

Cockle Edge Farm, Ingbirchworth

Ecological Assessment Report

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1 Introduction and Background

This report presents the results of an ecological assessment undertaken in relation to a proposed Endurance 50kW wind turbine (hub-height 25 metres; rotor diameter 19.2 metres) at Cockle Edge Farm, Ingbirchworth, Penistone, see Figure 1 below (approximate grid reference: SE23060541).

This assessment is based on the findings of a desk-based study and a field survey conducted on 1st May 2012 by Toby Fisher CEnv MIEEM and Ryan Knight AIEEM. The following key guidelines have been used in the preparation of this document:

- Institute of Ecology and Environmental Management (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom* (version 7 July 2006).
- Joint Nature Conservation Committee (2010). *Handbook for Phase 1 habitat survey - a technique for environmental audit*.
- West Yorkshire Ecology (Undated). *Bats and Wind Turbines. Developer Guidance – Assessing the impacts of wind turbines and wind farms on bats*
- Natural England. (2009). *Bats and onshore wind turbines. Interim Guidance. Technical Information Note (TIN051)*.
- Natural England. 2010. *Assessing the effects of onshore wind farms on birds. Technical Information Note TIN069 (First edition 7th January 2010)*.

Figure 1: Proposed location for the Endurance 50kW turbine



2 Survey Methodology

2.0 *Desk study*

A full ecological data search was commissioned from Barnsley Biological Records Centre (BBRC) in order to identify any existing records of protected / notable species and protected sites within 1.5 km of the site.

As part of the study, Geoff Carr of Barnsley Bird Study Group (BBSG) was contacted with regard to the identification of local bird interests.

Aerial photography and Ordnance Survey mapping were analysed in order to identify any notable habitat features in the vicinity of the proposed turbine.

2.1 *Field survey*

An ecological assessment of the site was undertaken on 1st May 2012 and conducted by Toby Fisher CEnv MIEEM and Ryan Knight AIEEM in accordance with the standard JNCC habitat classification methodology¹. The weather conditions at the time of the survey were dry, moderate breeze (Beaufort Scale – 2/3) and 10°C with good visibility. The site was also searched for evidence of protected/notable species and the habitats present were assessed in terms of their potential to support protected/notable species.

¹ JNCC, (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit, ISBN 0 86139 636 7.¹

3 Survey Results

3.0 Desk study results

Barnsley Bird Study Group (BSBG)

Geoff Carr (BSBG) stated that the nearby Scout Dike Reservoir (located approximately 200 metres south-west of the proposed turbine) has only limited bird interest and that the bird interest on this reservoir has declined in recent years since it has become popular with anglers. Mr Carr stated that the reservoir supports mallard, gadwall, Canada goose and possible teal. Reed bunting, yellowhammer and possibly grasshopper warbler occur in the area (all are UK Biodiversity Action Plan priority species). Little owl and dipper are also known from the area. Mr Carr also stated that skylark, curlew and snipe are all likely to occur in the general area.

Barnsley Biological Records Centre (BBRC)

Information provided by BBRC is included in Appendix 1.

There are no internationally or nationally designated sites within 1.5 km of the site.

Four Barnsley Natural Heritage Sites (NHS) have been identified within 1.5 km of the site:

- Scout Dike Reservoir NHS is located approximately 200 metres to the south-west of the proposed turbine site.
- Royd Moor Reservoir NHS is located approximately 760 metres to the south-west of the proposed turbine site.
- Gunthwaite Dam and Clough Wood NHS is located approximately 650 metres to the north of the proposed turbine site.
- Ingbirchworth Reservoir NHS is located approximately 1480 metres to the north-west of the proposed turbine site.

