what would have been expected when managed albeit of common species only.

The swards are dominated by common grasses including; fescues (*Festuca* spp.), false oat-grass (*Arrhenatherum elatius)*, common bent (*Agrostis capillaris*), meadow grasses (*Poa* spp.), white clover, creeping buttercup (*Ranunculus repens*), common vetch (*Vicia sativa*), hairy tare (*Vicia hirsuta*), ribwort plantain (*Plantago lanceolata*), black meddick, yarrow (*Achillea millefolium*), common knapweed (*Centaurea nigra*) and in very localised damper conditions; creeping bent (*Agrostis stolonifera*) and pendulous sedge (*Carex pendula*).

Other localised non-native species include rosebay willowherb (*Chamerion angustifolium*) and red valerian (*Centranthus ruber*).



Figure 4

Grassland to north of car park.



Figure 5

Grassland to south of car park.

Tall herb/scrub

Along the base of the rock face along the western side of the site is a dense area of mixed scrub and tall herbs dominated by bramble (*Rubus fruticosus* agg.) with frequent rosebay willowherb, nettle (*Urtica dioica*) and occasional ferns, raspberry (*Rubus idaeus*), buddleia (*Buddleja davidii*), hawthorn (*Crataegus monogyna*), willow, cock's-foot, false oat-grass and tufted vetch (*Vicia cracca*).



Figure 6

Scrub and tall herb along western boundary.

Trees

Along the southern boundary of the site are a row of semi-mature and young birch (*Betula pendula*), willow, ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*). The ground flora associated with these trees is dominated by a cover of ivy (*Hedera helix*) and yorkshire fog (*Holcus lantanus*) with occasional wood sage (*Teucrium scorodonia*), bramble, nettle and patches of springy turf moss (*Rhytidiadelphus squarrosus*).



Figure 7

Trees along southern site boundary.

Young trees are also scattered both on and below the bare rock face including ash, rowan (*Sorbus aucuparia*), birch and sycamore.

All of the trees on the site are intact and have no cracks, peeling bark or other features likely to be used by roosting bats.

Fauna

Amphibians

The application site holds only small amounts of potential terrestrial habitat for amphibians and is located further than 500m from any potential breeding ponds. It is concluded that it is extremely unlikely that the site would hold any important amphibian populations, including great crested newt.

Reptiles

The site contains some habitat which could be utilised by this group. However, it is a small area and is poorly connected to areas of higher value and it is therefore considered highly unlikely that any reptiles would face significant impacts from the proposed development.

Protected mammals

No evidence of any protected mammals was recorded during the survey and no significant potential habitat for any such species is present within the site boundary. None of the trees or the Well building offer potential for roosting bats and its small area makes it unlikely to be of significant value to foraging or commuting bats.

Birds

The site is likely to hold small populations of common nesting birds, primarily within the scrub habitat on and below the bare rock face.

The site would not hold any locally important populations based on its size and habitat types.

Invasive Plants

A single *Cotoneaster* sp. plant is located close to the north-east corner of the site. It is illegal to cause the spread of any invasive species listed on Schedule 9 (Part 2) of the Wildlife and Countryside Act (1981) and therefore care should be taken during works to ensure no offence is committed. No other listed species were found on the site.

Evaluation and Recommendations

The habitats within the site are of low ecological value. The site is very unlikely to support any protected or otherwise notable species or assemblages.

The proposed development need not be contrary to any local, regional or national conservation legislation or guidance and further survey is not required to demonstrate this.

The following precautions will however be required if potential offences are to be avoided:

- Any clearance of woody vegetation on site may be required and clearance and would need to be undertaken outside of the bird nesting season i.e. between October and February. Any clearance undertaken outside of this period 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 development.

In line with planning guidance PPS9 opportunities should be sought to enhance the site for wildlife. Enhancement of this site would be best achieved by the erection of high quality bat boxes either on the retained trees along the southern boundary, the exposed sections of the rock face or on new buildings.

References

IEA. (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