High Street, Shafton, Barnsley

Preliminary Ecological Site Appraisal

27th January 2015



Prepared by:

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Site Name High Street, Shafton.	**Location** High Street, Shafton, Barnsley,
Job Number / Ref 15/EC05	**Document ref** MEC/HighSt2015
Site Code None	**Grid Reference** SE 3935 1090
Surveyor Peter Middleton MCIEEM	**Date of Survey** 27/01/15
Geology/Soil Type Not needed	**Designation** None

Phase 1 Habitat Types A.2.1 Dense scrub, A.3.1 Scattered broad leaved trees B.2.2 Semi improved grassland, C.3.1 Tall ruderal, J.2.3.2 Intact hedge, G.1 Standing water.
NVC Communities MG1, W24.
Protected Species None
Red List Species House sparrow, Starling
UK Biodiversity Species House sparrow, Starling
Barnsley BAP None

Document History

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Summary Statement

The site has no national, regional or locally important habitats. However the site has been found to be of moderate ecological value on a local scale because of the presence of scrub and habitat mosaics.

The proposed development of the site is not likely to present any potential impacts on protected species other than the loss of foraging habitat for bats. General recommendations in terms of additional surveys, mitigation and enhancement of the site's biodiversity are made in the report.

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1. Introduction

1.1 The preliminary ecological site appraisal was commissioned by Oldham Access Services for an area of land adjacent to High Street, Shafton, Barnsley. The site is subject to a planning application for a development of 42 dwellings.

1.2 Included in this report are the results of a preliminary site appraisal (walkover survey) which includes determining the potential for, or presence of, protected species and Red listed/UK BAP/Local BAP species, plus an appended map of the site showing the Phase 1 habitats present.

2. Site description

2.1 The site is in the centre of the village, it is gently sloping with the highest point adjacent to the road (High St). The majority of the site consists of poor semi improved grassland together with scattered trees, dense scrub, tall ruderal vegetation and a hedgerow along the southeast boundary. The site has been overgrazed for many years and the ground flora has deteriorated as a consequence. The site is also relatively wet and this is reflected in the flora. At the lowest point of the site on the north-eastern boundary is a small pond measuring approximately nine square metres.

2.2 The surrounding area consists predominantly of residential properties, associated gardens and amenity grassland.

3. Methodology

3.1 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 then be uses to help target groups that need to considered in more detail in order to identify the ecological baseline for the application site.

3.2 A single visit was made to the site on the 27th January 2014 and a walkover survey was undertaken lasting approximately 1.5 hours to record all the plant species present in each of the different habitats or plots

3.3 The whole of the area of the proposed development land was also surveyed for European/UK protected species, UK BAP species, Schedule 1 Species, Red List Species and species listed on Schedule 9.

3.4 For assessing Phase 1 Habitat character the methodology used was as set out in the JNCC Handbook for Phase 1 Habitat Survey. National Vegetation Classification (NVC) methodology was used from the JNCC National Vegetation Classification – Users Handbook.

4. Results

4.1 Desk Study

4.1.1 Data searches were gathered from both the Sheffield Biological Data Centre and South Yorkshire badger Group. There are no known Badger *Meles meles* records within a 1km radius of the site. However, both Great Crested Newt *Triturus cristatus* and Water Vole *Arvicola terrestris* records exist within a 1.5km radius of the site. The former is present at Rabbit Ings. Whilst there is an abundance of records of many taxa, almost all are for Carlton Marsh which is 1.5 km from the site, and Rabbit Ings which is more than 1 km from the site. Bat records are somewhat scarce for the vicinity and the only other significant record that has the potential to be associated with the site is Grass snake *natrix natrix*, again, from Rabbit Ings.

4.1.2 A search of the website 'Magic' the Geographical information system and data supplied by Sheffield Biological Data Centre identified the following internationally, nationally and locally designated sites within a 2km radius.

4.1.3 **INTERNATIONALLY DESIGNATED SITES**

Special Protection Areas
There are no Special Protection Areas within your search area.