Species Records

BBRC provided over 1,200 species records from within 1.5 km radius of the site. These records are too numerous to include in this report (the data will be made available on request). The records include several records of rare/protected species and many records of common and widespread species. The key records are summarised as follows:

- Great crested newt: One record from 1,200 metres west of the site dated 1983.
- Numerous Red and Amber Listed Birds of Conservation Concern² including skylark, lesser redpoll, linnets, yellowhammer, meadow pipit, snipe, grasshopper warbler, yellow wagtail, spotted flycatcher, curlew, lapwing, reed bunting, brambling, willow tit, house sparrow, tree sparrow, grey partridge, starling, lesser whitethroat, redshank, redwing, bullfinch and song thrush.
- Schedule 1 (Wildlife and Countryside Act 1981 as amended) bird species including the following: kingfisher, little ringed plover, whimbrel and hobby.
- White-clawed crayfish from Gunthwaite and Clough Dike.
- Water vole from Royd Moor Reservoir LWS.
- Noctule, Daubenton's and Chiroptera from Scout Dike.
- Natterer's bat from >1km north of the site.
- Noctule bat from >1km north of the site.
- Hedgehog from various locations
- Brown hare from various locations.
- Otter from Ingbirchworth Reservoir >1km from the site.
- Badger from various locations.

² Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD (2009) Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. British Birds 102, pp296–341.

3.1 *Field survey results*

Habitats

Improved grassland

The proposed turbine location is situated within improved grassland bordered by dry stone walls to all sides. The grassland is heavily improved and heavily dominated by Italian rye-grass *Lolium multiflorum* along with small amounts of meadow foxtail *Alopecurus pratensis*, sweet vernal grass *Anthoxanthum odoratum*, dandelion *Taraxacum officinale* agg. and chickweed *Stellaria media*. The fields in the wider area are characterised by similar improved grassland.

Trees, hedgerows and woodland

No hedgerows, woodland or standard trees have been identified within 150 metres of the proposed turbine location. Broad-leaved woodland associated with the banks of Scout Dike Reservoir is located approximately 160 metres south-west of the turbine location.

Fauna

Bats

In accordance with Natural England guidance³ buffer zones of at least 50 metres have been maintained between the proposed turbine blade tips and any habitats likely to be used by bats. A buffer zone of approximately 160 metres has been provided from the woodland to the south-west.

Bats are likely to forage and commute along the woodlands and watercourses in the wider area. The open fields and dry stone walls in the vicinity of the proposed turbine are likely to be used to a much lesser extent.

No potential bat roost sites have been identified within 150 metres of the proposed turbine.

Birds

Limited bird activity was observed during the field survey. Willow warbler, carrion crow, blackbird and wood pigeon were all observed during the survey. A skylark was observed singing approximately 250 metres south-east of the proposed turbine location. Skylark is a UK Biodiversity Action Plan (UK BAP) priority bird species⁴.

No wading bird species were observed during the survey. The field in which the turbine will be positioned is considered sub-optimal habitat for disturbance-sensitive ground nesting birds due to the nature of sward, heavily dominated by Italian rye-grass. However, it is possible that skylark could nest in the field of the proposed turbine.

Other protected / notable species

The only waterbody identified within 500 metres of the proposed turbine location or cabling route is Scout Dike Reservoir located approximately 200 metres to the south-west. Scout Dike Reservoir is considered very unlikely to support great crested newts due to the known presence of fish and wildfowl.

No evidence of badger was observed on the site and the proposed turbine location and cabling route are assessed as being unsuitable for badger sett excavation, i.e. absence of wooded areas and suitable sett excavation areas. The likelihood of reptiles within the immediate area of the proposals is low due to the nature of the habitats.

³ Natural England Technical Information Note TIN051, Bats and onshore wind turbines Interim guidance. First edition 11 February 2009.

⁴ UK Biodiversity Action Plan (UKBAP) priority bird species status based on: <http://jncc.defra.gov.uk/page-5163>

The area of the proposed turbines could potentially be used by brown hares and hedgehog both of which are UK BAP priority species. No further protected / notable species are considered likely to be affected by the proposed turbine.

