EVERGREEN ECOLOGY

PROPOSED TURBINE REPLACEMNT AT QUARRY HOUSE FARM

ECOLOGICAL APPRAISAL

JUNE 2026

DATE ISSUED:	**June 2026**
JOB NUMBER:	**EE1219**
REPORT NUMBER:	**001**
VERSION:	**V0.1**
STATUS:	**FINAL**

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ECOLOGY APPRAISAL

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1 INTRODUCTION

1.1.1 Evergreen Ecology Ltd was commissioned by Harrison Pick to undertake an Ecological Appraisal for a proposed turbine replacement at Quarry House Farm, Penistone Road, High Flatts, Denby Dale, Huddersfield, HD8 8XY, hereafter referred to as "the Site". This report has been produced to support a planning application for the proposed development which seeks to replace the existing Endurance E-3120 wind turbine, rated at 50kW, with a Vestas V29 turbine rated at 225kW. The new turbine will be sited in the same position as the current turbine. The existing turbine has a hub height of 24.6 metres and a blade tip height of 34 metres. The replacement turbine will have a hub height of 31.5 metres and a blade tip height of 46 metres. The proposal constitutes a straightforward repowering project and represents an efficient use of an already-approved site for renewable energy production.

1.1.2 This Ecological Appraisal Report has been produced with reference to current guidelines (Chartered Institute of Ecology and Environmental Management (CIEEM 2017)) and British Standard BS 42020:2013 (BSI 2013) which involves the evaluation of the potential presence of ecological receptors and adverse effects thereon. A desk based approach has been undertaken for the assessment as the proposed development utilises existing infrastructure and does not involve any habitat loss.

1.1.3 The purpose of the report is to satisfy the requirements of the National Planning Policy Framework (NPPF), identifying the likely presence of ecological receptors within or near the application site that could be subject to adverse effects arising from the proposed development. Where required further ecological surveys will be recommended to inform the baseline conditions and inform any mitigation requirements. An assessment of potential adverse effects is provided, although this is not a substitute for full Ecological Impact Assessment (CIEEM 2015), as well as any mitigation and enhancement opportunities where appropriate.

1.2 Site Description

1.2.1 The Site covers approximately 0.2 ha and is located approximately 1.6 km to the south west of the village of Denby Dale, West Yorkshire (central Ordnance Survey Reference SE 2189 0691). It comprises an existing hardstanding access through the existing farm and a farm track through a pasture field to the current turbine located within a modified grassland field. The Site is off Penistone Road and is located within a rural setting with surrounding pasture land.

1.3 Site Location

1.3.1 Figure 1 below displays the location of the Site within the wider landscape.

Figure 1 Site boundary in the wider landscape (magic.co.uk)



1.4 Relevant Legislation and Policy

1.4.1 This appraisal has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England including:

- UK Government's 25 Year Environment Plan (Defra, 2018);
- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (Defra, 2011);
- National Planning Policy Framework (NPPF) (DLUHC, 2023);
- The Natural Environment and Rural Communities (NERC) Act (HMSO, 2006);
- The Environment Act (Defra, 2021); and,
- Kirklees Local Plan Strategy and Policies (Kirklees Council, February 2019)

2 METHODOLOGY

2.1 Quality Assurance

2.1.1 This ecology appraisal was undertaken by Richard Laws (Principal Ecologist), who is an Ecologist with over 12 years' experience and a Full member of CIEEM. Richard has experience assessing sites for their ecological baseline, value and potential to support protected species.

2.2 Desk Study

2.2.1 A desk study was undertaken to review all the available existing ecological data for the Site and the surrounding area. This includes identifying any statutory designations and non-statutory sites within 2km of the site and 5km for European designated sites.

2.2.2 West Yorkshire Ecology records centre were not contacted for ecological data for the site. It was deemed the results of the search would not influence the recommendations or conclusions reached within this report when considering the proposed development, lack of habitats impacted, its location and desk based assessment being completed.