Special Areas of Conservation
There are no Special Areas of Conservation within your search area.

4.1.4 **NATIONALLY DESIGNATED SITES**

Sites of Special Scientific Interest
There are no Sites of Special Scientific Interest within the search area.

4.1.5 **LOCALLY DESIGNATED SITES**

Sites of Ecological or Geological Importance
There are no second tier sites (SEGI) occurring within the search area.

Local Nature Reserves

Local Nature reserves (LNR) are sites of local or district-wide importance for the enjoyment, study or conservation of wildlife, geological features or landforms. Sites include:

- Carlton Marsh

Local Wildlife Sites

Local Wildlife Sites have been identified as the most important areas for biodiversity outside the nationally designated sites. They are selected for their locally important, distinctive and threatened habitats and the species they support. Sites include:

- Brierley Meadows
- Carlton Marsh

4.2 Field Survey (Phase 1 habitat survey)

4.2.1 B.2.2 Semi improved grassland

This habitat would have once covered the entire site but now it constitutes two thirds of the site. The grassland conforms to the National Vegetation Classification MG1 which is dominated by Cock'sfoot *Dactylis glomerata* and False Oat Grass *Arrhenatherum elatius*. Other occasional species that are typical of this community include Yorkshire Fog *Holcus lanatus*, Dandelion *Taraxicum* sp, Ribwort plantain *Plantago lanceolata* and Creeping buttercup *Ranunculus repens*. The grassland is heavily 'poached' in places as a consequence of overgrazing (see plate 2). Additionally, nutrient enrichment is evident resulting in areas dominated by chickweed *Stelaria media*, Nettle *Urtica dioica* and Docks *Rumex*.

4.2.2 A.3.1 Scattered broad leaved trees

There is an area of scattered trees behind a row of terraced houses. Sycamores *Acer psuedoplatanus* is by far the most abundant species together with frequent Wild cherry *Prunus avium* and occasional Pendunculate oak *Quercus robur* and Goat willow *Salix caprea*. Also, there is a single Hazel *Corylus avellana* and Cracked willow *Salix fragilis*. Within the scattered trees are areas of tall ruderal vegetation dominated by Great willowherb *Epilobium hirsitum* and Bramble *Rubus fruticosus agg* scrub.

4.2.3 A.2.1 Dense Scrub

There are two relatively large areas of impenetrable dense scrub; one of which is dominated by Bramble and the other dominated by Blackthorn *Prunus*

spinosa. On the periphery of the site there are also several other small areas of brambles.

4.2.3 J.2.3.2 Intact hedge

Along the eastern boundaries is a largely intact mature Hawthorn *Crataegus monogyna* hedge with occasional Elder *Sambucus nigra*.

4.2.5 C.3.1 Tall ruderal

There are several areas of this habitat on site that are dominated by Great willowherb *Epilobium hirsitum*. There is also a transition zone between this habitat and dense scrub where both Great willowherb and Bramble *Rubus fruticosus agg* occur. There are numerous scattered sapling trees within this habitat. The abundance of Great willowherb is a direct consequence of the dampness of the site.

4.2.6 G.1 Standing water

A small pond on the north-east boundary measuring 3m X 3m (9m2) is approximately 12mm deep. It has almost no emergent vegetation except for a single Soft rush *Juncus effuses*. Submeged vegetation includes abundant Common water starwort *Callitriche stagnalis*.

