ECOLOGICAL SURVEY & PROTECTED SPECIES RISK ASSESSMENT
WIND TURBINE PROPOSAL
DYSON COTE FARM
SHEFFIELD

Version	Prepared by	Date	Checked by	Date	Approved by	Date
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ECOLOGICAL SURVEY & PROTECTED SPECIES RISK ASSESSMENT
WIND TURBINE PROPOSAL
DYSON COTE FARM
SHEFFIELD
S36 8YR

GRID REF: SE 257 002

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EXECUTIVE SUMMARY

Naturally Wild have been instructed to undertake an Ecological Survey and Protected Species Risk Assessment on an agricultural field 1.8 km to the northwest of the town of Stockbridge and 3.1km to the southeast of Penistone. The application site is located within an agricultural field, with Underbank Lane to the west, and currently holds semi-improved grassland used for livestock grazing. The proposed development is subject to a planning application (2012/1124) for the erection of a single wind turbine within a small agricultural field. The application includes the installation of the associated infrastructure, including ground works and grid connection.

The Local Planning Authority has requested that an ecology survey should be submitted in support of the planning application. As part of the planning process an ecological survey is required to determine if any European Protected Species and Habitats are likely to be affected by the proposed works, and to show how any negative ecological impacts would be mitigated and compensated.

The objective of the survey was to ascertain if any protected species may be using the site, document the habitats present and determine any potential ecological risks posed by the development during and post construction. The footprint of the proposed turbine and associated habitats were assessed, as were the immediate surrounding habitats. All survey and assessment work was completed in accordance with official assessment guidelines produced by Natural England and the Institute for Ecology and Environmental Management.

The initial site survey work was completed on the 23rd October 2012, with a site review on the 1st August 2014.

The proposed wind turbine will be located at Grid Reference SE 257 002 in the southwest corner of a small grassland field. Semi-improved grassland used for livestock grazing is the only habitat within a 50 m radius the turbine. There are no statutory or non-statutory sites on directly adjacent to the application site.

A full risk assessment was completed to assess how the proposed development would impact on protected habitats or species during the construction and operational phase.

For reasons discussed in the report it is not considered that the proposed turbine will have any significant impact on bat or any other protected species during the construction or operation phase, and in this respect there are no further habitat or species issues to consider and no requirement for additional ecological survey work in advance of the application being determined.

ECOLOGICAL SURVEY & PROTECTED SPECIES RISK ASSESSMENT.
PROPOSED WIND TURBINE, AGRICULTURAL FIELD, DYSON COTE FARM, SHEFFIELD.

1 INTRODUCTION

1.1 Background

Naturally Wild have been instructed to undertake an Ecological Survey and Protected Species Risk Assessment on an agricultural field 1.8 km to the northwest of the town of Stockbridge and 3.1km to the southeast of Penistone. The application site is located within an agricultural field, with Underbank Lane to the west, and currently holds semi-improved grassland used for livestock grazing. The proposed development is subject to a planning application (2012/1124) for the erection of a single wind turbine within a small agricultural field. The location of the proposed wind turbine is shown below in Figure 1. The Local Planning Authority has requested that an ecology survey should be submitted in support of the planning application (See Appendix 8.1 for full comments). Dyson Cote Farm is located 180 m to the northeast of the application site.

As part of the planning process an ecological survey is required to determine if any European Protected Species and habitats are likely to be affected by the proposed works, and to show how any negative ecological impacts would be mitigated and compensated.

Figure 1. The red point shows the location of the proposed turbine.

1.2 Development Proposal

In overview, the development proposal is for the erection a 24.6 m high (hub) wind turbine within an existing agricultural field (semi-improved grassland), 150 m to the southwest of Dyson Cote Farm. Further to this, the application includes the installation of the associated infrastructure, including base work to secure the turbine shaft and grid connection, which will link to an existing building to the northeast, as shown in Figure 9. The dimension of the proposed wind turbine is shown below in Figure 2.

The proposed wind turbine would satisfy the energy demands of the farm by providing a source of renewable energy that would also allow the business to operate in a more environmentally and financially sustainable manner. Additional energy production would be sold back to the grid. The generated energy will feed directly onto the farm and will offset the energy requirements of the farm. The turbine would be positioned on land owned by and associated with Dyson Cote Farm.

