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BASELINE ECOLOGICAL SURVEY REPORT

Middlecliff Farm, Millhouse Green

March 2012

NB. Information on legally protected, rare or vulnerable species may appear in ecological reports. In such cases it is recommended that appropriate caution be used when circulating copies.

Envirotech NW Ltd

GEN/11/314

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Professional responsibility

This report has been commissioned and the actions of the surveyor have been made in accordance with the Code of Professional Conduct for the Institute of Ecology and Environmental Management. (www.ieem.org.uk) and the Royal Institution of Chartered Surveyors (www.rics.org.uk)

Accuracy of report

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, all of the protected species this survey covers are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and/or in their interaction with protected species. If protected species are found during a work programme, and continuing the work programme could result in their disturbance, injury or death, either directly or indirectly an offence may be committed.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

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COMMENTS ON CURRENT STATUS AND ANY IMMEDIATE AND FUTURE ACTIONS NEEDED:

THE SITE SUPPORTS AN UNREMARKABLE ASSEMBLAGE OF COMMONLY OCCURRING PLANT SPECIES AS WELL AS LIMITED SCOPE FOR PROTECTED SPECIES.

THE INSTALLATION OF A WIND TURBINE IS CONSIDERED LIKELY TO HAVE A NEGLIGIBLE IMPACT ON THE ECOLOGY OF THE LOCAL AREA.

REPORT CONTROL SHEET

General Report Information	
Date of site risk assessment	19th March 2012
Project lead signature	Andrew Gardner - Director
Date report issued	28th March 2012
Report approved by	Andrew Gardner - Director

Whilst all due and reasonable care is taken in the preparation of reports, Envirotech accept no responsibility whatsoever for any consequences of the release of this report to third parties.

RESULTS SUMMARY AND ACTIONS REQUIRED

Results

1. The site supports habitat of limited value to wildlife.

2. The installation of a turbine is considered likely to have only a negligible impact on the ecology of the local area.

Actions Required

These actions are to meet compliance with current legislation, planning policy and best practice as recognised by the various statutory authorities. They are intended to fulfil ecological planning formalities and facilitate the implementation of the project.

1. Grassland in which the turbine is to be located should continue to be mown to retain a short sward.

1.0 Background

1.1 Extended Phase 1 Survey

1.1.1 The Extended Phase 1 survey was undertaken by Andrew Gardner BSc (Hons), MSc, MRICS, MIEEM, CEnv who is a Natural England Licensed bat surveyor. The survey followed the Phase 1 habitat survey methodology (NCC, 1990) which is a standard technique for recording and mapping habitats. The survey involved walking the whole site, mapping and describing different habitats (for example: woodland, grassland, scrub).

1.2 Timing and Constraints

1.2.1 The Phase 1 survey was carried out on 23rd March 2012, the weather was dry, bright and mild throughout, the survey timing was during early spring. In this case, due to the habitats present, the time of year did not pose any constraint. Similarly, the timing posed no problems for the baseline protected species assessment, and no constraints were encountered in respect of achieving the survey objectives.

2.0 Phase 1 Survey Results

2.1 Habitat Results

2.1.1 The site lies to the West of Millhouse Green and comprises a series of open permanent pasture fields bounded by walls and fences. The turbine is to be located within a garden area at Middlecliff Farm. See figure 1 for the Phase 1 Habitat Plan and descriptive botanical and faunal target notes, hereafter referred to as TN and FTN.

2.1.2 The habitats encountered on and adjacent to the site were (in no particular order):

- Improved Pasture
- Tall Ruderals
- Buildings/ Hard standing
- Bare Ground
- Ephemeral Short/ perennial
- Deciduous Woodland

2.2 Improved Pasture

2.2.1 Improved pasture forms the field adjacent to which the turbine is to be located and the majority of those surrounding (BTN1). The fields are used for grazing and mowing, they are under intensive management. The field immediately adjacent to the turbine has recently been re-seeded. The grassland appears species poor and is dominated by Perennial Ryegrass (*Lolium perenne)*. Annual Meadow Grass *(Poa annua)*, Cocksfoot *(Dactylis glomerata)* and Yorkshire Fog *(Holcus lanatus)* occur in the field sides along with occasional Creeping thistle *(Cirsium arvense)* and Dandelion *(Taraxacum officinale)*.





Plate 1a and 1b- Improved pasture around farm buildings

2.3 Semi-improved grassland

2.3.1 The area in which the turbine is to be located comprises a garden area which has become overgrown (BTN2). The area is dominated by Tufted Hair-Grass (*Deschampsia cespitosa)* with occasional Cocksfoot *(Dactylis glomerata)*, Yorkshire Fog *(Holcus lanatus)* and Creeping thistle *(Cirsium arvense)*. Common nettle *(Urtica dioica)* and Meadow Buttercup *(Ranunculus acris)* are also frequent.

2.3.2 This area appears to historically have been strimmed but can not be mown due to its topography.



Plate 2- Interface of Semi-Improved pasture and Improved pasture at proposed turbine location

2.4 Buildings/ Hard Standing

2.4.1 A farmstead lies to the North-east of the proposed turbine site and comprises concrete yards with both modern portal frame and traditional stone built buildings (BTN3). There is no vegetation associated with these areas. These buildings are considered to offer negligible potential for roosting bats due to their exposure and lack of potential roosting sites (FTN1)



Plate 3- Farm buildings offer negligible potential for use by bats

2.5 Bare Ground

2.5.1 A quarry site to the West of the site largely comprises bare ground (BTN4). There appears to be ongoing work at this site to re-compact the ground to prevent sediment runoff. The ground appears to be very hard and other than small areas of less disturbed ground is devoid of vegetation.

2.5.2 Lapwing *(Vanellus vanellus)* were seen displaying nesting behaviour in this area (FTN2)

2.6 Ephemeral Short/ perennial

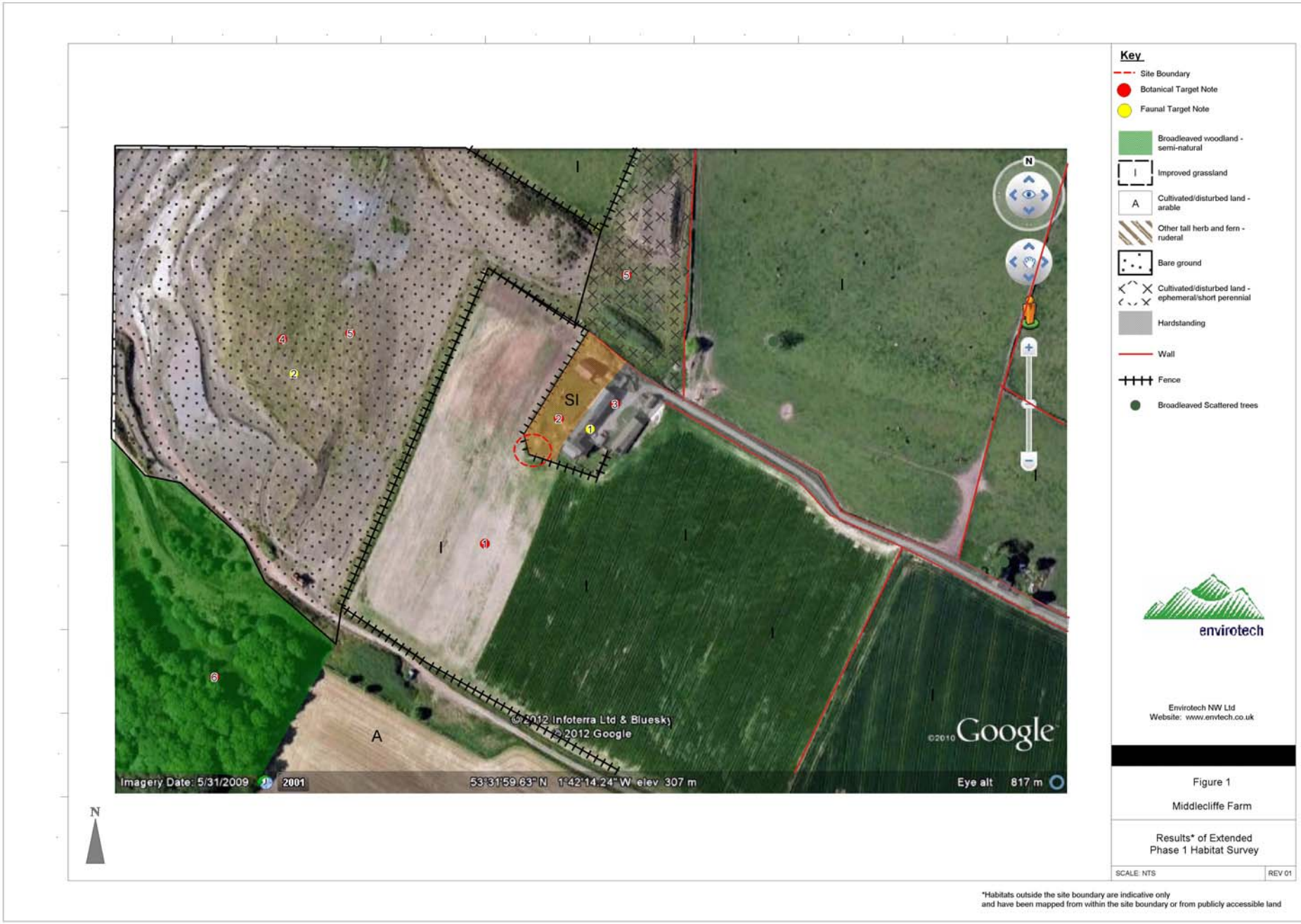
2.6.1 Areas of the quarry which are less disturbed support short/ patchy vegetation growth dominated by Fescue (Festuca Sp.) with occasional Tufted Hair-Grass (*Deschampsia cespitosa)* (BTN5).

2.7 Walls/ Fences

2.7.1 The development area and quarry are bounded by a steel sheet net fence. Drystone walls bound other fields in the local area. These are not considered to offer significant potential for commuting or foraging bats.

2.8 Deciduous Woodland

2.8.1 Semi-natural Deciduous woodland occurs to the South-west of the site on the boundary of the quarry (BTN6). This area is poorly connected to the site and is outside the area of site ownership. It was not possible to closely inspect it but species comprises Silver Birch *(Betula pendula)*, Hawthorn *(Crataegus monogyna)*, Sycamore (*Acer pseudoplatanus)* and English Oak *(Quercus robur)*.


Key
Site Boundary
Botanical Target Note
Faunal Target Note
Broadleaved woodland - semi-natural
Improved grassland
Cultivated/disturbed land - arable
Other tall herb and fern - ruderal
Bare ground
Cultivated/disturbed land - ephemeral/short perennial
Hardstanding
Wall
Fence
Broadleaved Scattered trees
SI
A
©2012 Infoterra Ltd & Bluesky
©2012 Google
©2010 Google
Imagery Date: 5/31/2009
2001
53°31'59.63" N 1°42'14.24" W elev 307 m
Eye alt 817 m
N
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Figure 1
Middlecliffe Farm
Results* of Extended Phase 1 Habitat Survey
SCALE: NTS
REV 01
*Habitats outside the site boundary are indicative only and have been mapped from within the site boundary or from publicly accessible land

3.0 SUPPORTING INFORMATION

3.1 Scope and objectives

This report was commissioned in respect of the proposed future installation of a wind turbine near Middlecliff Farm, Millhouse Green, the objectives of this survey are:

1. To carry out an ecological assessment of the site to identify any habitats, species or features of nature conservation significance.