Plate 1 The site



Table 1

Full Species List for all habitats		
English Name	**Scientific Name**	**DAFOR Rating**
False oat grass	*Arrhenatherum elatius*	F
Cock'sfoot	*Dactylis glomerata*	F
Hawthorn	*Crataegus monogyna*	A
Sycamore	*Acer psuedoplatanus*	F
Broad leaved dock	*Rumex obtusifolius*	O
Dandelion	*Taraxicum* sp	F
Great willowherb	*Epilobium hirsitum*	Loc D
Ivy	*Hedera helix*	O
Yorkshire fog	*Holcus lanatus*	F
Red fescue	*Festuca rubra*	F
Elder	*Sambucus nigra*	F
Hemlock	*Conium maculatum*	R
Cock'foot	*Dactylis glomerata*	Loc A
Creeping bent	*Agrostis stolonefera*	R
Hawthorn	*Crataegus monogyna*	O
Goat willow	*Salix caprea*	O
Cracked willow	*Salix fragilis*	R
Chickweed	*Stellaria media*	Loc A
Feverfew	*Tanacetum parthenium*	R
Pendunculate oak	*Quercus robur*	R
Hazel	*Corylus avellana*	R
Blackthorn	*Prunus spinosa*	Loc D
Bramble	*Rubus fruticosus*	Loc D
Smooth meadow-grass	*Poa pratense*	O
Rough meadow-grass	*Poa trivialis*	O
Leyland cypress	*Cupressocyparis leylandii*	O
Creeping buttercup	*Ranunculus repens*	A
Cow parsley	*Anthriscus sylvestris*	Loc A
Nettle	*Urtica dioica*	Loc A
Holly	*Ilex aquifolium*	O
Broad buckler fern	*Dryopteris dilitata*	R
Wild cherry	*Prunus avium*	R
Spear thistle	*Cirsium vulgare*	F
Ox-eye daisy	*Leucanthemum vulgare*	R
Bulbous buttercup	*Ranunculus bulbosus*	R
Ribwort plantain	*Plantago lanceolata*	O
Soft rush	*Juncus effusus*	R
Hybrid willowherb	*Epilobium*	R

Perennial rygrass	*Lolium perenne*	R
Snowdrop	*Galanthus nivalus*	Loc A
Daisy	*Bellis perennis*	R
Cleavers	*Gallium aperine*	Loc A
Foxglove	*Digitalis purpuria*	O
Red Valerian	*Centhranthus rubur*	R
Garden daffodil	*Narcissus*	Loc A
Periwinkle	*Vinca major*	Loc D
Smooth sowthistle	*Sonchus*	R
Common water starwort	*Callitriche stagnalis agg*	Loc A

D = Dominant, **A** = Abundant, **F** = Frequent, **O** = Occasional, **R** = Rare

Plate 2 Photo from near boundary with High Street looking north-east



Plate 3 Dense Blackthorn scrub



Plate 4 Bramble scrub



Plate 5 Small pond 3m X 3m



4.3 Schedule 9 species (Invasive species)

4.3.1 There are no species on site which are listed on Schedule 9 of the Wildlife and Countryside Act 1981 Part 2, section 14, which prohibits the release of such plants into the wild.

4.4 Protected species

4.4.1 There is no water course on site, however, there is a small pond measuring 9m^2 that potentially could support Great Crested Newts. It is a seasonal pond that collects the 'run off' from the site. The pond has been assessed for its habitat suitability (see table 2) and it was found to be below average (see table 3). No tracks or signs of Badgers *Melis melis* were found and there are no buildings on site that can accommodate a bat roost. Furthermore, all the trees on site were assessed for their bat roost potential. The trees were inspected for features such as woodpecker holes, basal holes, rot holes and flaking bark. None of the trees were found to have any suitable features.

Table 2

HSI Pond Results	
	High St Site, Shafton
Location 1	1
Pond Area 2	0.1
Pond Permanence 3	0.5
Water Quality 4	0.67
Pond Shading 5	1
No of Waterfowl 6	1
Fish Presence7	1
Pond Density 8	0.1
Newt Friendly Habitat 9	1
Macrophyte 10	0.8
Multiplication	**0.00268**
Result Root (overall HSI)	**0.553112508**

4.4.2 Table 3 below shows a system for using HIS scores to define pond suitability for Great Crested Newts on a categorical scale:

Table 3

HSI Scores to define pond suitability for GCNs		
HSI		Pond suitability
<0.5	=	Poor
0.5 – 0.59	=	Below average
0.6 – 0.69	=	Average
0.7 – 0.79	=	Good
>0.8	=	Excellent

4.5 Red Listed/UK/Local BAP species

4.5.1 Both House sparrow *Passer domesticus* and Starling *Sturnus vulgaris* were recorded on site. Both of which are Red Listed Species of Conservation Concern and UK BAP Species.