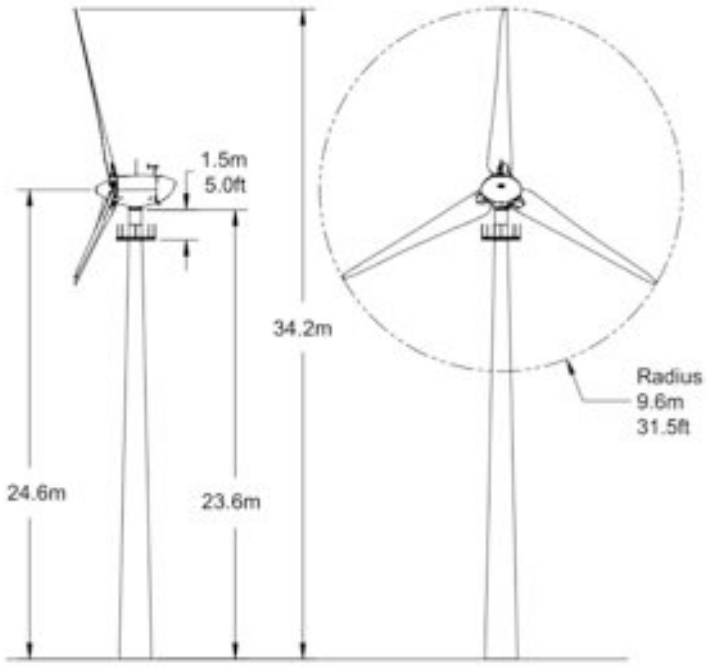

Figure 2: Elevation plan of the turbine.

1.3 Comments from the Planning Authority during the initial planning application.

As part of the planning application, which was submitted to Barnsley Metropolitan Borough Council (BMBC), comments were received from Stephen Moralee (Assistant Director). Stephen's comments confirmed that the Planning Application was invalid as an ecological survey report was not included. Full comments from BMBC are presented in Appendix 1. The purpose of this report was to meet the request for an Ecology Survey detailed in the response made by Stephen Moralee on the 23rd October 2012.

2 RELEVANT LEGISLATION

British wildlife is protected by a range of legislation, the most important being the Wildlife and Countryside Act 1981, the Conservation (Natural Habitats &c) Regulations 1994 and the Countryside Rights of Way Act 2000. The Wildlife and Countryside Act as amended mainly by the Countryside Rights of Way Act protects species listed in Schedules 5 and 8 of the Act (animals and plants respectively) from being killed, injured, and used for trade. For some species, such as Great Crested Newts and all bat species, the provisions of this act go further to protect animals from being disturbed or taken from the wild and protects aspects of their habitats. The act also stipulates that offences occur regardless of whether they were committed intentionally or recklessly. The parts of this legislation that apply to most reptile species are in regard to killing, injury and trade only and do not protect their habitat, nor are they protected from disturbance or from being taken from their habitat.

The Conservation (Natural Habitats &c) Regulations is the English enactment of European legislation and provides similar but subtly different protection for species listed on Schedules 2 and 4 of those regulations. A recent change in this legislation means that the provisions of this act now complement those of the Wildlife and Countryside Act more. Species to which these provisions apply are the European Protected Species. Activities that might cause offences to be committed can be legitimised by obtaining a licence from the relevant statutory body.

Birds receive protection under the Wildlife and Countryside Act also. It is an offence to intentionally or recklessly kill, injure or take any wild bird; take, damage or destroy a nest of a wild bird whilst it is in use or being built; or to take, damage or destroy an egg of a wild bird. The bird-nesting season is defined as being from 1st February until 31st August with exceptions and alterations for some species.

3 ECOLOGICAL SURVEY

3.1 Objective of Survey

The objective of the survey was to ascertain if any protected species may be using the site, document the habitats present and determine any potential ecological risks posed by the development during and post construction. The survey would include a desktop assessment, and bird and bat risk assessment, plus a daytime site assessment. The survey findings would be assessed in relation to the comments made by Stephen Moralee (Assistant Director at BMBC), and the statutory and non-statutory consultees. All findings will be assessed in relation to relevant policies, including ES12 – Effect on wildlife and ecology, Technical Information Note 051 and Technical Information Note 069.

3.2 Survey Area

The footprint of the proposed turbine was assessed, as were the immediate surrounding habitats. The site proposed for development is located at Grid Reference SE 257 003 and is shown in Figure 1. The Full National Grid Reference Point for the turbine shaft is 425736 400329. All habitats within 500 m of the site were assessed, with a particular emphasis on the 50 m and 100 m zones of influence, as shown in Figure 7.