2. To undertake more in-depth surveys to asses the extent of any ecological risk identified.

3. To provide a concise written report of the results, making any appropriate recommendations to ensure compliance with wildlife law and recognised best practice.

3.2 General site description and methods

The site comprises a small area of semi-improved grassland n a very exposed position bounded by improved pasture and fences.

A plan and photographs are provided earlier in this report.

3.3 Methodology

A consultation with the site agents was made on the 28th February 2012 following which the general site layout and adjacent environs were appraised. A search for ecological records and of protected sites within 2km of the site held by the Sheffield Biological Records Centre was also made. A request for comments in respect of possible bird interest/ risk was sent to Barnsley Bird Club. Results of the records search are shown in Appendix 1.

No additional records searches were considered necessary based on our initial appraisal of the habitats associated with the site.

The level of survey effort used for each species was derived from our assessment of the likely presence and susceptibility of each species to disturbance from the proposed development as well as its local abundance and level of protection/importance.

3.3.1 Bats

The survey was carried out in full accordance with the recommendations in NCC (1987), Mitchell-Jones (2004) and BCT (2007). The survey was undertaken by a Natural England licensed surveyor.

This comprised a close inspection of all buildings adjacent to the site. Buildings were assessed in relation to their ability to support roosting or foraging by bats in respect of the number of suitable roosting features present as well as there orientation and proximity to suitable foraging areas.

The general habitat at and adjacent to the site was evaluated in terms of its suitability to bats for foraging or commuting.

A bat activity survey was not conducted as in accordance with BCT (2007) the site could be sufficiently well assessed from a daytime walkover survey to be reasonably confident in the absence or low risk to bats from the proposal.

3.3.2 Badger

The survey method was a scaled down version of the standard badger survey methodology as described in Harris et al (1989). In practice this comprised a generalized search of the whole site where suitable habitat was found, to a distance of 30m from the site boundaries, where this was possible, for feeding signs, habitual runs and footprints, hairs, droppings and latrines, scratching posts and actual setts.

Badgers are protected from deliberate disturbance when in an active sett and intentional killing or injury. The badger is the only UK species to be specifically covered by its own legislation the 1992 Protection of Badgers Act.

3.3.3 Birds

All nesting birds, other than pest species covered by specific exemptions where they are causing damage to livestock or crops, are protected from disturbance when actively nesting or rearing dependant young. An assessment of the sites potential to support nesting birds would reveal the level of likely past use of the site and likely impact of the development on nesting/ foraging opportunities for birds. The farm buildings were also assessed for the past presence of Barn Owls. Indications of use such as pellets, "white wash", chick down and leg bones were searched for.

Based on the habitat and exposure of the site it was not considered appropriate to undertake bird flight/ activity surveys. The size and scale of the proposal is considered unlikely to significantly affect bird flight lines or significant/ notable populations of birds. The turbine is located in close proximity to the farmstead which would dissuade many more sensitive bird species from overflying it.

3.3.4 Invertebrates

The survey for these species was based on assessing the habitat type and suitability of the site.

It is our opinion that the above methodology was sufficient to make a risk assessment of site works and determine the likely effect on these species. As such we consider the above methodology constitutes reasonable effort in this case.

3.3.5 Plants

The vegetation composition of the site was assessed with key plant and tree species being identified.

3.3.6 Water vole/ Otter/ Great Crested Newts

There is no suitable habitat at or in proximity to the site. No additional assessment was considered necessary.

3.4 Limitations

The surveys were limited to the Spring season. Based upon habitat composition, exposure of the site and the nature of the proposed scheme it is considered that the level of survey effort is however proportionate to the risk at this site.

4.0 RESULTS

4.1 Protected sites

There are no protected sites within or immediately adjacent to the survey area. The nearest protected sites are Small Shaw and High Bank and Whitley Edge.

Small Shaw and High Bank lies in a mainly agricultural area between Whitley Road and Whams Road; however, to the southwest, beyond Whams Road (A616) there is a large brick works and immediately to the south-east there is an active open-cast quarry.

The site has limited connectivity to the surrounding area due the local landscape lacking a network of hedges and trees, although the local drainage systems does provide some links. A large section in the east of the site is species-poor semi-improved grassland. Kestrel *(Falco tinnunculus)* and Twite (*Carduelis flavirostris)* have been recorded.

Whitley Edge is a series of three slightly separated sites, all on the steep southwesterly slope that is a south-eastern continuation of Whitley Edge. Ground conditions are strongly acidic and the site comprises heathland and acid grassland. Notable species include Lapwing *(Vanellus vanellus)*, Sky Lark *(Alauda arvensis)* and Meadow Pippit *(Anthus pratensis)*.

A plan showing the location of these sites is included at figure 2. Citations are included in Appendix 1.

These sites are not directly connected to the site. The development area is isolated from them by improved pasture fields and or an open quarry. There does not appear to be any hydrological link from the site to these areas as the development site is downslope.

Habitats within and immediately adjacent to the site are not representative of those which fall within the designated area.

Impacts on these designated areas as a result of the proposal are considered likely to be negligible.

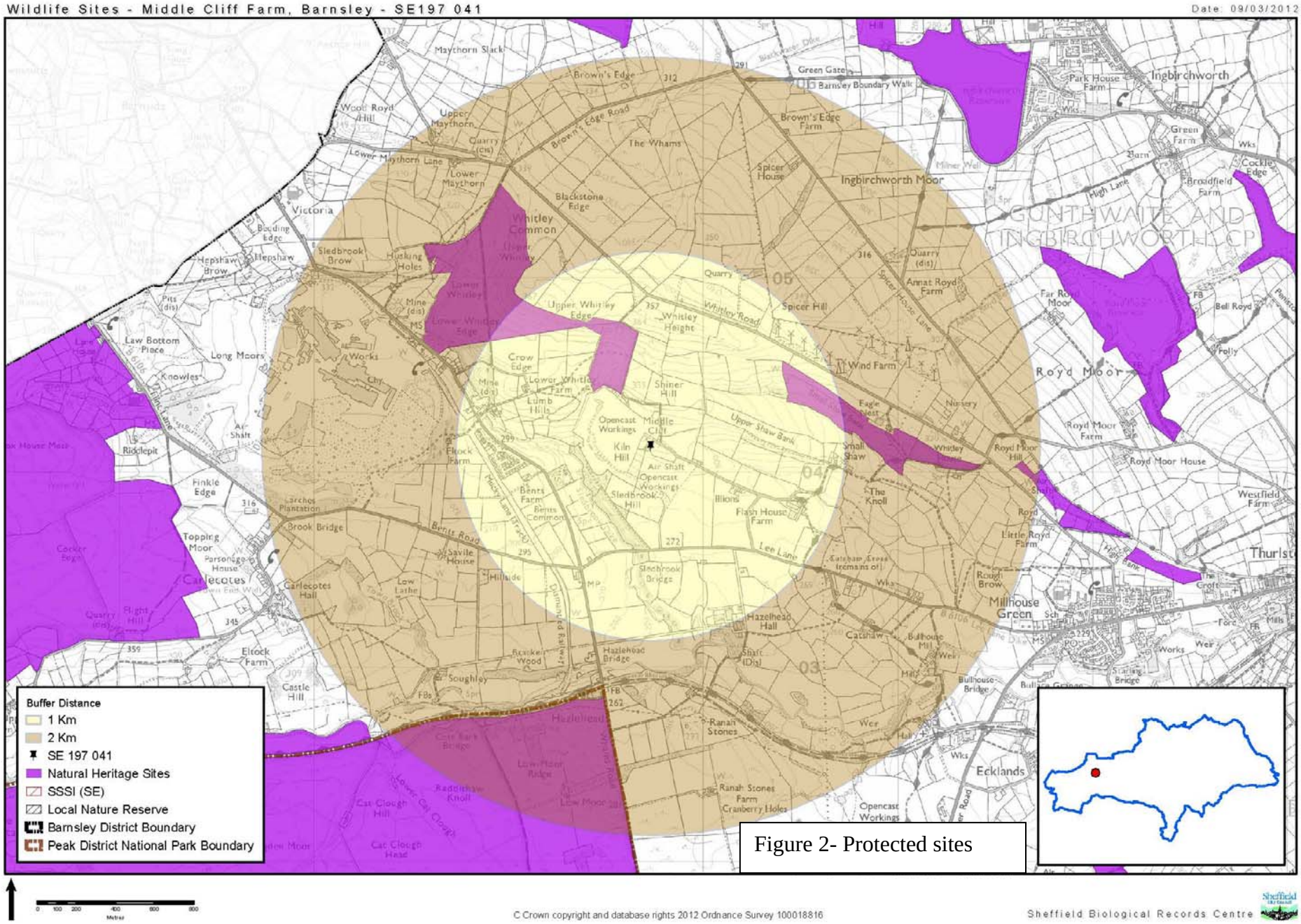


Figure 2- Protected sites

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4.2 Bats

There are no records of bats within 1km of the site. There are no buildings on the site which will be lost and or partially modified by the proposal. The majority of buildings adjacent to the site are of natural stone and or portal frame construction and are under steel or stone slate roofs. They were, after inspection, considered to offer negligible roosting potential.

Farmhouse

The farmhouse is of stone construction and has recently been re-pointed and re-roofed. There were occasional small gaps noted under the stone flags on the roof but these were shallow and suboptimal for use by bats due to exposure of the roof to the wind. No indications of past or current use could be found. The roof voids are clean, the external walls well sealed.



Plate 4- Farmhouse roof voids are very clean

Barn

The barn is of stone construction but is dilapidated. The roof is collapsing inwards which allows light and water into the internal space and walls.

There are cobwebs on the more sheltered walls internally with no indications of past or current use by bats apparent.



Plate 5- Barn roof collapsing inwards. Internal space open and light

Dutch Barn

A Dutch barn is clad in steel sheets on a timber frame. It offers negligible potential for use by bats.

Trees

There are no trees on or in proximity to the proposed turbine location.

In accordance with BCT (2007) the habitat adjacent to the site was mapped by an experienced bat ecologist to determine the likely foraging and commuting routes in the local area. The results of the exercise are shown on figure 3.

Bats may forage along the woodland to the South of the site, this area is high quality.

All of the land surrounding the site is low quality for foraging bats being open and exposed. A low quality potential commuting route occurs along the interface between the semi-improved and improved pasture adjacent to the site. Walls along the roadside and across fields locally provide medium quality commuting routes.

None of these commuting routes connect with any locally significant foraging areas and there is no apparent use of the farm buildings by large numbers of bats.

The hill upon which the turbine is to be located is very exposed, bats are considered more likely to follow the contours of the hill rather than fly over it. The sites exposure is extreme and it is likely to be colder than those areas nearby which are more sheltered.