4.6 Other fauna

4.6.1 Fourteen species of common birds were recorded on site during the brief walkover survey including Dunnock *Prunella modularis* (Amber Listed), Robin *Erithacus rubacula*, Blackbird *Turdus merula,* Wren *Troglodytes troglodytes*, Magpie *Pica pica,* Blue tit *Parus caeruleus*, Great tit *Parus major*, Long-tailed tit *Aegithalos caudatus*, Starling, House sparrow, Mistle thrush *Turdus viscivorus*, Wood pigeon *Columba palumbus*, Goldfinch *Carduelis carduelis* (flock of 19) and Sparrow hawk *Accipiter nisus*. The habitat also has the potential to support several migrant breeding warblers including Whitethroat *Sylvia communis*, Lesser Whitethroat *Sylvia curruca* and Blackcap *Sylvia atricapilla*. The site no doubt supports a greater assemblage of bird species than the brief walkover survey suggests. For example, the habitat on site will probably support Song thrush *Turdus philomelos* which is a Red Listed species. There is also evidence of rabbit *Oryctolagus cuniculus* activity on site.

4.7 Habitat assessment and summary

4.7.1 The grassland has been overgrazed for a considerable time and consequently it has an abundance of species indicative of over-grazing by horses. Creeping buttercup is now abundant together with patches of nettle and/or Docks. Whilst there are no nationally or regionally important habitats, the site has local ecological value because of the habitat mosaics containing scrub, scattered trees and tall ruderal vegetation. Consequently, the site will support a good population of common birds.

5. Constraints

5.1 The survey was undertaken outside of the season for undertaking flora surveys and when birds are quiet and unobtrusive and summer migrants have not yet returned. The constraints have not however affected the survey with regards to the potential to support EU/UK protected species. Furthermore, the habitat assessment has not been affected by the timing of the survey whatsoever. The species list would have been greater if the walkover survey had been undertaken during the summer months. However, considering the habitats present, it is no cause for concern.

6. Legislation

6.1 Development and construction works need to comply with the complex requirements of the wildlife protection legislation and government policy in the UK.

Core Legislation

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)
- The Protection of badgers Act 1992
- The Hedgerow Regulations 1997
- The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended)
- The Countryside and Rights of Way Act 2000
- The Natural Environment and Rural Communities Act 2006

Key Policy

- The UK Biodiversity Action Plan (1994)
- National Planning Policy Framework: 11 Conserving and enhancing the natural environment (2012)
- Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System (2005)
- Technical Advice Note 5: Nature Conservation and Planning (2006)
- Regional Planning Policy and Local Development Documents

7. Mitigation/Enhancements

7.1 For mitigation and in order to enhance the ecological value of the site in accordance with the aims of planning policy NPPF: 11, it is suggested that the developer follows the recommendations detailed below. Please note that the mitigation/enhancements have been informed by the results and findings of the preliminary ecological appraisal (see 4.6.1).

- Retain all trees on the north-west boundary, plus retain as many of the existing trees as possible. These should be fenced off sufficiently to protect the roots from damage during site clearance.

- The hedgerow along the south east boundary should be improved by 'laying' the existing hedge and by filling in the gaps with further plantings of native species in order to improve the existing hedge from species poor to species rich. Species should include Hawthorn, Blackthorn, Guelder rose *Viburnum opulus*, Field maple *Acer campestre*, Wild service tree *Sorbus torminalis*, Dog rose *Rosa cannina*, Holly *Ilex aquifolium* and Hornbeam *Carpinus betulus*.