3.3 Habitat Description

The development site is situated within a small (0.7 ha) grassland field used for livestock grazing. The proposed wind turbine will be located in the southwest corner of the field, as shown below in Figure 3. The site is located at an altitude of 1003 ft[1], and has a prominent westerly prevailing wind. The application field has a south-facing slope, with dry stonewalls, mature woodland and grass verges bordering the field on all sides. Dyson Cote Farm, which includes a series of agricultural and residential units, is located 150 m to the northeast of the proposed turbine.

There are no statutory or non-statutory wildlife sites on or adjacent to the application site. The nearest protected site is Spring Meadows, Alderman's Head & Cow Croft Meadows (SSSI), which is located 2.5 km to the west. Features of varying ecological value border the application field, with the distances between these features and the proposed turbine shown in Figure 6. There are no mature trees or buildings within the field where the turbine is proposed. The wider area is used largely for agricultural use, and is primarily focused on livestock production. There are no ponds within 250 m of the site.

Figure 3: Position of the proposed turbine in relation to surrounding features (satellite image).

(Image taken from Google earth Pro: ©2010 Tele Atlas; ©2010 Infoterra Ltd & Bluesky).

3.4 Survey Constraints

There were no constraints with regards to the completion of the survey objectives.

[1] http://www.altitude.org/find_altitude.php

4 METHODOLOGY

The overall ecological assessment comprised two parts; a desktop study, and a bird and bat risk assessment. The desktop search collates all available public information regarding the biodiversity of the area, the habitat structure of the surrounding area and statutory and non-statutory designations. A detailed records search would be completed for the presence of protected species in the area using the National Biodiversity Network Gateway. The desktop survey also consisted of an assessment of the habitats on site using photographic records. The dominant vegetation structure was identified, allowing the habitats on site to be classified. The site and surrounding features were assessed for their potential value to protected habitats and species. Any trees of potential habitat importance would be noted. These activities were not limited solely to the site and the surrounding area was also investigated. Biological Records were requested from local bird surveyors.

It is generally understood that wind farm developments have a low impact on ecology in terms of land take, relative to the size of the development site. Impacts have been known to occur at some sites with birds and bats striking turbines during flight and bats being killed by barotrauma. The emphasis of the impact assessment will therefore be on the potential impact of the operational wind farm on birds and bats, particularly through blade strike. However, potential impacts throughout the construction and operation phases of the proposed wind turbine on other notable species will also be considered.

The 'Guidelines for Ecological Impact Assessment' (IEEM, 2006) (hereafter referred to as 'the IEEM Guidelines') provide guidance on the process of identifying the value of ecological receptors, characterising impacts upon them and assessing whether these impacts are significant. An ecologically significant impact is defined in the IEEM Guidelines as: '*an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area.*' The Guidelines focus on assessment of impacts at a variety of geographic scales and set out the following process for assessment:

- Identification of the nature conservation value of each ecological receptor that is present within the site and adjacent areas which may be affected by the development and the level of sensitivity of each of these receptors to the development;
- Identification of potential impacts, based on the nature of the construction, operation and decommissioning phases of the development;
- Determining the magnitude of potential impacts - i.e. the scale of the change in population/ number of individuals affected and the duration / reversibility of the potential impact;
- Determining the geographic level at which an impact will be significant, based on the interaction between the magnitude of the impact and the nature conservation value of the receptor likely to be affected;
- Identifying mitigation and, if required, compensation measures that are proposed to avoid, reduce or offset significant adverse impacts.
- Reduce or offset significant adverse impacts.

5 RESULTS

5.1 Desktop Study

The desktop study looked at current publically available data relating to protected species within the area and to local knowledge from past surveys undertaken by team members in the area. Naturally Wild have completed a search on the National Biological Network (NBN): Species that are relevant to this Ecological Survey, are noted at BAP 2007 species and have been recorded in SE20 are listed below.

5.1.1 National Biological Network – Gateway

Amphibian Species

Common Toad	*Bufo bufo*
Great Crested Newt	*Triturus cristatus*

Bird Species

Common Cuckoo	House Sparrow
Common Grasshopper	Warbler Northern Lapwing
Common Scoter	Red-backed Shrike
Corncrake	Reed Bunting
Eurasian Curlew	Ring Ouzel
Eurasian Tree Sparrow	Spotted Flycatcher
European Nightjar	Tree Pipit
European Turtle Dove	Wood Warbler
Greater Scaup	Yellow Wagtail
Grey Partridge	Yellowhammer
Hawfinch	