4 Evaluation and Recommendations

4.0 *Habitats*

The turbine is proposed to be located within improved grassland which is considered to be of low ecological value in its own right.

4.1 *Bats*

Standard guidance in relation to wind turbines in England is to provide a buffer zone of at least 50 metres between turbine blade-tip and the nearest feature likely to be used by bats e.g. a hedgerow, tree-line or a built structure. In accordance with the guidance, a minimum distance significantly in excess of 50 metres has been maintained and no significant impacts on bats are predicted and no further surveys with regards to bats are recommended.

4.2 *Breeding birds*

Open ground nesting bird species such as skylark and meadow pipit could potentially occur in the field of the proposed turbine and cabling route.

Information from BBSG suggests that Scout Dike Reservoir is not likely to be of significant value in terms of notable wildfowl populations.

No evidence of wading birds was observed during the survey and impacts on disturbance sensitive waders such as curlew and snipe are considered unlikely to occur.

Potential impacts on UK BAP priority species and Schedule 1 birds such as kingfisher, little ringed plover, whimbrel and hobby are assessed as unlikely to occur.

It is recommended that standard measures to prevent damage/destruction of active bird nests should be employed, i.e. the construction area of the proposed turbine and cabling route should be checked for nesting birds immediately prior to commencement of any ground works during March to August inclusive.