- Plant avenue of native trees on the estate road where appropriate; species should include Rowan *Sorbus ucuparia* and Whitebeam *Sorbus aria*.

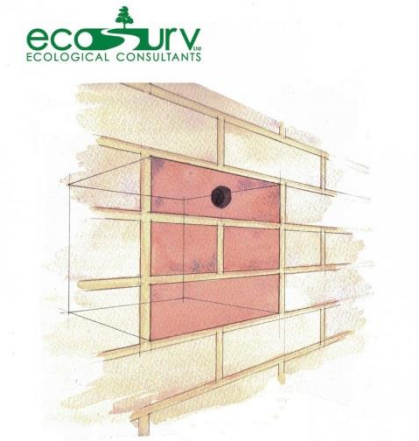
- The dwellings should have incorporated into their design in-situ cavity boxes for Starlings, 15 in total for one third of the dwellings (see Figure 1 & 4). The location within this development is ideal because of the close proximity of short sward grassland where the Starlings can forage.

- The dwellings should have three 17A Schwegler Swift Nest Box (Triple Cavity) either built in to walls or screwed to brick work under soffit (see figure 2 & appendix 2).

- Pond on northeast boundary to be retained and enhanced and incorporated into the sites drainage scheme.

- Three cavity bat boxes to be installed high on gables (see fig 3 & appendix 2).

Figure 1 Code 197682 at www.nhbs.com



7.2 Starling populations have declined dramatically in recent years and are now on the Red List of birds of high conservation concern. Loss of habitat is one of the major pressures on this species and household renovations and new buildings offer much fewer nesting sites than have previously been available. Providing these birds with a safe and secure habitat and nesting environment is a great way to help ensure their future survival.

The Starling Box is a large, solid box made of insulating concrete with an internal nesting space, which can be incorporated into the fabric of a building as it is built or renovated. The box is designed especially to be unobtrusive and aesthetically pleasing. This box is made to order and faced in brick or stone to match your building.

Figure 2

17A Schwegler Swift Nest Box (Triple Cavity)



7.3 Swifts spend just four months in Europe over the summer and during this time they use urban areas around our homes and buildings to provide nesting sites. Renovation and rebuilding of older houses means that many of these preferred spaces, such as under roofs, attics or tiles, are often blocked so that they cannot find sufficient nest sites. These Swift Nest Boxes from Schwegler can help this species by providing valuable nesting locations and the installation of several units is an ideal way to support a swift colony. These boxes have been used across Europe with great success for many decades. This box should be installed under the shelter of eaves or overhanging roofs.

Figure 3

Small cavity bat roost (three) to be situated at the rear of the properties adjacent to the south-east boundary (species rich hedgerow).



7.4 The small cavity bat roost will fit in the space of one standard brick. This version has the advantage that no lintel is required above the entrance, and it has even less impact on the visual appearance of the building.

8. Conclusion

8.1 No European/UK protected species, or UK Bap species were recorded on site during the walkover survey. However, a small pond on site has perhaps a little potential to support Great crested newts. Two Red Listed bird species of Conservation Concern were recorded; House sparrow and Starling. Whilst there are no nationally or regionally important habitats the site has a little local importance because of the habitat mosaics present.

8.2 The proposed development will obviously impact on the site's ecological value. However, by retaining as many trees as possible, particularly on the boundaries, and by implementing the enhancements the net loss will become less adverse.

8.3 The site has the potential to support a large number of nesting birds therefore any future preparatory works should avoid the bird nesting season from March to August.

8.4 The small pond on site has been assessed as having less than average habitat for Great crested newts. Nevertheless, habitat suitability index (HIS) is no

substitute for a survey. Therefore it is recommended that a survey for amphibians is conducted in spring 2015. Furthermore, considering the relative close occurrence of Grass snake at Rabbit Ings and the potential suitable habitat on a nearby disused railway, it is recommended that a reptile survey be undertaken at the same time.