Reptile Species

Common Lizard	*Zootoca vivipara*
Adder	*Vipera berus*

Terrestrial Mammal Species

Brown Hare	*Lepus europaeus*
Brown Long-eared Bat	*Plecotus auritus*
Eurasian Red Squirrel	*Sciurus vulgaris*
European Otter	*Lutra lutra*
European Water Vole	*Arvicola amphibius*
Mountain Hare	*Lepus timidus*
Noctule Bat	*Nyctalus noctula*
Pine Marten	*Martes martes*
Polecat	*Mustela putorius*
Soprano Pipistrelle	*Pipistrellus pygmaeus*
West European Hedgehog	*Erinaceus europaeus*

Bat Species

Daubenton's Bat	*Myotis daubentonii*
Whiskered Bat	*Myotis mystacinus*
Natterer's Bat	*Myotis nattereri*
Noctule Bat	*Nyctalus noctula*
Pipistrelle species	*Pipistrellus pipistrellus sensu lato*
Common Pipistrelle	*Pipistrellus pipistrellus sensu stricto*
Soprano Pipistrelle	*Pipistrellus pygmaeus*
Long-eared Bat species	*Plecotus*
Brown Long-eared Bat	*Plecotus auritus*

5.1.2 Statutory and non-statutory search

The following statutory and non-statutory designated sites were recorded within 7 km of the application site, and were considered relevant to this desktop survey. The Natural England Online Search tool was used as part of the desktop survey.

Site Designation	Site Code	Site Name	Area (ha)	Distance
Local Nature Reserves	1009580	Wharncliffe Crags	15.6	> 4 km to the southeast
	1083118	Town End Common	8.43	> 4 km to the southeast
Special Areas of Conservation	UK0030280	South Pennine Moors (The Dark Peak) SAC	65025.5	3 km m to the south
Sites of Special Scientific Interest	1003966	Little Don Stream Section	1.01	3 km m to the south
	1002023	The Dark Peak	31823.79	> 3 km to southwest
	1084114	Spring Meadows, Alderman's Head & Cow Croft Meadows	16.83	2.5 km to the west

Table 1: Relevant statutory and non-statutory designated sites within 10 km of the application site.

5.1.3 Liaison with Relevant Parties

Thomas McQuillan issued information requests to South Yorkshire Badger Group (Monica Ward) on the 17th October 2012.

South Yorkshire Badger Group	No reply as of 24/10/2012
South Yorkshire Bat Group	Emailed 17/10/2012

The Barnsley Bird Study Group is no longer consulted with regards to bird records in the area surrounding the proposed development (See appendix 8.2).

Figure 4: Statutory and non-statutory sites surrounding the application site[2].

5.2 Site Assessment

Naturally Wild staff who have been fully trained in ecological surveying, assessment and mitigation techniques completed a site assessment in October 2012 following the desktop survey which used satellite images and data resources. An updated assessment was conducted in August 2014. The assessment determined the overall characteristics of the site, and its potential value of all habitats for European Protected Species. All survey and assessment work was completed in line with official assessment guidelines produced by Natural England and the Institute for Ecology and Environmental Management.

Desktop and initial site survey work was completed by Ecologist Thomas McQuillan (BSc Hons Environmental Sciences, AIEEM), with the updated 2014 assessment conducted by Ecologist Jess Mitchell. Graeme Skinner (Bat licensed 201221937) has reviewed this document and the survey findings. Thomas and Graeme have completed numerous wind turbine ecological assessments in the past 2 years, and are experienced in bat & bird survey work.

The site assessments were completed on Tuesday 23rd October 2012 under suitable weather conditions (visibility reduced due to low fog), and Friday 1st August 2014 under suitable weather conditions.

5.2.1 On Site Ecological Features

The location of the proposed turbine is situated within a small (0.7 ha) grassland field used for livestock grazing. The proposed wind turbine will be located in the southwest corner of the field, as shown below in Figures 1 & 3. The site is located at an altitude of 1003 ft, and has a westerly prevailing wind. The application field has a south-facing slope, with dry stonewalls, woodland blocks and grass verges bordering the field on all sides.

Species-poor improved grassland used for livestock grazing is the only habitat feature on, and within 61

[2] http://www.natureonthemap.naturalengland.org.uk/map.aspx?m=nreserves. © Crown Copyright and database right 2012. Ordnance Survey Licence number 100022021. © Crown copyright. Licence number 100022432.

m of the proposed turbine. With the grassland habitat used for livestock grazing it is likely to subject to fertilizer application, which would further reduce any botanical value.