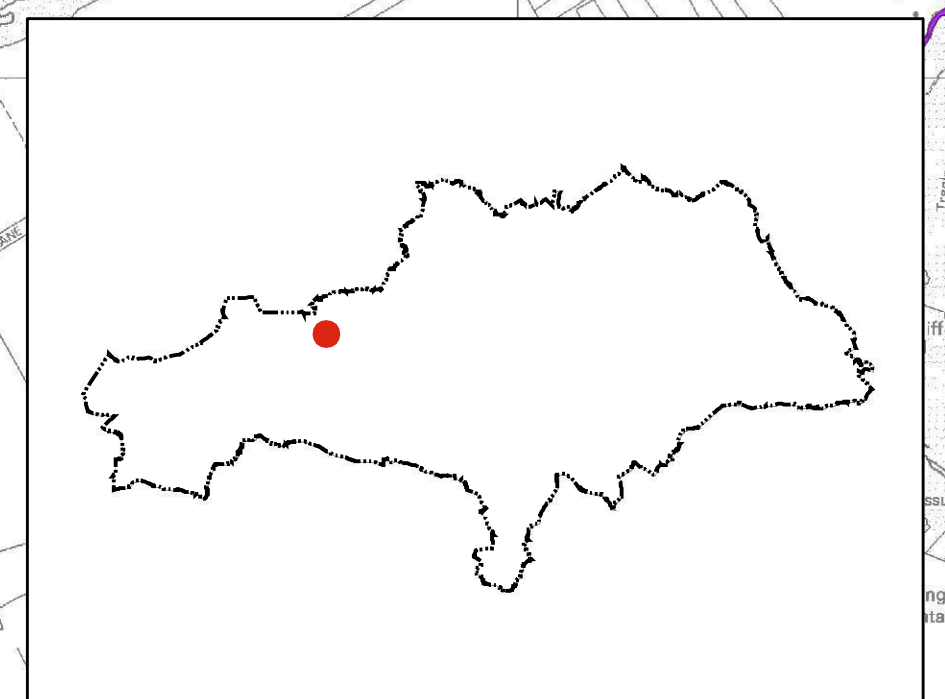
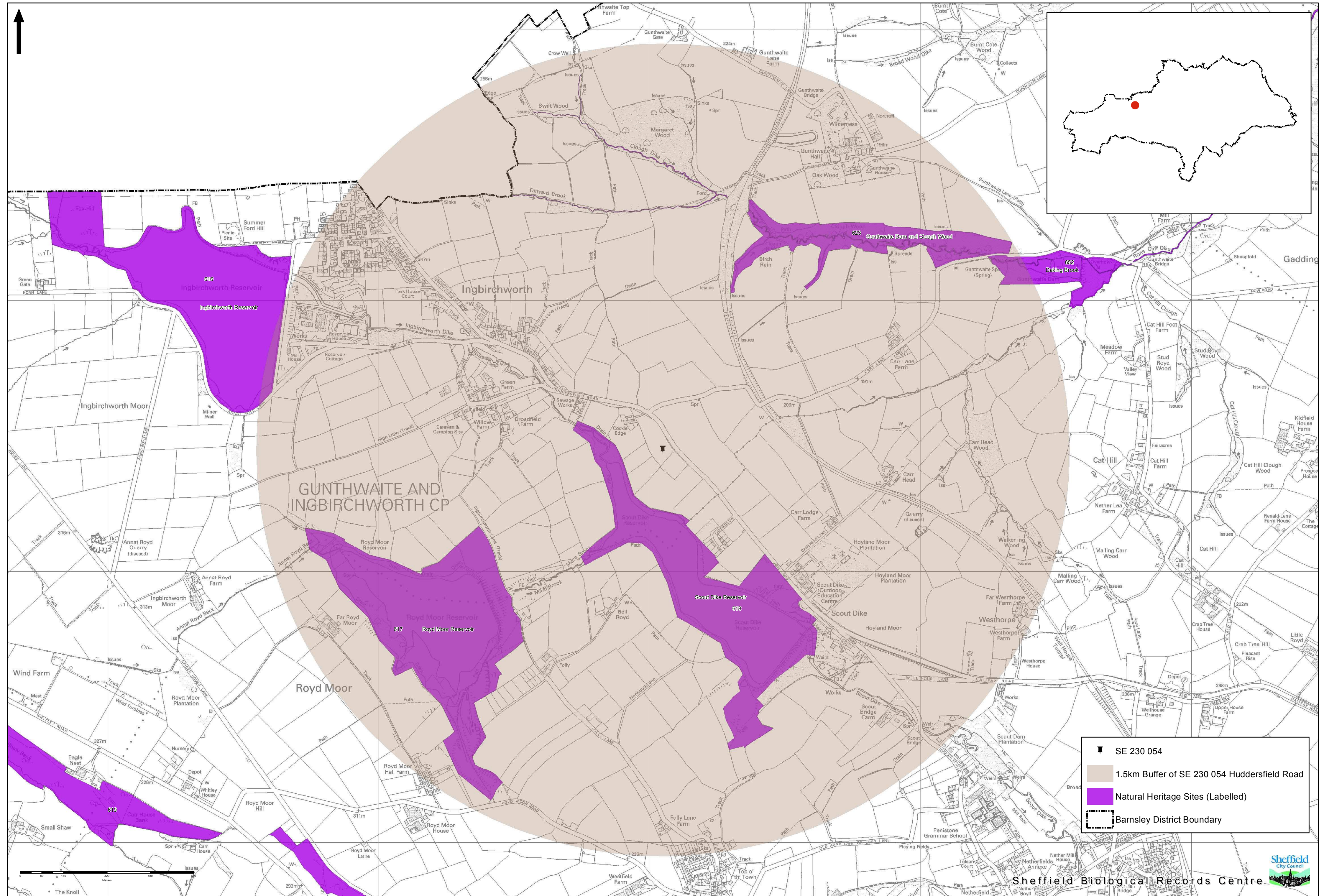
4.3 *Other fauna*





No significant impacts on other protected/notable species such as great crested newt, badger, hedgehog or brown hare are predicted.

4.4 *Further surveys*

No further surveys are recommended to inform the planning application.

Appendix 1: Data records provided by BBRC



 SE 230 054
 1.5km Buffer of SE 230 054 Huddersfield Road
 Natural Heritage Sites (Labelled)
 Barnsley District Boundary