References:

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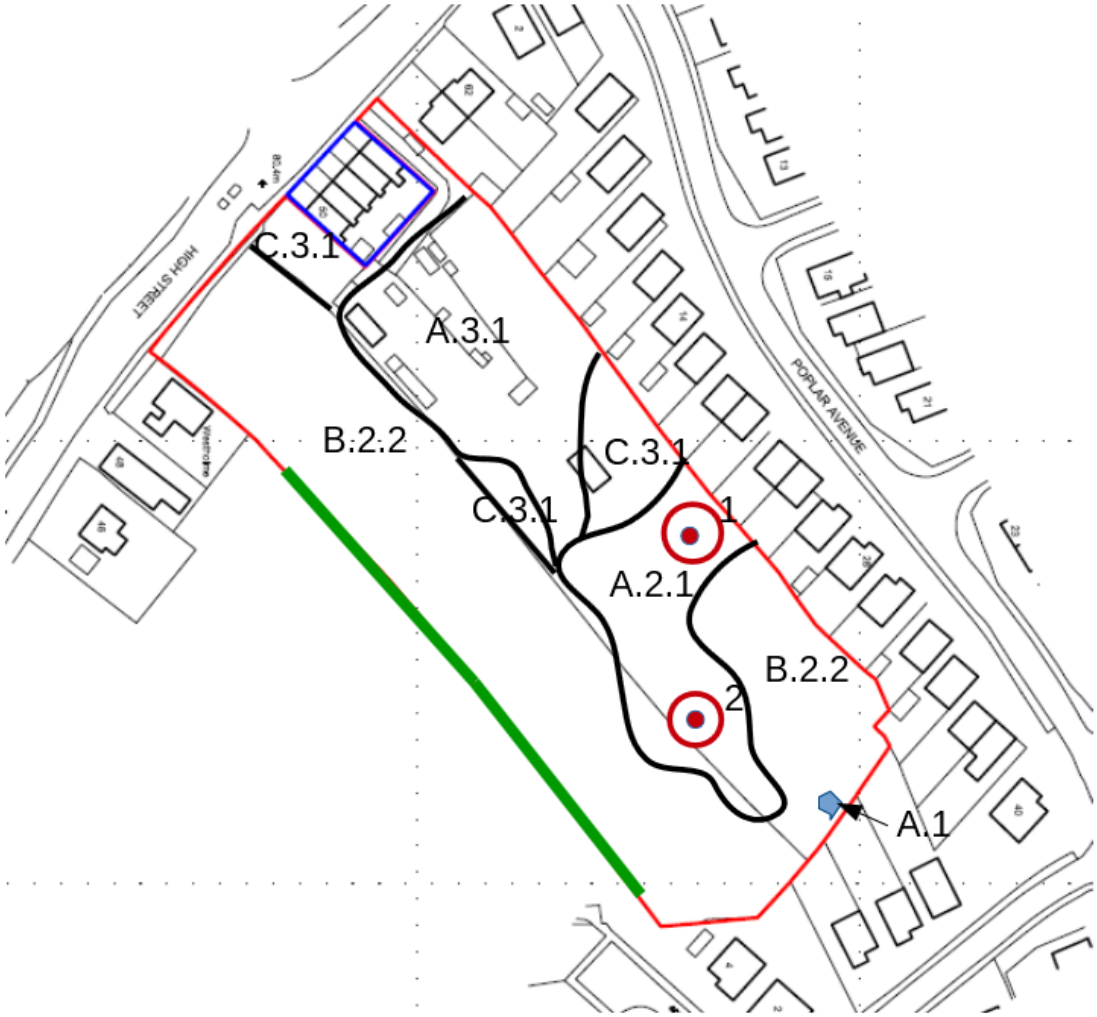
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Rodwell J.S, 1991, British Plant Communities, JNCC.

Appendix 1

Phase 1 Habitat Map



Target Note 1
Dense scrub dominated by Bramble

Target Note 2
Dense scrub dominated by Blackthorn

Appendix 2

Mitigation locations