Based on habitat type, connectivity and exposure bats which may be found foraging over the woodland adjacent to the site are likely limited to Common Pipistrelle *(Pipistrellus pipistrellus)*. Whiskered *(Myotis mystacinus)* and Brandt's *(Myotis brandtii)* may be found locally but habitat and connectivity with the site for these species is very poor. Noctule *(Nyctalus noctula)* may forage over open ground but the quality of habitat is also considered poor for this species.

Natural England guidelines TIN051 indicate that Myotis Species bats are generally at a low risk from turbines. Common Pipistrelle are at a medium risk from turbines. These differences are due to their respective flight profiles and foraging behaviour. Noctule, **which have not expected to occur over the site** but may occur in the local area, are considered to be at a high risk from

turbines.

The proposed turbine itself is not considered likely to directly intersect the flight path of any bats using the potential commuting lines identified at or near the site. A recent publication by Phil Richardson in the IEEM journal "In Practice" questions the validity of the assumption that bats always follow linear landscape features. Radio tracking evidence indicates that bats will commute over open ground for large distances and it is perhaps the insect/ food assemblage associated with features rather than their being a navigational aid which attracts bats.

This site is very exposed and there is very poor vegetation diversity near to the site. There is therefore unlikely to be significant use of the local landscape adjacent to the turbine for foraging bats as it is unlikely to support high numbers of invertebrate prey species.

Research into the short and medium term impacts on bats from wind turbines is still ongoing. There are currently no quantifiable methods for impact assessment. Based on the qualitative assessment of the experienced bat consultant dealing with this site we would consider the short to medium term impacts to be low. The development site does not appear to form the key commuting route or add to the high quality foraging areas in the locality.



Key

- Site Boundary
- High Quality Habitat
- Medium Quality Habitat
- Low Quality Habitat
- High Quality Corridor
- Medium Quality Corridor
- Low Quality Corridor

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Figure 3

Results* of Bat Habitat Survey

SCALE: NTS | REV 01

*Habitats outside the site boundary are indicative only
and have been mapped from within the site boundary or from publicly accessible land

Natural England guidelines TIN051 indicate the long term impacts on bat populations based on the species likely to be found at the site can be summarises thus

Bat species	Relative population size and status	Risk of collision	Population Threat
Common Pipistrelle	Common	Medium	Low
Myotis species	Common	Low	Low

Mitigation to ensure the semi-improved grassland forming the site is kept low to promote a short sward will minimise future potential impacts on bat species.

4.3 Badger

There are no records of badger within 1km of the site. A detailed inspection of all suitable habitat at the site and to a distance of at least 30m from the site boundaries, where this was possible, revealed no active badger setts. No habitual runs, hair or scratch posts were found on or near suitable features on the site.

A search for snuffle holes (badger feeding signs) was made across the entire site. No indication of badger feeding was found.

Whilst badgers are believed to occur within 2km of the site, it is reasonable to assume that they do not have an active sett within 30m of the site boundary.

The proposed development will not impact on any existing badger runs or setts. The porosity of the surrounding fields to the passage of badgers will not be affected.

4.4 Birds

Few potential nest sites were located on the site. A risk assessment of the site in respect of its future potential for and value to nesting birds could be adequately made.

There are no habitats present on the site which offer nesting potential and are not well represented elsewhere in the locality. The impact on nesting birds is therefore considered likely to be minor.

The site is unlikely to support populations of notable ground nesting birds due to habitat fragmentation and disturbance.

Species such as Lapwing *(Vanellus vanellus)* and Oystercatcher *(Haematopus ostralegus)* are known to nest and were recorded locally during the site survey. These species could nest in the open quarry adjacent to the site. The high level of disturbance associated with existing use of the farmhouse is however likely to result in the development sites potential for use by these species being negligible. The development site is also isolated from suitable nesting habitat for these species by recently reseeded improved pasture which is mown for silage.

The proposed turbine does not intersect with natural flight corridors, the turbine being immediately adjacent to the farm buildings.

There was no indication of use of the farm buildings by Barn Owls. The habitat at the site is considered to be moderate for this species. No impacts are predicted on this species, it is considered likely to be absent from the farmstead adjacent to the development site.

No indications of extensive use of the barn on site by Swallow *(Hirundo rustica)*, also an indicator of high invertebrate numbers which would be attractive to bats, was found. This species would be more likely to interact with the a turbine in close proximity to the farm buildings than other species.

It is not considered that sensitive bird species are likely to significantly interact with a turbine in its current location.

A response to the consultation request to Barnsley Bird club was not received.

4.5 Invertebrates

A survey for invertebrates including, but not limited to solitary and mining bees and wasps and certain butterflies was triggered as a result of this site lying in proximity to semi-natural vegetation. The method of survey for these species was to assess the habitat type affected by development and therefore its likely importance at the local level to any of these species.

The semi-improved and improved pasture which forms the development site and that immediately adjacent provides little if any habitat of value to invertebrates.

The significance of the site to invertebrates is likely to be limited to the local context although the habitat on site will support invertebrate species.

The turbine base will require minimal loss of habitat. Impacts are considered to be negligible.

4.6 Plants

Details of the plant species found on site are included in the target notes. Only common plant species were located. The species found within the site are related to agricultural improvement and or are not locally scarce. **No invasive or Schedule 9 weed/ plant species were identified on the site.**

The loss of a small area of semi-improved grassland does not require mitigation and will have negligible impact on the ecology of the local area.

5.0 Conclusion

No conclusive signs of protected or otherwise important species were recorded on the site and or are reasonably expected to be significantly affected by the proposed installation of a turbine.

Bats are likely to use the surrounding landscape for foraging in very low numbers. Bat species are considered unlikely to interact with the turbine in the proposed location. The development area is not considered to offer locally significant bat foraging opportunities.

No indications of current use of the site by badgers could be found. The species is however known to occur in the local area.

We consider the site has limited potential for use by nesting and foraging birds. The proximity of the turbine to the farm buildings significantly reduces potential impacts risks.

We judge the ecological significance of the vegetation at the site to be low in respect of its vegetative composition and importance to invertebrates.

Overall, it is considered there are likely to be no significant ecological constraints to development of the site.

I certify this report has been compiled in accordance with the code of professional conduct for the Institute of Ecology and Environmental Management and The Royal Institute of Chartered Surveyors and reflects my objective opinion of the facts found in relation to the instruction received and information available based upon the methodology, assumptions and constraints detailed within this report.

Signed



Andrew Gardner BSc (Hons), MSc, MIEEM, MRICS, CEnv, Dip NDEA
Director Envirotech NW Ltd
Wednesday, 28 March 2012

6.0 **Appendix 1**

Grid Ref	Location Name	Date	Location	Group	Scientific Name	Common Name
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Alauda arvensis	Skylark
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Alauda arvensis	Skylark
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Alauda arvensis	Skylark
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Anas platyrhynchos	Mallard
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Anas platyrhynchos	Mallard
SE193044		03/12/2000	Thurlstone Moors north of Peak Park Boundary to Thurlstonbe,Crow Head and Hepworth	bird	Anthus pratensis	Meadow Pipit
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Anthus pratensis	Meadow Pipit
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Anthus pratensis	Meadow Pipit
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Anthus pratensis	Meadow Pipit
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Anthus pratensis	Meadow Pipit
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Anthus pratensis	Meadow Pipit
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Athene noctua	Little Owl
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Carduelis cannabina	Linnet
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Carduelis cannabina	Linnet
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Carduelis cannabina	Linnet
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Carduelis cannabina	Linnet
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Carduelis cannabina	Linnet
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Carduelis cannabina	Linnet
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Carduelis cannabina	Linnet
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Carduelis carduelis	Goldfinch
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Carduelis carduelis	Goldfinch
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Carduelis carduelis	Goldfinch
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Carduelis carduelis	Goldfinch
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Carduelis carduelis	Goldfinch
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Carduelis chloris	Greenfinch
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Carduelis flammea	Redpoll
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Columba livia feral	Feral Pigeon
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Columba oenas	Stock Dove
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Columba oenas	Stock Dove
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Columba oenas	Stock Dove
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Columba palumbus	Woodpigeon
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Columba palumbus	Woodpigeon
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Columba palumbus	Woodpigeon
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Columba palumbus	Woodpigeon

SE202039		03/12/2000	Thurlstone Moors north of Peak Park Boundary to Thurlstonbe,Crow Head and Hepworth	bird	Corvus corax	Raven
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Corvus corone subsp. corone	Carrion Crow
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Corvus corone subsp. corone	Carrion Crow
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Corvus corone subsp. corone	Carrion Crow
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Corvus corone subsp. corone	Carrion Crow
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Corvus corone subsp. corone	Carrion Crow
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Corvus corone subsp. corone	Carrion Crow
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Corvus corone subsp. corone	Carrion Crow
SE2003	SE20B-2	13/06/2009	'BARNSLEY MBC'	bird	Corvus frugilegus	Rook
SE2003	SE20B-3	01/04/2010	'BARNSLEY MBC'	bird	Corvus frugilegus	Rook
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Corvus monedula	Jackdaw
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Corvus monedula	Jackdaw
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Corvus monedula	Jackdaw
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Corvus monedula	Jackdaw
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Corvus monedula	Jackdaw
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Emberiza citrinella	Yellowhammer
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Emberiza citrinella	Yellowhammer
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Emberiza citrinella	Yellowhammer
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Emberiza citrinella	Yellowhammer
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Emberiza citrinella	Yellowhammer
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Emberiza citrinella	Yellowhammer
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Emberiza citrinella	Yellowhammer
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Emberiza schoeniclus	Reed Bunting
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Emberiza schoeniclus	Reed Bunting
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Emberiza schoeniclus	Reed Bunting
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Emberiza schoeniclus	Reed Bunting
SE197042		03/12/2000	Thurlstone Moors north of Peak Park Boundary to Thurlstonbe,Crow Head and Hepworth	bird	Erithacus rubecula	Robin
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Erithacus rubecula	Robin

SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Erithacus rubecula	Robin
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Erithacus rubecula	Robin
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Erithacus rubecula	Robin
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Erithacus rubecula	Robin
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Falco tinnunculus	Kestrel
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Falco tinnunculus	Kestrel
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Fringilla coelebs	Chaffinch
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Fringilla coelebs	Chaffinch
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Fringilla coelebs	Chaffinch
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Fringilla coelebs	Chaffinch
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Fringilla coelebs	Chaffinch
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Fringilla coelebs	Chaffinch
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Fringilla coelebs	Chaffinch
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Gallinula chloropus	Moorhen
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Gallinula chloropus	Moorhen
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Gallinula chloropus	Moorhen
SE2004	SE20C-1	07/05/2009	'BARNSLEY MBC'	bird	Haematopus ostralegus	Oystercatcher
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Haematopus ostralegus	Oystercatcher
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Hirundo rustica	Swallow
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Hirundo rustica	Swallow
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Motacilla alba subsp. yarrellii	Pied Wagtail
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Motacilla alba subsp. yarrellii	Pied Wagtail
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Motacilla alba subsp. yarrellii	Pied Wagtail
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Motacilla alba subsp. yarrellii	Pied Wagtail
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Motacilla alba subsp. yarrellii	Pied Wagtail
SE195047	east end	10/01/2012	Whitley Edge LWS	bird	Motacilla alba subsp. yarrellii	Pied Wagtail
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Numenius arquata	Curlew
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Numenius arquata	Curlew
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Numenius arquata	Curlew
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Numenius arquata	Curlew
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Numenius arquata	Curlew
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Numenius arquata	Curlew

SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Numenius arquata	Curlew
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Numenius arquata	Curlew
SE205038		03/12/2000	Thurlstone Moors north of Peak Park Boundary to Thurlstonbe,Crow Head and Hepworth	bird	Parus caeruleus	Blue Tit
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Parus major	Great Tit
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Passer domesticus	House Sparrow
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Passer domesticus	House Sparrow
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Passer domesticus	House Sparrow
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Passer domesticus	House Sparrow
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Perdix perdix	Grey Partridge
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Perdix perdix	Grey Partridge
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Perdix perdix	Grey Partridge
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Phasianus colchicus	Pheasant
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Phasianus colchicus	Pheasant
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Phasianus colchicus	Pheasant
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Phasianus colchicus	Pheasant
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Phasianus colchicus	Pheasant
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Phasianus colchicus	Pheasant
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Phasianus colchicus	Pheasant
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Phylloscopus collybita	Chiffchaff
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Phylloscopus trochilus	Willow Warbler
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Pica pica	Magpie
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Pica pica	Magpie
SE2003	SE20B-2	03/05/2009	'BARNSLEY MBC'	bird	Pica pica	Magpie
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Prunella modularis	Dunnock
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Regulus regulus	Goldcrest
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Sturnus vulgaris	Starling
SE2003	SE20B-1	03/06/2008	'BARNSLEY MBC'	bird	Sylvia borin	Garden Warbler
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Troglodytes troglodytes	Wren
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Troglodytes troglodytes	Wren

SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Troglodytes troglodytes	Wren
SE197042		03/12/2000	Thurlstone Moors north of Peak Park Boundary to Thurlstonbe,Crow Head and Hepworth	bird	Turdus merula	Blackbird
SE205038		03/12/2000	Thurlstone Moors north of Peak Park Boundary to Thurlstonbe,Crow Head and Hepworth	bird	Turdus merula	Blackbird
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Turdus merula	Blackbird
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Turdus viscivorus	Mistle Thrush
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Turdus viscivorus	Mistle Thrush
SE1903	SE10W-4	11/05/2008	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE1903	SE10W-4	31/05/2008	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE1904	SE10X-3	20/04/2009	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE2004	SE20C-1	23/04/2009	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE2003	SE20B-2	03/05/2009	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE1904	SE10X-3	10/05/2009	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE2004	SE20C-1	17/05/2009	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE1904	SE10X-3	14/06/2009	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE2004	SE20C-1	20/06/2009	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE1904	SE10X-4	12/05/2011	'BARNSLEY MBC'	bird	Vanellus vanellus	Lapwing
SE195046	TN13	01/09/2010	Whitley Edge LWS	conifer	Picea sitchensis	Sitka Spruce
SE195046	TN13	01/09/2010	Whitley Edge LWS	fern	Blechnum spicant	Hard Fern
SE1903	Western Moors	25/02/2006	Western Moors LWS	fern	Oreopteris limbosperma	Lemon-Scented Fern
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Achillea ptarmica	Sneezewort
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Agrostis canina	Velvet Bent
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Agrostis capillaris	Common Bent
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Agrostis capillaris	Common Bent

SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Agrostis capillaris	Common Bent
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Agrostis capillaris	Common Bent
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Agrostis stolonifera	Creeping Bent
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Callitriche stagnalis	Common Water-Starwort
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Cirsium palustre	Marsh Thistle
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Cirsium vulgare	Spear Thistle
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Crataegus monogyna	Hawthorn
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Dactylis glomerata	Cock's-Foot
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Danthonia decumbens	Heath-Grass
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Deschampsia caespitosa	Tufted Hair-Grass
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Deschampsia caespitosa	Tufted Hair-Grass
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Deschampsia flexuosa	Wavy Hair-Grass
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Deschampsia flexuosa	Wavy Hair-Grass
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Digitalis purpurea	Foxglove
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Digitalis purpurea	Foxglove
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Epilobium ciliatum	American Willowherb
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Fagus sylvatica	Beech
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Festuca ovina agg.	Sheep's Fescue agg.

SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Fraxinus excelsior	Ash
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Galium palustre	Common Marsh-Bedstraw
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Galium saxatile	Heath Bedstraw
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Galium saxatile	Heath Bedstraw
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Holcus lanatus	Yorkshire-Fog
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Holcus mollis	Creeping Soft-Grass
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Hydrocotyle vulgaris	Marsh Pennywort
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Hypochaeris radicata	Cat's-Ear
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Hypochaeris radicata	Cat's-Ear
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Juncus acutiflorus	Sharp-Flowered Rush
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Juncus articulatus	Jointed Rush
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Juncus conglomeratus	Compact Rush
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Juncus conglomeratus	Compact Rush
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Juncus conglomeratus	Compact Rush
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Juncus effusus	Soft Rush
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Juncus effusus	Soft Rush
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Juncus effusus	Soft Rush
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Juncus squarrosus	Heath Rush

SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Juncus squarrosus	Heath Rush
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Leontodon autumnalis	Autumnal Hawkbit
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Lotus corniculatus	Common Bird's-Foot-Trefoil
SE194035	dunford	14/06/1984	Dunford Bridge	flowering plant	Lychnis flos-cuculi	Ragged Robin
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Molinia caerulea	Purple Moor-Grass
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Montia fontana	Blinks
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Nardus stricta	Mat-Grass
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Nardus stricta	Mat-Grass
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Plantago lanceolata	Ribwort Plantain
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Plantago lanceolata	Ribwort Plantain
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Poa annua	Annual Meadow-Grass
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Poa pratensis	Smooth Meadow-Grass
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Potentilla erecta	Tormentil
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Potentilla erecta	Tormentil
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Ranunculus acris	Meadow Buttercup
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Ranunculus flammula	Lesser Spearwort
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Ranunculus flammula	Lesser Spearwort
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Ranunculus omiophyllus	Round-Leaved Crowfoot

SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Ranunculus repens	Creeping Buttercup
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Rubus fruticosus agg.	Bramble
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Rumex acetosa	Common Sorrel
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Rumex acetosa	Common Sorrel
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Rumex acetosella	Sheep's Sorrel agg.
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Rumex obtusifolius	Broad-Leaved Dock
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Salix	Sallow
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Salix cinerea	Grey Willow
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Salix fragilis	Crack Willow
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Senecio sylvaticus	Heath Groundsel
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Solidago virgaurea	Goldenrod
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Stellaria media	Common Chickweed
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Trifolium repens	White Clover
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Trifolium repens	White Clover
SE192048	TN6	01/09/2010	Whitley Edge LWS	flowering plant	Ulex gallii	Western Gorse
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Ulex gallii	Western Gorse
SE189047	TN7	01/09/2010	Whitley Edge LWS	flowering plant	Urtica dioica	Common Nettle
SE1903	Western Moors	25/02/2006	Western Moors LWS	flowering plant	Vaccinium myrtillus	Bilberry

SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Vaccinium myrtillus	Bilberry
SE195046	TN13	01/09/2010	Whitley Edge LWS	flowering plant	Viola palustris	Marsh Violet
SE192048	TN6	01/09/2010	Whitley Edge LWS	fungus	Cladonia	Cladonia
SE195046	TN13	01/09/2010	Whitley Edge LWS	moss	Pseudoscleropodium purum	Pseudoscleropodium purum
SE196050	Whitley Common, Barnsley MDC	25/08/1982		terrestrial mammal	Clethrionomys glareolus	Bank Vole
SE200036	Hazlehead	17/10/1982	'BARNSLEY MBC'	terrestrial mammal	Erinaceus europaeus	Hedgehog
SE200036	Hazlehead	02/07/1983	'BARNSLEY MBC'	terrestrial mammal	Erinaceus europaeus	Hedgehog
SE204039		02/03/1982	Ingbirchworth	terrestrial mammal	Lepus europaeus	Brown Hare
SE203047		17/04/1982	Whitley Common	terrestrial mammal	Lepus europaeus	Brown Hare
SE194050		04/05/1982	Whitley Common	terrestrial mammal	Lepus europaeus	Brown Hare
SE196050		30/07/1982	Whitley Common	terrestrial mammal	Lepus europaeus	Brown Hare
SE196050		05/08/1982	Whitley Common	terrestrial mammal	Lepus europaeus	Brown Hare
SE194050		06/08/1982	Whitley Common	terrestrial mammal	Lepus europaeus	Brown Hare
SE195047	east end	10/01/2012	Whitley Edge LWS	terrestrial mammal	Lepus europaeus	Brown Hare
SE192037	Hazelhead	11/01/1986	'BARNSLEY MBC'	terrestrial mammal	Talpa europaea	Mole
SE195047	east end	10/01/2012	Whitley Edge LWS	terrestrial mammal	Talpa europaea	Mole

PLANNING DESIGN ENVIRONMENT



7. Small Shaw and High Bank

NHS Assessment and Phase 1 Survey

Prepared by
TEP

for

Barnsley Metropolitan Borough Council

January 2011

(Report Ref 2481.52)

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Site Name:	Small Shaw and High Bank
Site Area:	19.29ha
Survey Date:	October 2010
Nearest Settlement:	Millhouse Green
Grid Reference at Centre:	421263, 404053
Surveyor(s)	PG, VG

Site Description:

This is a series of three slightly separated sites, all on the steep south-westerly slope that is a south-eastern continuation of Whitley Edge. The smallest and eastern-most site, High Bank (TN8), is just north of the small settlement of Millhouse Green, which lies just to the west of Penistone. In the middle, Royd Moor lies between High Bank Lane and Royd Lane, just to the north-west of High Bank. The largest of the three areas, Small Shaw bank is further north-west along the scarp, just below Whitley Road.

Like the site at Whitley the ground conditions here are strongly acidic. High Bank consists of a single grazed slope (TN8) with the western gorse (*Ulex gallii*) and dwarf heath element severely under pressure from the grazing cattle and the surrounding grassland becoming less acidic in character.

The section of bank at Royd Moor is much more varied. TN9 supports a mosaic of dwarf shrub heath with unimproved acid grassland and bracken patches. Further northwest, TN10 is more uniformly clad in heath, with increasing acid grassland and some birch regeneration northwest of that. TN11 records a formerly acidic area that is undergoing intense improvement and at the time of the fieldwork was mainly bare imported soil with growth of ruderal herbs typical of disturbed agricultural land. At the base of the slope is the species-poor semi-improved grassland of TN12.

Small Shaw Bank, in the west, is the largest of the three sections of the site. Much of the slope is dominated by western gorse dwarf shrub heath, with scattered tree regeneration (TN14, TN17). The east end of this part of the site is much more diverse, with a small waterbody (TN6), swamp (TN16), heath/acid grassland mosaic (TN1, TN14), broadleaved plantation (TN7) and coniferous plantation (TN5) as well as areas of heath and broad swathes of bracken. At the bottom of the slope, Small Shaw Dike flows to the south-east, into the small waterbody at TN6. The watercourse has some scattered tree growth along its banks and flatter areas of the valley bottom have some areas of neutral grassland.