There are no statutory or non-statutory wildlife sites on or directly adjacent to the application site. Features of varying ecological value border the application field, with the distances between these features and the proposed turbine shown in Figure 6. There are no mature trees within the field where the turbine is proposed, although there are several mature deciduous trees along the boundary of the application field (individual stunted oak trees). Grassland used for livestock grazing was the only habitat recorded at the position of the proposed turbine or location of the associated grid connection. This habitat type was considered to be of minimal ecological importance, and as having no value to any protected species. The grid connection will pass through grassland and along Underbank Lane in a northeast direction towards Dyson Cote Farm (Figure 9). The grid connection will pass through an existing gap in the boundary wall, and as such no hedgerows or matures trees will be impacted.

The application field is managed on a rotational basis for livestock grazing and occasionally silage production when the weather is suitable. The proposed development will cause the loss of a small area of species poor grassland habitat during the construction of the base work for the turbine. This habitat type is not considered to be under threat or of any specific value to protected species, and furthermore is abundant in the area surrounding the site. Consequently, it is not considered that the loss of a small area of this habitat type will have any ecological significance in a local or wider context. As there are no statutory or non-statutory wildlife sites on or directly adjacent to the application plot it is not deliberated that the construction of the turbine will have any associated impact on protected sites. Under the current development proposal, for reasons discussed above, it is not considered that the installation process of the proposed turbine and grid connection will have any significant direct or indirect impact on any protected species or habitats.

5.2.2 Off Site Ecological Features

A detailed assessment was undertaken to identify any potential ecological impacts that may result on protected species or habitats surrounding the application site as a consequence of the proposed development. The wider area is used largely for agricultural production, and is primarily livestock focused, although several of the surrounding fields are used for arable production (Figure 3 & 8). The grassland field, where the turbine is proposed to be located is bordered to the east by a dry stonewall, with grazed grassland beyond this. A dry stonewall borders the application field to the north with a mature woodland copse beyond this. A dry stonewall borders the grassland field to the south, with further grazed grassland beyond this. Underbank Lane and a dry stonewall border the site to the west. Salter Hill Plantation (mature beech woodland) is located >90 m to the north of the application site.

Dyson Cote Farm, which includes a series of agricultural and residential buildings, modern utilitarian farm buildings and several 1970's agricultural outbuildings, is situated 180 m to the northeast. The site is accessed by agricultural road, which links up with the Underbank to the south. It is understood that the grid connection will pass only through agricultural land, and pass through an existing gap in the dry stonewall as it leaves the application field.

None of the sites of ecological importance (Table 1) in the surrounding area are considered to have any significant interaction with the development site at a habitat level. The nearest protected site is Spring Meadows, Alderman's Head & Cow Croft Meadows (SSSI), which is located 2.5 km to the west. The importance of this site (Spring Meadows, Alderman's Head & Cow Croft Meadows) relates to the Neutral grassland – lowland habitat type. The site covers 16.83 ha and is in a favorable condition. This site has a 70% wildflower cover, and is prone to waterlogging. It is not considered that the habitats on this site have any interaction or dependency with those habitats on and directly surrounding the application site. The proposed turbine would not directly impact this designation as no excavations are proposed within the confines of the SSSI. Furthermore the designation relates principally to the sites flora rather than any fauna consideration.

Agricultural fields in the wider area are of a similar size and design to the application site (mixture of livestock production: cattle & sheep, and arable use), and are primarily bordered by dry stonewalls and grass verges. The nearest ecological feature to the proposed turbine (Figure 6), apart from the semi-improved grassland, are the 3ft dry stonewalls 48m to the south, 59m to the north, 55m to the east and 11 m to the west. The nearest natural feature with the exception of agricultural land and dry stonewalls is the mature beech woodland copse 61 m to the north. The desktop data search detailed no records of any protected species or habitats on or adjacent to the application site (Figure 4, and section 5.1). The habitat types recorded on and around the application site have been mapped, and are presented in Figure 5. In conclusion, the habitats on and directly surrounding (< 50 m) the proposed turbine were not considered to be of significant value to protected species. Also no trees or hedgerows will be impacted during the installation process, and the nearest mature tree is located > 50 m to the north.

Features of varying ecological value border the application field, with the distances between these features and the proposed turbine shown in Figure 6. There are no mature trees or buildings within the field where the turbine is proposed. The wider area is used largely for agricultural use, and is primarily a mixture of livestock and arable. There are no ponds within 250 m of the application site. The nearest large area of mature woodland is located >61 m to the north of the proposed turbine.