Important Species:

Several nationally important bird species have been recorded in the area including lapwing (*Vanellus vanellus* UKBAP, LBAP, Red List), linnet (*Carduelis cannabina* UKBAP, Red List), meadow pipit (*Anthus pratensis* Amber List), oystercatcher (*Haematopus ostralegus* Amber List), skylark (*Alauda arvensis* UKBAP, Red List), tree sparrow (*Passer montanus* UKBAP, LBAP, Red List), grey partridge (*Perdix perdix* UKBAP, LBAP, Red List) and the yellowhammer (*Emberiza citrinella* UKBAP, Red List).

Target Note:	TN1
Habitat:	Dry heath/acid grassland mosaic

Species List:

Scientific Name	Common Name	Frequency
Erica cinerea	Bell Heather	A
Ulex gallii	Western Gorse	A
Agrostis capillaris	Common Bent	F
Deschampsia flexuosa	Wavy Hair-grass	F
Digitalis purpurea	Foxglove	F
Holcus mollis	Creeping Soft-grass	F
Deschampsia cespitosa	Tufted Hair-grass	O
Galium saxatile	Heath Bedstraw	O
Pteridium aquilinum	Bracken	O
Rubus fruticosus agg.	Bramble	O
Senecio sylvaticus	Heath Groundsel	O
Potentilla erecta	Tormentil	R

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

Target Note:	TN2
Habitat:	Continuous bracken, southern edge of extensive slope

Species List:

Scientific Name	Common Name	Frequency
Agrostis capillaris	Common Bent	F
Chamerion angustifolium	Rosebay Willowherb	F
Dactylis glomerata	Cock's-foot	F
Holcus lanatus	Yorkshire-fog	F
Poa annua	Annual Meadow-grass	F
Pteridium aquilinum	Bracken	F
Rubus fruticosus agg.	Bramble	F
Digitalis purpurea	Foxglove	O
Holcus mollis	Creeping Soft-grass	O
Ulex gallii	Western Gorse	O
Vaccinium myrtillus	Bilberry	O

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

Target Note:	TN3
Habitat:	Dry heath/acid grassland mosaic

Species List:

Scientific Name	Common Name	Frequency
Agrostis capillaris	Common Bent	A
Holcus mollis	Creeping Soft-grass	A
Deschampsia flexuosa	Wavy Hair-grass	F
Nardus stricta	Mat-grass	F
Erica cinerea	Bell Heather	O
Galium saxatile	Heath Bedstraw	O
Moss sp.	Moss species	O
Polytrichum sp.	Moss species	O
Pteridium aquilinum	Bracken	O
Teucrium scorodonium	Woodsage	O
Vaccinium myrtillus	Bilberry	O
Potentilla erecta	Tormentil	R
Ribes uva-crispa	Gooseberry	R
Rumex acetosa	Common Sorrel	R
Ulex gallii	Western Gorse	R

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

Target Note:	TN4
Habitat:	Tall ruderal herb

Species List:

Scientific Name	Common Name	Frequency
Urtica dioica	Nettle	D
Arrhenatherum elatius	False Oat-grass	A
Chamerion angustifolium	Rosebay Willowherb	F
Cirsium arvense	Creeping Thistle	F
Holcus mollis	Creeping Soft-grass	F
Senecio sylvaticus	Heath Groundsel	F
Agrostis stolonifera	Creeping Bent	O
Dactylis glomerata	Cock's-foot	O
Galeopsis tetrahit	Common Hemp-nettle	O

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

Target Note:	TN5
Habitat:	Coniferous plantation

Species List:

Scientific Name	Common Name	Frequency
Pinus sylvestris	Scots Pine	D
Rubus fruticosus agg.	Bramble	F
Ilex aquifolium	Holly	O
Prunus avium	Wild Cherry	O
Quercus robur	English Oak	R

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

Target Note:	TN6
Habitat:	Pond, swamp/tall ruderal herb

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	F
Lemna minor	Common Duckweed	F
Cirsium palustre	Marsh Thistle	O
Eleocharis palustris	Common Spike-rush	O
Filipendula ulmaria	Meadowsweet	O
Potamogeton natans	Broad-leaved Pondweed	O
Sparganium erectum	Branched Bur-reed	O

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

Target Note:	TN7
Habitat:	Broadleaved plantation

Species List:

Scientific Name	Common Name	Frequency
Populus tremula	Aspen	A
Alnus glutinosa	Alder	F
Salix viminalis	Osier	F
Fraxinus excelsior	Ash	O
Salix caprea	Goat Willow	O
Salix hybrid	Willow hybrid	O

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

Target Note:	TN8
Habitat:	Dry heath/acid grassland mosaic
Species List:	
No species list compiled for this target note area	

Target Note:	TN9
Habitat:	Dry heath, dry heath/acid grassland mosaic, continuous bracken

Species List:

Scientific Name	Common Name	Frequency
Ulex gallii	Western Gorse	A
Deschampsia flexuosa	Wavy Hair-grass	F
Erica cinerea	Bell Heather	F
Pteridium aquilinum	Bracken	F
Agrostis capillaris	Common Bent	O
Chamerion angustifolium	Rosebay Willowherb	O
Dicranum scoparium	Moss species	O
Digitalis purpurea	Foxglove	O
Festuca ovina	Sheep's Fescue	O
Galium saxatile	Heath Bedstraw	O
Holcus lanatus	Yorkshire-fog	O
Nardus stricta	Mat-grass	O
Rubus fruticosus agg.	Bramble	O
Teucrium scorodonium	Woodsage	O
Vaccinium myrtillus	Bilberry	O
Arrhenatherum elatius	False Oat-grass	R
Campylopus introflexus	Moss species	R
Cladonia sp.	Cladonia species	R
Crataegus monogyna	Hawthorn	R
Dactylis glomerata	Cock's-foot	R
Dryopteris dilatata	Broad Buckler-fern	R
Pilosella officinarum	Mouse-ear Hawkweed	R
Plantago lanceolata	Ribwort Plantain	R
Polytrichum juniperinum	Moss species	R
Rubus idaeus	Raspberry	R
Sorbus aria	Whitebeam	R

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

Target Note:	TN10
Habitat:	Acid dry dwarf shrub heath

Species List:

Scientific Name	Common Name	Frequency
Ulex gallii	Western Gorse	D
Agrostis capillaris	Common Bent	F
Deschampsia flexuosa	Wavy Hair-grass	F
Nardus stricta	Mat-grass	F
Betula pendula	Silver Birch	O
Chamerion angustifolium	Rosebay Willowherb	O
Festuca ovina	Sheep's Fescue	O
Galium saxatile	Heath Bedstraw	O
Holcus lanatus	Yorkshire-fog	O
Vaccinium myrtillus	Bilberry	O
Deschampsia cespitosa	Tufted Hair-grass	R
Digitalis purpurea	Foxglove	R
Senecio sylvaticus	Heath Groundsel	R

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

Target Note:	TN11
Habitat:	Bare ground, ephemeral/short perennials

Species List:

Scientific Name	Common Name	Frequency
Persicaria maculosa	Redshank	F
Rumex obtusifolius	Broad-leaved Dock	F
Stellaria media	Chickweed	F
Urtica dioica	Nettle	F
Atriplex patula	Common Orache	O
Lolium perenne	Ryegrass	O
Senecio vulgaris	Groundsel	O
Sisymbrium officinale	Hedge Mustard	O

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

Target Note:	TN12
Habitat:	Species-poor semi-improved grassland

Species List:

Scientific Name	Common Name	Frequency
Agrostis capillaris	Common Bent	F
Festuca rubra	Red Fescue	F
Holcus lanatus	Yorkshire-fog	F
Ranunculus repens	Creeping Buttercup	F
Arrhenatherum elatius	False Oat-grass	O
Dactylis glomerata	Cock's-foot	O
Leontodon autumnalis	Autumn Hawkbit	O
Plantago lanceolata	Ribwort Plantain	O
Trifolium pratense	Red Clover	O
Trifolium repens	White Clover	O
Digitalis purpurea	Foxglove	R
Lemna minor	Common Duckweed	R
Rubus fruticosus agg.	Bramble	R
Rumex obtusifolius	Broad-leaved Dock	R
Spergula arvensis	Corn Spurrey	R
Taraxacum sp.	Dandelion species	R
Teucrium scorodonium	Woodsage	R
Ulex gallii	Western Gorse	R

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

Target Note:	TN13
Habitat:	Tall ruderal herb, nettle dominated

Species List:

No species list compiled for this target note area

Target Note:	TN14
Habitat:	Acid dry dwarf shrub heath, scattered scrub

Species List:

Scientific Name	Common Name	Frequency
Holcus lanatus	Yorkshire-fog	A
Rubus fruticosus agg.	Bramble	A
Vaccinium myrtillus	Bilberry	A
Chamerion angustifolium	Rosebay Willowherb	F
Ranunculus repens	Creeping Buttercup	F
Agrostis capillaris	Common Bent	O
Deschampsia cespitosa	Tufted Hair-grass	O
Deschampsia flexuosa	Wavy Hair-grass	O
Dicranum scoparium	Moss species	O
Digitalis purpurea	Foxglove	O
Dryopteris dilatata	Broad Buckler-fern	O
Juncus effusus	Soft Rush	O
Potentilla erecta	Tormentil	O
Rhytidiadelphus squarrosus	Moss species	O
Athyrium filix-femina	Lady-fern	R
Dryopteris filix-mas	Male-fern	R
Epilobium sp.	Willowherb species	R
Nardus stricta	Mat-grass	R
Rumex acetosa	Common Sorrel	R
Teucrium scorodonium	Woodsage	R
Valeriana officinalis	Valerian	R

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

Target Note:	TN15
Habitat:	Dry heath/acid grassland mosaic, bracken patches

Species List:

No species list compiled for this target note area

Target Note:	TN16
Habitat:	Swamp

Species List:

Scientific Name	Common Name	Frequency
Epilobium hirsutum	Great Willowherb	D
Holcus lanatus	Yorkshire-fog	A
Ranunculus repens	Creeping Buttercup	A
Urtica dioica	Nettle	F
Athyrium filix-femina	Lady-fern	O
Deschampsia cespitosa	Tufted Hair-grass	O
Equisetum sylvaticum	**Wood Horsetail**	**O**
Filipendula ulmaria	Meadowsweet	O
Galium palustre	Marsh Bedstraw	O
Juncus conglomeratus	Compact Rush	O
Valeriana officinalis	Valerian	O
Cirsium arvense	Creeping Thistle	R
Rumex obtusifolius	Broad-leaved Dock	R

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

Target Note:	TN17
Habitat:	Acid dry dwarf shrub heath, scattered trees

Species List:

Scientific Name	Common Name	Frequency
Ulex gallii	Western Gorse	D
Deschampsia flexuosa	Wavy Hair-grass	A
Galium saxatile	Heath Bedstraw	F
Holcus lanatus	Yorkshire-fog	F
Chamerion angustifolium	Rosebay Willowherb	O
Deschampsia cespitosa	Tufted Hair-grass	O
Digitalis purpurea	Foxglove	O
Dryopteris dilatata	Broad Buckler-fern	O
Ilex aquifolium	Holly	O
Nardus stricta	Mat-grass	O
Pteridium aquilinum	Bracken	O
Rubus fruticosus agg.	Bramble	O
Vaccinium myrtillus	Bilberry	O
Cirsium palustre	Marsh Thistle	R
Galeopsis tetrahit	Common Hemp-nettle	R
Rubus idaeus	Raspberry	R
Teucrium scorodonium	Woodsage	R

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

Management Issues:

No parts of this site are managed for nature conservation, where there is some management it is generally at the expense of the ecological value of the site. For example the cattle grazing of High Bank (TN8), with improvement of the acid sward, will eventually be destructive of the western gorse dominated dry heath/acid grassland. Also the improvement of the former acid grassland on Royd Moor bank (TN11) will diminish the extent of semi-natural acid habitats within the site. But in each case this management is being done for agricultural reasons. In the west, the broad flush of nettle dominated vegetation through the acid slope of TN17 has arisen through tipping and pollution caused by throwing rubbish down the slope from redevelopment at Eagle Nest. Further west in TN17 the currently sparse regeneration of trees is an indication that all of the heathland element of the site could eventually be lost to woodland succession without some management intervention.

Diversity:

A total of 74 species of vascular plants was recorded across all three sections of this site during October 2010 fieldwork. Considering that, the habitats are mainly strongly acidic so the species recorded are an indication of quite high diversity across this site.

Naturalness:

The southwest facing steep scarp face, along which the three sections of site are spread, is exposed and strongly acidic. The suite of plant communities and the species of which they are composed are entirely natural for such a hillside, once it was cleared of its original native woodland cover, many centuries ago.

Rare or Exceptional Features:

The most notable feature is the large population of western gorse, which is the most characteristic species for this site. However the range of heath and acid grassland species recorded here is a diverse feature of the site also.

Fragility:

As discussed under management considerations, these acid swards are vulnerable to damage and/or loss through improvement for agricultural reasons, as well as the steep slopes simply being used as tipping grounds from the flatter land above. Otherwise these species are well adapted to the harsh site conditions here.

Typicalness:

The suite of acid grasslands and dwarf scrub heath types is entirely typical of the steeper parts of the acidic hill-farming country to the west of Penistone.

Recorded History & Cultural Associations:

There is some evidence of small-scale quarrying of the gritstone and the abundance of stone walls in the agricultural landscape all around the site bears witness to local quarrying.

The remains of the medieval Catshaw Cross lie less than 1km south of the site, to the west of Millhouse Green, but this is on the flatter farmed land, not on the steep ridge face.

Connectivity within the Landscape:

The surrounding landscape is predominantly agricultural, both of the flatter land north of the bank face and on the lower ground to the south. The whole landscape is open of aspect with few trees and practically no hedges. Dark gritstone walls are the characteristic element of the local agricultural landscape.

There is a windfarm with 13 large white wind turbines to the north of Small Shaw Bank, just across Whitley Road.

Value for appreciation of Nature and Learning:

There is a good range of acidic habitats and plant species on this site, public footpaths are few and not well defined, though part of the site is in an area designated as open access land. Due to its steepness and poor access, this site is most appropriate for individual appreciation of its distinctive wildlife assets. The public right of way through Small Shaw Bank, via Eagles Nest, is in a particularly poor condition though has good links to the Crow Edge and Sledbrook Hill areas to the south.

There is no on-site interpretation; there are various natural and management processes that could be observed here, but the steepness and general difficulty of access makes this site rather unsuitable for visiting school groups.

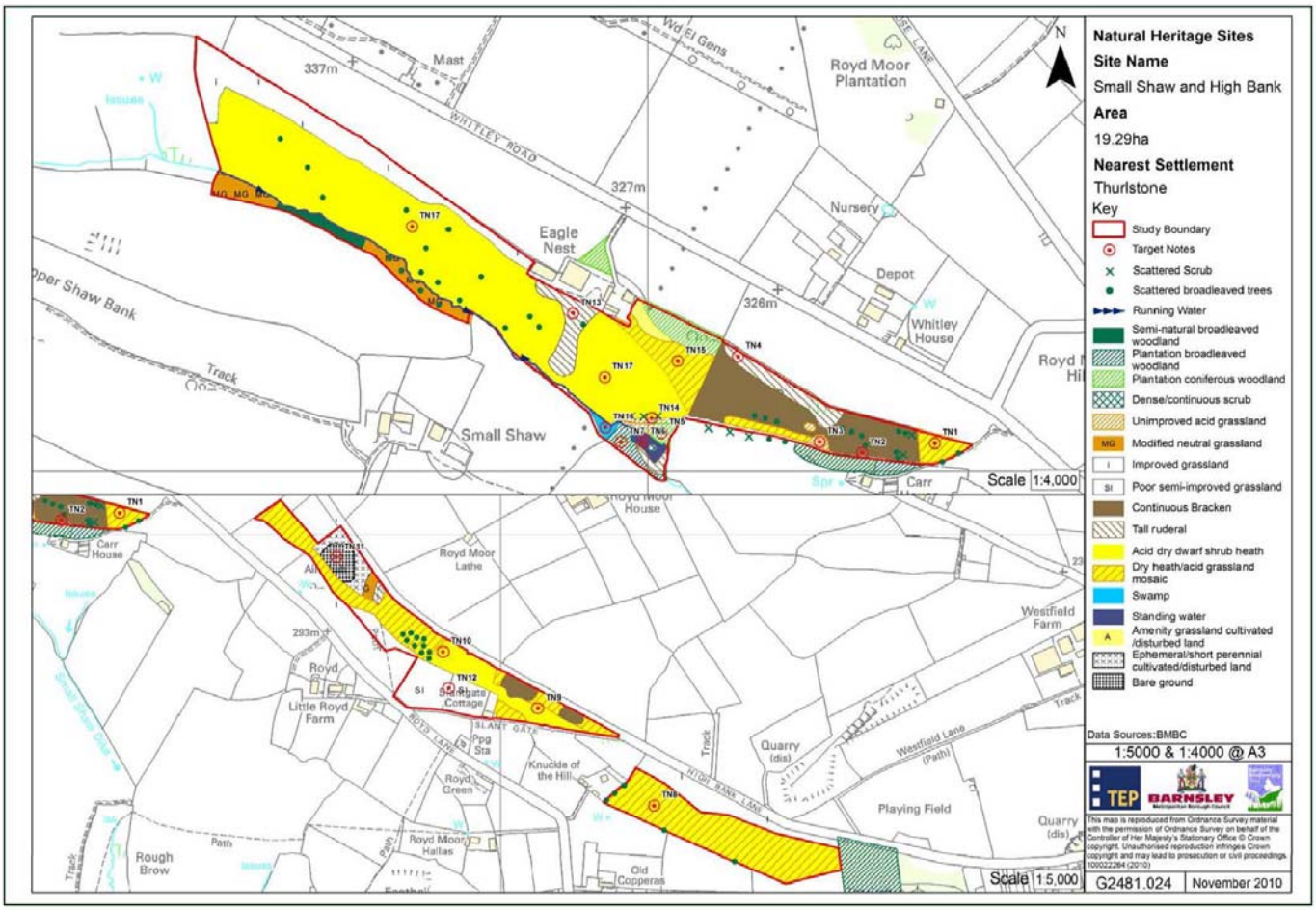
Recommendations:

This site is part of a heath/acid grassland corridor that stretches from Thurlstone through Crow Edge to Hade Edge at the western reaches of the upland heath areas of the Pennine Moors.

This site should be retained as a Natural Heritage Site, purely for its landscape connectivity function. The site is also important habitat a number of nationally important birds though.

Through dialogue with landowners it may be possible to 'fill in' the gaps in this corridor and create a true landscape scale natural corridor. The western limit of the site could be extended to take in the area of heath that reaches 200m+ beyond the existing site boundary.

Action: Retain as a Natural Heritage Site
Extend western boundary to encompass heath area
Explore the possibility of connecting the existing NHS along this corridor


Natural Heritage Sites
Site Name
Small Shaw and High Bank
Area
19.29ha
Nearest Settlement
Thurlstone
Key
Study Boundary
Target Notes
Scattered Scrub
Scattered broadleaved trees
Running Water
Semi-natural broadleaved woodland
Plantation broadleaved woodland
Plantation coniferous woodland
Dense/continuous scrub
Unimproved acid grassland
Modified neutral grassland
Improved grassland
Poor semi-improved grassland
Continuous Bracken
Tall ruderal
Acid dry dwarf shrub heath
Dry heath/acid grassland mosaic
Swamp
Standing water
Amenity grassland cultivated /disturbed land
Ephemeral/short perennial cultivated/disturbed land
Bare ground
Data Sources:BMBC
1:5000 & 1:4000 @ A3
Scale 1:4,000
Scale 1:5,000
G2481.024
November 2010
Small Shaw
Eagle Nest
Royd Moor Plantation
Whitley House
Royd Moor House
Royd Moor Lathe
Little Royd Farm
Rough Brow
Old Copperas
Westfield Farm
Playing Field
Quarry
Mast
337m
327m
326m
293m
Upper Shaw Bank
Track
Nursery
Depot
Carr
Carr House
Knuckle of the Hill
Royd Green
Royd Moor Hallas
Westfield Lane (Path)
WHITLEY ROAD
SLANT GATE
ROYD LANE

PLANNING DESIGN ENVIRONMENT



2. Whitley Edge

NHS Assessment and Phase 1 Survey

Prepared by
TEP

for

Barnsley Metropolitan Borough Council

January 2011

(Report Ref 2481.61)

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Site Name:	Whitley Edge
Site Area:	39.38ha
Survey Date:	September 2010
Nearest Settlement:	Crow Edge
Grid Reference at Centre:	418999, 404907
Surveyor(s)	PG

Site Description:

The site lies in a mainly agricultural area between Whitley Road and Whams Road; however, to the southwest, beyond Whams Road (A616) there is a large brick works and immediately to the south-east there is an active open-cast quarry. The site has limited connectivity to the surrounding area due the local landscape lacking a network of hedges and trees, although the local drainage systems does provide some links.

A large section in the east of the site is species-poor semi-improved grassland, where white clover (*Trifolium repens*) is abundant and ryegrass (*Lolium perenne*) and common bent (*Agrostis capillaris*) are frequent. On the steep well drained slopes, unimproved acid grassland dominated by mat grass (*Nardus stricta*) is prevalent. In some areas, the acid grassland is more species-rich, with autumn hawkbit (*Leontodon autumnalis*), common cat's-ear *(Hypochaeris radicata)* and creeping buttercup (*Ranunculus repens*) more common in the sward. Upper Whitley Edge is a narrow southwest facing strip of steep slope along the eastern edge of the site where much western gorse (*Ulex gallii*) heath grows in an acid grassland matrix.

On the flatter areas, mainly above the steep acid slopes down to Calf Hey Sike, there is marshy rush pasture dominated by soft rush (*Juncus effusus*). This extensive marshy area cuts through the acid grassland in the western valley bottom. A range of wetland species grows along Calf Hey Dike, which defines much of the western site border.