No significant ecological impact is anticipated on the habitats (grassland, mature trees & grass verges) surrounding the application site during the construction or operational phase of the wind turbine. The application site does not appear to form part of a biodiversity corridor in a wider context and is considered relatively isolated from an ecological perspective (turbine will be positioned in a semi-improved grassland field). There are no statutory or non-statutory wildlife sites on or adjacent to the application site, and no such sites within a 2.5 km radius of the site; therefore, it is not considered that the proposed development will have any direct impact on such sites in the wider area.

5.3 Protected Species

Great crested newts: There are no records of great crested newts within 500 m of the application site (NBN Gateway records). Amphibian access onto the site is limited to a certain degree by surrounding roads and dry stonewalls, furthermore the application site itself was considered to hold low value GCN terrestrial habitat (grazed grassland). As such no impact to GCN is considered likely under the development proposal. There are no ponds within 250 m of the application site.

Badgers: A potentially active man-made/ and partly natural badger sett was recorded in the mature woodland copse during the 2012 assessment however the updated assessment in 2014 failed to record the presence of an active badger sett. Overall, whilst badgers may use the vegetation strips and natural features in the wider area for movement and foraging it is not anticipated that the erection of a single turbine will have any impact on badger activity on site, during or post completion. The badger sett is located adjacent to managed farmland, which is regularly worked upon by large machinery, and therefore it is not considered that the installation process will have any significant impact on badgers in the area. With the badger sett being located over 100 m from the area of proposed works it is not considered that the installation of the proposed turbine will have any impact on the active sett to the northwest or badger activity in the wider area. No evidence of badger activity was recorded in the application field.

Reptiles: With the majority of the habitats surrounding the application site managed for the purpose of agriculture (semi-improved grassland), they are deemed unsuitable for reptile use. Adders and common lizards were the only species identified during the desktop research, and the application site (semi-improved grassland) was considered of very limited value to these species. With the habitats on the application site considered to be of negligible value to reptile species, no risk is anticipated to reptile populations during the construction phase.

Birds: The habitats surrounding the application site (semi-improved grassland) are considered in general terms to be of low value for bird species. There are no large areas of open water, marsh or bog habitat suitable for birds within 1 km of the application site. There are no protected bird sites within the immediate surrounding area (1 km). The woodland copse, > 61 m from the proposed turbine, is likely to be of low-moderate value to smaller bird species, notably passerine species, and may also be used by owl species for foraging and roosting purposes. Being grazed the grassland field itself was however considered of negligible value to raptor and owl species.

It is not considered that the development site holds any value for upland bird species. The site is in an intensive agricultural location, which does not contain any prominent natural features, and therefore is not considered to be located within a significant bird movement corridor. South Pennine Moors (SAC) and The Dark Peak (SSSI) are known to be of particular importance to upland bird species, however as this site is located over 3 km to the southwest, and there are no prominent links between these areas no impact is envisaged.

Agricultural bird species, such as lapwing and skylark, are likely to be present within the surrounding area; however the habitats on the application site were not considered to be of any significant value to these species. With the habitats on and surrounding the application site being used primarily for intensive agricultural purposes, and as there are no habitats of significant bird importance in the local area, it is not considered that the proposed turbine will have any dispersal impact on bird species. Wildfowl and waders are the most common bird groups that are susceptible to displacement disturbance, and as there are no suitable habitats surrounding the application site for these species no significant impact is envisaged. The nearest large area of open water is Underbank Reservoir 1.1 km to the south, and this feature has no connection with the application site. Although there are no known flight paths near the application site should birds commute over/near to the proposed turbine any impact would be negligible as birds generally commute at a much greater height than 34.2 m. Having assessed the presence of other turbines in the area, no cumulative impact is predicted. There is a similar small turbine to the east, however it is not considered that the proposed turbine will have any cumulative impact in addition to the current turbine (both small turbines and no habitat links).

Raptor and owl species are understood to be at particular risk to collision impacts with turbines, however with the habitats within 91 m of the proposed turbine being of negligible value to hunting raptor and owl species (grazed semi-improved grassland) no significant impact is envisaged. The grass verges parallel to the dry stonewalls were of limited size and were considered of negligible value to foraging owl and raptor species. Such species may to forage within the grass verges bordering the field; however the vast majority of foraging activity would be expected in and adjacent to the mature woodland to the north. Having spoken to the owner at Dyson Cote Farm it was confirmed that barn owls have not been recorded on the farmstead, and there are no artificial nest boxes in place. The closest area of potential foraging habitat is located at least 60 m from the proposed turbine, and as such no collision impact is envisaged. Further to this, owl species are likely to commute and forage at a height below the tips of the turbine blades (below 15 m). Little owl and tawny owl are likely to be within the local area, along with sparrowhawk and kestrel.