The part of the site extending west of Calf Hey Sike has similar steep acid slopes with semi-improved pasture on the flatter areas above. There are some bare shale areas and rock exposures on the steep slopes rising above the eastern bank of the sike, but generally these slopes support unimproved acid grassland.

In the southwest extremity there are two areas of open water surrounded by broadleaved plantation. In the southeast corner there is an extension of the site southwards into a partially quarried area, where there is a complex mosaic of acid and wet habitats, including western gorse heath, semi-improved acid grassland, marshy grassland, areas of swamp, rock exposures and a small area of broadleaved plantation. Western gorse and mat grass are each abundant in this area.

Important Species:

Twite (*Carduelis flavirostris* UKBAP and Red List) and kestrel (*Falco tinniculus* LBAP and Amber List) were seen using this site during the 2010 visits. Records

show the presence of several other nationally important species in the area including curlew (*Numenius arquata* UKBAP and Amber List), lapwing (*Vanellus vanellus* UKBAP, LBAP and Red List), meadow pipit (*Anthus pratensis* Amber List), oystercatcher (*Haematopus ostralegus* Amber List), skylark (*Alauda arvensis* UKBAP, LBAP and Red List) and snipe (*Gallinago gallinago* Amber List).

Target Note:	TN1
Habitat:	Semi-improved grassland with tall swathes of rush pasture

Species List:

This is a wide flattish area of pasture that appears to be in the process of being improved. Whilst much of it is a short and species-poor sward, currently grazed, there are also extensive areas of quite tall rush pasture, mainly in the northern half of the area. With a mix of species similar to that in TN2

No species list compiled for this area

Target Note:	TN2
Habitat:	Soft rush dominated marshy grassland (rush pasture) extending into semi-improved grassland

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	D
Deschampsia cespitosa	Tufted Hair-grass	A
Agrostis stolonifera	Creeping Bent	F
Juncus conglomeratus	Compact Rush	F
Agrostis capillaris	Common Bent	O
Cirsium palustre	Marsh Thistle	O

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

Target Note:	TN3
Habitat:	Unimproved acid grassland

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	D
Agrostis capillaris	Common Bent	F
Agrostis stolonifera	Creeping Bent	F
Deschampsia flexuosa	Wavy Hair-grass	O
Galium saxatile	Heath Bedstraw	O
Juncus conglomeratus	Compact Rush	O
Juncus squarrosus	Heath Rush	O
Polytrichum commune	Moss species	O
Polytrichum juniperinum	Moss species	O
Potentilla erecta	Tormentil	O
Trifolium repens	White Clover	O
Carex panicea	Carnation Sedge	R
Cladonia sp.	Cladonia species	R
Danthonia decumbens	Heath Grass	R
Deschampsia cespitosa	Tufted Hair-grass	R
Hypochaeris radicata	Common Cat's-ear	R
Leontodon autumnalis	Autumn Hawkbit	R
Molinia caerulea	Purple Moor-grass	R
Peltigera sp.	Dog-lichen species	R
Ranunculus repens	Creeping Buttercup	R

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

Target Note:	TN4
Habitat:	Soft rush-dominated rush pasture

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	D
Agrostis stolonifera	Creeping Bent	F
Deschampsia cespitosa	Tufted Hair-grass	F
Holcus lanatus	Yorkshire-fog	F
Juncus conglomeratus	Compact Rush	F
Agrostis capillaris	Common Bent	O
Cirsium palustre	Marsh Thistle	O
Festuca rubra	Red Fescue	O
Polytrichum commune	Moss species	O
Potentilla erecta	Tormentil	O
Alopecurus geniculatus	Marsh Foxtail	R
Callitriche stagnalis	Common Water Starwort	R
Cardamine pratensis	Cuckooflower	R
Eriophorum angustifolium	Common Cottongrass	R
Galium palustre	Marsh Bedstraw	R
Glyceria sp.	Sweet-grass species	R
Juncus articulatus	Jointed Rush	R
Juncus bufonius	Toad Rush	R
Juncus squarrosus	Heath Rush	R
Lotus pedunculatus	Marsh Bird's-foot Trefoil	R
Montia fontana	Blinks	R
Persicaria maculosa	Redshank	R
Ranunculus acris	Meadow Buttercup	R
Ranunculus flammula	Lesser Spearwort	R
Ranunculus hederaceus	Ivy-leaved Crowfoot	R

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

Target Note: TN5
Habitat: Semi-improved grassland

Species List:

Scientific Name	Common Name	Frequency
Trifolium repens	White Clover	A
Agrostis capillaris	Common Bent	F
Lolium perenne	Ryegrass	F
Cerastium fontanum	Common Mouse-ear	O
Hypochaeris radicata	Common Cat's-ear	O
Poa annua	Annual Meadow-grass	O
Cirsium arvense	Creeping Thistle	R
Deschampsia cespitosa	Tufted Hair-grass	R
Juncus conglomeratus	Compact Rush	R
Juncus effusus	Soft Rush	R
Leontodon autumnalis	Autumn Hawkbit	R
Plantago lanceolata	Ribwort Plantain	R
Trifolium pratense	Red Clover	R
Ulex gallii	Western Gorse	R

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

Target Note: TN6
Habitat: Acid dwarf shrub heath and heath/acid grassland mosaic

Species List:

Scientific Name	Common Name	Frequency
Ulex gallii	Western Gorse	D

Nardus stricta	Mat-grass	A
Agrostis capillaris	Common Bent	F
Cladonia sp.	Cladonia species	O
Galium saxatile	Heath Bedstraw	O
Juncus squarrosus	Heath Rush	O
Dactylis glomerata	Cock's-foot	R
Hypochaeris radicata	Common Cat's-ear	R
Plantago lanceolata	Ribwort Plantain	R
Rumex acetosa	Common Sorrel	R
Trifolium repens	White Clover	R

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

Target Note:	TN7
Habitat:	Soft rush-dominated rush pasture

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	D
Deschampsia cespitosa	Tufted Hair-grass	A
Agrostis stolonifera	Creeping Bent	F
Juncus conglomeratus	Compact Rush	F
Agrostis capillaris	Common Bent	O
Molinia caerulea	Purple Moor-grass	O
Cirsium vulgare	Spear Thistle	R
Digitalis purpurea	Foxglove	R
Epilobium sp.	Willowherb species	R
Juncus squarrosus	Heath Rush	R
Poa annua	Annual Meadow-grass	R
Ranunculus acris	Meadow Buttercup	R
Ranunculus flammula	Lesser Spearwort	R
Stellaria media	Chickweed	R
Urtica dioica	Nettle	R

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

Target Note:	TN8
Habitat:	Unimproved acid grassland

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	D
Agrostis capillaris	Common Bent	F
Galium saxatile	Heath Bedstraw	O
Juncus squarrosus	Heath Rush	O
Potentilla erecta	Tormentil	O
Calluna vulgaris	Heather	R
Cirsium arvense	Creeping Thistle	R
Molinia caerulea	Purple Moor-grass	R
Sorbus aucuparia	Rowan	R
Ulex gallii	Western Gorse	R
Vaccinium myrtillus	Bilberry	R

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

Target Note:	TN9
Habitat:	Broadleaved plantation

Species List:

Scientific Name	Common Name	Frequency
Fraxinus excelsior	Ash	F
Crataegus monogyna	Hawthorn	F
Betula pendula	Silver Birch	F
Acer campestre	Field Maple	O
Alnus glutinosa	Alder	O

Populus tremula	Aspen	O
Salix caprea	Goat Willow	O
Populus nigra agg.	Black Poplar species	R
Viburnum opulus	Guelder-rose	R
Corylus avellana	Hazel	R
Sorbus aucuparia	Rowan	R

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

Target Note:	TN10
Habitat:	Unimproved acid grassland

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	D
Agrostis capillaris	Common Bent	F
Cladonia sp.	Cladonia species	O
Deschampsia flexuosa	Wavy Hair-grass	O
Festuca ovina	Sheep's Fescue	O
Galium saxatile	Heath Bedstraw	O
Juncus squarrosus	Heath Rush	O
Polytrichum juniperinum	Moss species	O
Chamerion angustifolium	Rosebay Willowherb	R
Digitalis purpurea	Foxglove	R
Trifolium repens	White Clover	R
Ulex gallii	Western Gorse	R
Vaccinium myrtillus	Bilberry	R

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

Target Note:	TN11
Habitat:	Watercourse through marshy grassland strip

Species List:

Scientific Name	Common Name	Frequency
Juncus effusus	Soft Rush	A
Cirsium palustre	Marsh Thistle	F
Deschampsia cespitosa	Tufted Hair-grass	F
Holcus lanatus	Yorkshire-fog	F
Ranunculus repens	Creeping Buttercup	F
Trifolium repens	White Clover	F
Agrostis capillaris	Common Bent	O
Agrostis stolonifera	Creeping Bent	O
Callitriche stagnalis	Common Water Starwort	O
Cerastium fontanum	Common Mouse-ear	O
Digitalis purpurea	Foxglove	O
Festuca rubra	Red Fescue	O
Glyceria sp.	Sweet-grass species	O
Lotus pedunculatus	Marsh Bird's-foot Trefoil	O
Rumex acetosa	Common Sorrel	O
Ranunculus flammula	Lesser Spearwort	R
Senecio jacobaea	Ragwort	R
Urtica dioica	Nettle	R

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

Target Note:	TN12
Habitat:	Unimproved acid grassland and semi-improved grassland

Species List:

On the western side of Calf Hey Dike the areas included within site are much more heavily grazed

and mainly comprise species-poor short-grazed and semi-improved sward. The steep valley slopes are terraced by stock and retain a sward that is more acidic in character but still very short-grazed.

No species list compiled for this area

Target Note:	TN13
Habitat:	Mosaic of acid dry heath, semi-improved acid grassland, marshy grassland etc.

Species List:

Scientific Name	Common Name	Frequency
Nardus stricta	Mat-grass	A
Ulex gallii	Western Gorse	A
Agrostis capillaris	Common Bent	F
Juncus effusus	Soft Rush	F
Cirsium palustre	Marsh Thistle	O
Deschampsia flexuosa	Wavy Hair-grass	O
Galium saxatile	Heath Bedstraw	O
Holcus lanatus	Yorkshire-fog	O
Hypochaeris radicata	Common Cat's-ear	O
Juncus conglomeratus	Compact Rush	O
Leontodon autumnalis	Autumn Hawkbit	O
Lotus corniculatus	Bird's-foot Trefoil	O
Plantago lanceolata	Ribwort Plantain	O
Potentilla erecta	Tormentil	O
Pseudoscleropodium purum	Moss species	O
Ranunculus repens	Creeping Buttercup	O
Rubus fruticosus agg.	Bramble	O
Rumex acetosa	Common Sorrel	O
Trifolium repens	White Clover	O
Agrostis canina	Velvet Bent	R
Blechnum spicant	Hard Fern	R
Callitriche stagnalis	Common Water Starwort	R
Crataegus monogyna	Hawthorn	R
Danthonia decumbens	Heath Grass	R
Digitalis purpurea	Foxglove	R
Fagus sylvatica	Beech	R
Fraxinus excelsior	Ash	R
Galium palustre	Marsh Bedstraw	R
Hydrocotyle vulgaris	Marsh Pennywort	R
Juncus acutiflorus	Sharp-flowered Rush	R
Montia fontana	Blinks	R
Picea sitchensis	Sitka Spruce	R
Ranunculus flammula	Lesser Spearwort	R
Rumex acetosella	Sheep's Sorrel	R
Salix cinerea ssp. cinerea	Grey Willow	R
Salix fragilis	Crack Willow	R
Salix species	Willow species	R
Senecio sylvaticus	Heath Groundsel	R
Vaccinium myrtillus	Bilberry	R
Viola palustris	Marsh Violet	R

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

Management Issues:

The acidic species-poor semi-improved grasslands of target note areas TN1, TN5, TN12 and TN13 appear undergoing active improvement measures, with evidence of recent muck spreading. Some elements of acid grassland remain in TN5, but it is likely that continued improvement will diminish these, both here and in TN13 area. Extensive areas of unmanaged acid grassland and dwarf shrub heath remain.

The public footpath running south, through the central part of the site towards Crow Edge, is deteriorating in places, especially where it crosses wetter areas. Stone walls dividing some of the fields are generally in quite a good state but could do with some maintenance to retain the locally distinctive landscape character into the future.

Diversity:

The fieldwork on 13 September 2010 identified 79 species of vascular plants were noted here, including within the plantation areas of TN9 and within TN13. The majority of these species are native, typical both dry and damp acidic situations.

The most highly modified parts are the semi-improved grasslands, mainly along the eastern side of the site. Even though the main elements of the vegetation (acid grassland, rush pasture and dwarf shrub heath) are quite strongly dominated by single species, mainly mat grass, soft rush and western gorse, the diversity of the topography both increases the overall vegetation diversity as well as militates towards these types being sustainable into the future. There are steep slopes, shallow slopes, valleys, hollows and rock exposures, all adding to the diversity of the acidic vegetation here, with a range of wetland habitats including: water courses, small reservoirs, swamp and flush. Areas of broadleaved plantation also provide shelter for birdlife in areas TN9 and TN13.

Naturalness:

Most of this site has not been highly modified into improved agricultural land so that the remaining areas of acid grassland, rush pasture and dry heath represent semi-natural vegetation characteristic of this hillside area, that ranges from around 300m to 340m above sea level. Whilst there are some unnatural elements here, native plant species are strongly dominant and create an ecologically valuable range of acid habitat types within this part of the Borough.

Rare or Exceptional Features:

The steep acidic bluffs in the western part of the site (TN3 and TN10) have some bare shale and exposed bedrock, along the eastern bank of Calf Hey Sike, and the underlying rocks are exposed more accessibly in the northern part of TN13 area, where quarrying has taken place in the past. The large brickworks to the southwest of the site and the almost adjacent opencast quarry to the southeast are visible from site. These features, plus the disused mine in Crow Edge, illustrate the past and present value of the underlying geology to the local economy, whilst the tall white turbines of the nearby wind-farm on the crest of the hill on Whitley Road point to a future potential of such a landscape.

Fragility:

The intrinsic landform and acidity of this site, coupled with the history of human impacts, has resulted in a pretty robust range of semi-natural community types, well suited to this high and exposed location. Further agricultural improvements would be very expensive and not cost effective so it is likely that the steep slopes of acid grassland and dwarf shrub heath will persist, with low-level grazing, far into the future. The wetter areas of rush pasture are unlikely to be drained and so will also remain as useful bird habitat, particularly wintering snipe.

Typicalness:

This range of acid communities is typical of this part of the Borough, where it approaches the eastern fringes of the Pennines. The hilly landscape, crossed by a network of dry-stone walls, is distinctly lacking in trees and hedgerows, the main woody growth being patches of the very low western gorse. This dwarf shrub heath is a locally distinctive characteristic that helps define this part of the borough.

Recorded History & Cultural Associations:

This exposed hillside, with its network of stone walls, has long been used for animal husbandry, though the ruined Lower Whitley Farm illustrates how agriculture is changing to larger units. The northern edge of TN13 shows signs of quarrying the local stone in the past. There is an active deep clay quarry just south of TN13, serving the large brickworks on the western side of the A616. There is also a disused mine just to the south, at Crow Edge and shale tips abut the southern site boundary.

Connectivity within the Landscape:

The immediate land-use around this site is agricultural, a mix of pastoral and arable fields, depending on the steepness of the slopes. Field boundaries are a mix of dry-stone walls and barbed-wire fences and the landscape flows through and across the site, uninterrupted by trees or tall hedges.

The boundaries of the site are generally not easily visible in this open landscape. There is little in the way of wildlife corridor habitat, There is a weak link formed by Calf Hey Sike along the western edge, flowing south to the large course of Sledbrook Sike.

The Broadstone Reservoir Natural Heritage Site lies just to the north of Whitley Edge.

Value for Appreciation of Nature and Learning:

This site is fairly well served by footpaths; on the western side there is a public right of way along Calf Hey Lane, linking south-west to the A616. At its north end, Calf Hey Lane also gives access to the straight path running north/south through the site along the line of a stone wall. This path, in turn, links with a path running eastwards from the A616, past Lower Whitley Farm and through the complex TN13 area. From TN13 paths lead both to the south-east and also north to Whitley Road, to the west of the wind turbines.

In the southeast extremity of the site, TN13 area is close to the wind-farm and has direct views into the working clay pit.

As well as being an intrinsically diverse area in its own right, this part of the site could make a valuable outdoor teaching resource area. Access and parking would be difficult for a school party at present, but there is potential for a pull-in from Whitley Road, to the north of TN13 area. There are links, via local lanes, to the Broadstone Reservoir NHS, about 1km to the north of this site.

Recommendations:

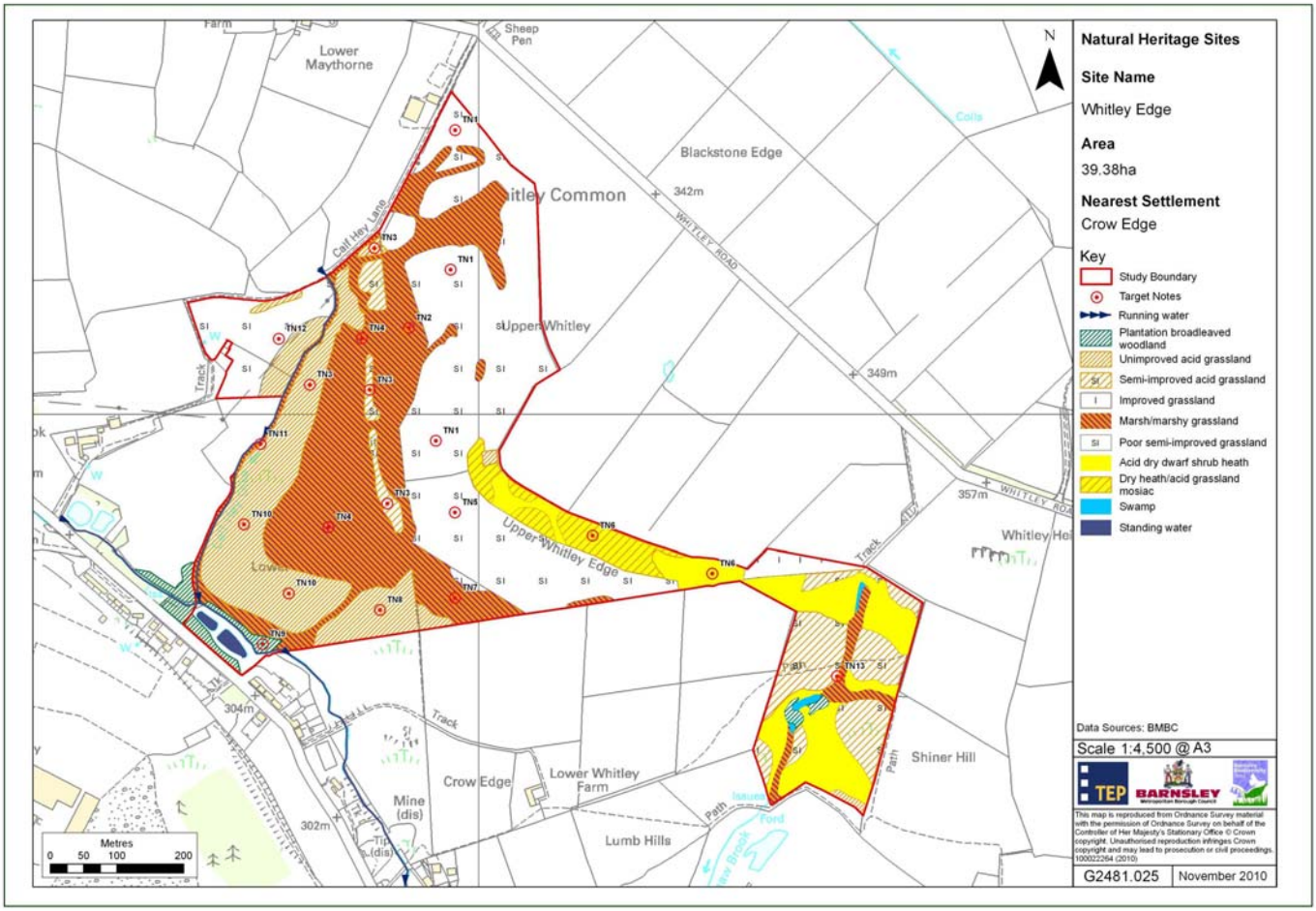
This site is part of a heath/acid grassland corridor than reaches from Thurlstone to the Western Moors, along with other NHS sites such as Small Shaw and High Bank.

The site is a good example of acid grassland possessing many of the species that are associated with this habitat type. It is also habitat for a number of bird species that are UK and Local Biodiversity Action Plan species.

The role this site has in the wider habitat network, its composition and its use by priority species means that it should be retained within the NHS system. The site boundaries are, at present, adequate for the habitat contained within the site.

Action: Retain as a Natural Heritage Site

Encourage landowners/managers using this site to adopt more wildlife friendly approaches to land management.


Natural Heritage Sites
Site Name
Whitley Edge
Area
39.38ha
Nearest Settlement
Crow Edge
Key
Study Boundary
Target Notes
Running water
Plantation broadleaved woodland
Unimproved acid grassland
Semi-improved acid grassland
Improved grassland
Marsh/marshy grassland
Poor semi-improved grassland
Acid dry dwarf shrub heath
Dry heath/acid grassland mosiac
Swamp
Standing water
Data Sources: BMBC
Scale 1:4,500 @ A3
TEP
BARNSLEY
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G2481.025
November 2010
Lower Maythorne
Sheep Pen
Blackstone Edge
342m
Whitley Common
Calf Hey Lane
WHITLEY ROAD
Upper Whitley
349m
Track
Upper Whitley Edge
357m
Whitley Hall
Lower Whitley
304m
Crow Edge
Lower Whitley Farm
Mine (dis)
302m
Tip (dis)
Lumb Hills
Shiner Hill
Path
Ford
Metres
0 50 100 200