The majority of the bird species using the habitats, notably the grassed strips, field margins and partial hedgerows, surrounding the application site will be smaller and more agile (sparrows and finches), and the RSPB generally consider that such species are better equipped to avoid collision. Therefore, it is not considered that there will be any significant collision issues regarding bird species and the proposed turbine. Due to the small scale of the proposed development (one turbine), the proposed location (grazed field), the land management (intensive agriculture), and the open, exposed and isolated location it is not considered that the wind turbine will have any significant impact on bird species during the operational phase. As the predicted risk for impact on bird populations is low it is not considered necessary for additional survey work.

Bats: The species-poor semi-improved grassland habitat on and around the application site is considered to be of negligible value to foraging or commuting bats, and furthermore is in an exposed and open position and does not provide a link between suitable bat habitats. The turbine will be located at an altitude of 1003 ft, and such conditions make this position unsuitable for bat activity. The nearest

habitat considered of potential value for bat activity is the mature beech woodland copse > 61m to the north. There are also several individual trees and a small grouping of trees between 60 and 80 m of the proposed turbine; however these features were considered of negligible value to bats. With the nearest suitable foraging habitat over 61 m from the proposed turbine under current guidance no impact on bat species is predicted[3]. The analysis of the application site and surrounding areas strongly suggests that the position of the proposed turbine is not located within or near to a bat movement corridor, or where bats are likely to forage. Any bat activity would be expected to be present to the north of the site around the woodland and Dyson Cote Farm. The focal habitat within a 90 m radius of the application site was semi-improved grassland used for cattle grazing. Dry stonewalls are located c. 48m to the south, 59m to the north, 55m to the east and 11 m to the west of the proposed turbine, however for the following reasons these features were not considered to be of any value to bat activity; in an exposed position, did not link any suitable foraging habitat, where not prominent features (3 ft high) and did not contain any associated vegetation. There are also several individual trees between 60 and 80 m from the proposed turbine; however these trees are isolated, in an exposed position and do not contain any features suitable for roosting bats; and are therefore considered to be of negligible value to bat activity.

To conclude, none of the habitats within 60 m of the proposed turbine are considered of any significant value to bats, and furthermore the focus of the habitats deemed suitable for bat use are > 61 m to the north. In overview, it is not considered that the habitats within a 61 m radius of the proposed turbine hold any significant value to bat activity. Dyson Cote Farm, which is located 180 m to the northeast of the application site was considered to be minor potential value to roosting bats (some brick built units with tiled roofs), however the majority of the buildings were of corrugated sheet construction and were therefore considered of negligible value to roosting bats. There is ample foraging habitat in the area to the northeast of the farmstead, and as the position of the proposed turbine is >150 m from the farm and the linking habitats are poor no risk is anticipated. There are no mature trees within 50 m of the proposed turbine position.

The exposed positioning and openness of the habitats on the application site (grassland field) would not be preferable for bat foraging or commuting behavior. In the wider area there is ample commuting, foraging and roosting habitat notably to the north of the application site. UK bat species, especially *Pipistrelle* bats, are known to prefer to remain close to habitat features when commuting[4], therefore it is highly unlikely that the proposed turbine will impact commuting bats as the nearest potential commuting feature is > 61 m from the turbine. Bat species known to be present within the area include primarily pipistrelle and to a lesser extent noctule. Under the risk assessment tool (Produced by Natural England) for assessing the potential impact of wind turbines on bat species pipistrelle and noctule bats are classified as a medium risk and high risk respectively. Noctule bats are known to primarily roost and forage in woodland, and as the application site does not form a link between such habitats, no impact to this species is envisaged. There are also no records of noctule bats within 1 km of the site. Pipistrelle bats are the most common bat in the local area, and forage in a range of habitats including farmland,

[3] Technical Information Note TIN051, in light of the Eurobats Agreement, entitled 'Bats and Onshore Wind turbines' produced by Natural England
[4] Technical Information Note TIN051: 'Bats and Onshore Wind turbines' produced by Natural England

woodland and large hedgerows. Pipistrelle bats forage and commute at a height of between 5-10 m[5], and as the turbine blades will be located at a height of 15 m, at the lowest point, the possibility of collision is unlikely. Under the current guidance *Myotis* species are considered low risk to impacts from wind turbines. The risk associated to bats as a consequence of the development proposal is low for the following reasons: the site is small (1 turbine), in a windy exposed position, at a high altitude, in an agricultural field and there is no suitable foraging, commuting or roosting habitat within 61 m of the turbine. As the predicted risk for impact on bat populations is low it is not considered necessary for additional survey work.

The assessment of how the proposed wind turbine may affect bat populations was undertaken in line with the Technical Information Note TIN051, in light of the Eurobats Agreement, entitled 'Bats and Onshore Wind turbines' produced by Natural England. This report summaries that potential impacts on bats as a consequence of wind turbines are unlikely should a 50 m buffer area be present from foraging habitat. In the case, of the proposed development the nearest area of suitable bat foraging habitat is located > 60 m from the proposed turbine. Therefore, for reasons discussed and under the risk assessment guidelines set by Natural England, no significant risk on bat populations is anticipated during the operational phase of the turbine.

Other species: In addition, there is no evidence to indicate that the following protected species will be impacted by the proposed turbine during the operational or construction phase: polecat, red squirrel, water vole, mountain hare, otter and brown hare. Although habitats in the surrounding area may be of value to such species the application itself is not, and therefore no impact is envisaged.

[5] http://www.bio.bris.ac.uk/research/bats/britishbats/batpages/commonpipi.htm

5.4 Phase 1 Habitat Map

Figure 5: Phase 1 Habitat Survey Findings.

Figure 6: Showing the location of ecological features in relation to the development site.

Figure 7: Proposed turbine position with 50m and 100m radius lines.

6 EVALUATION & RECOMMENDATIONS

For reasons discussed in the report it is not considered that the proposed turbine will have any significant impact or protected species or sites during the construction or operation phase and in this respect there are no further habitat or species issues to consider and no requirement for additional ecological survey work in advance of the application being determined.

7 SITE IMAGES AND FIGURES

7.1 Site Images

Image 1: Looking west towards the application site.

Image 2: Habitats surrounding the application site.

Image 3: Habitats surrounding the application site.

Image 4: The application site looking southeast.

Image 5: Possible Badger sett in the mature woodland to the north (> 400m from the development).

Image 6: Mature beech tree in the woodland to the north.

Image 7: Salter Hill Plantation to the north.

Image 8: View looking towards the application site, in a northwest direction

Image 9: View looking towards the application site, in a south eastern direction

Image 10: Evidence of a bird attack in the woodland area, potentially by a sparrowhawk or fox

Image 11: A track separating the application site and the beech woodland

7.2 Additional Figures

Figure 8: Application site: 2km surrounding area.

Figure 9: Showing the location of the proposed turbine and grid connection (red line).

Figure 10: Showing additional protected areas within 10km of the site[6].

Figure 11: Showing additional protected areas within the wider area[7].

[6] http://www.natureonthemap.naturalengland.org.uk/map.aspx?m=nreserves
[7] http://www.natureonthemap.naturalengland.org.uk/map.aspx?m=nreserves

8 APPENDIX

8.1 Comments from Barnsley Metropolitan Borough Council

Planning and Regulatory Services
Assistant Director: Stephen Moralee BA (Hons) MBA
P.O. Box 604, Barnsley S70 9FE

Earthmill Ltd
Equinox 3
Audby Lane
Wetherby
West Yorkshire
LS22 7RD

My ref:
Your ref:
Enquiries to: Angela Bladen
Email: developmentmanagement@barnsley.gov.uk
Dial Direct: (01226) 772595
Fax: (01226) 772591
Date: 12 August 2014

Dear Sir/Madam

APPLICATION NO: 2012/1124/INVALID
DESCRIPTION: Erection of 1 no. 34.2m high wind turbine.
LOCATION: Dyson Cote Farm, Tofts Lane, Sheffield, S36 8YR

Thank you for your planning application in respect of the above. Unfortunately, your application is invalid and cannot be processed because:-

Ecology Survey

Need further photomontages - Agents needs to discuss with Case Officer Matthew Woodward on 01226 772287

Please provide another copy of the Zone of Theoretical Visibility (ZTV)

Please attach these documents to this letter and return to the above address as soon as possible, to enable us to process your application. If you require assistance or have any queries please telephone the officer named above.

NB: If you are sending an additional fee only please attach to this letter and return, do not send cheques without a covering letter, remembering to quote the relevant application number.

Yours faithfully

Stephen Moralee

Assistant Director, Planning and Regulatory Services