2.2.3 A Predictive Impact Assessment upon Birds was undertaken by Entotax Consultants UK for Universal Green Energy Ltd in 2010 for the original turbine development, which has been reviewed and informed this report.

2.2.4 A number of internet-based resources were used to locate the presence of NERC S.41 Priority and Local BAP Habitats and European Protected Species Licences.

2.2.5 A review of the previous planning application was undertaken for context and to identify any past constraints or mitigation implemented for the current turbine.

2.3 Legislation

2.3.1 For full details of legislation relating to all habitats and species discussed within this report visit http://www.legislation.gov.uk.

3 RESULTS AND EVALUATION

3.1 Designated Sites

3.1.1 Within 10km of the site there are a number of statutory designations:

- Local Nature Reserve (LNR) – Bretton Country Park
- Local Nature Reserve (LNR) – Upper Park Wood
- Special Area of Conservation (SAC) – Denby Grange Colliery Ponds
- Special Area of Conservation (SAC) – South Pennine Moors
- Special Protected Area (SPA) – Peak District Moors
- Site of Special Scientific Interest (SSSI) – Little Don Stream Section
- Site of Special Scientific Interest (SSSI) – Pye Flatts Meadows
- Site of Special Scientific Interest (SSSI) – Dark Peak
- Site of Special Scientific Interest (SSSI) – Honley Station Cutting
- Site of Special Scientific Interest (SSSI) – Spring Meadows, Alderman's Head and Cow Croft Meadows
- Site of Special Scientific Interest (SSSI) – Denby Grange Colliery Ponds

3.1.2 The site does fall within the Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ) for the Dark Peak SSSI designation, which is 6.6km away at is nearest point, for which the proposed development has been recognised as potentially causing an impact:

- *'Wind and Solar: Solar schemes with a footprint > 0.5ha, all wind turbines.'*

3.1.3 The Dark Peak SSSI, falls within the South Pennine Moors Special Protection Area (SPA) and Special Area of Conservation (SAC) and is designated for the following qualifying features:

- South Pennine Moors SAC is primarily designated for its European dry heaths, blanket bogs and old sessile oak woods with Ilex and Blechnum in the British Isles habitats. Other qualifying features but not a primary reason are Northern Atlantic wet heaths with *Erica tetralix*, transition mires and quaking bogs[1].

[1] JNCC (online) SAC citation. Available at: https://sac.jncc.gov.uk/site/UK0030280. Accessed 30/05/2026.

- South Pennine Moors SPA is designated for its important assemblage of breeding moorland and moorland fringe birds. *'The site qualifies under Article 4.2 by supporting, in summer, a diverse assemblage of breeding migratory birds of moorland and moorland fringe habitats including: golden plover, lapwing Vanellus vanellus, dunlin Calidris alpina, snipe Gallinago gallinago, curlew, redshank Tringa totanus, common sandpiper Actitis hypoleucos, short-eared owl Asio flammeus, whinchat Saxicola rubetra, wheatear Oenanthe oenanthe, ring ouzel Turdus torquatus and twite Carduelis flavirostris.'*[2]The South Pennine Moors have an important role in maintaining the breeding range of merlin, red grouse *Lagopus lagopus*, golden plover, dunlin, short-eared owl and twite with the designation being the southernmost assemblage in Britain.
- Dark Peak SSSI designation relates to the similar habitats and species detailed above, with a focus on nationally important blanket bogs, dwarf shrub heaths and upland breeding bird assemblages[3].

3.1.4 As the Site is wholly outside of the SSSI designation there are no direct impacts anticipated.

3.1.5 The proposed development has no pathway of causing any indirect impacts upon habitats within the above listed designations, and therefore there are no anticipated impacts on the SAC, SPA or SSSI qualifying features, nor upon any of the LNRs.

3.1.6 The site is located within a Wildlife Habitat Network for the area, designated as a Network Expansion Zone.

3.1.7 There is a Kirklees Local Wildlife Site (LWS) 'Turpin Hill', which lies roughly 1.6km to the north, designated as a small but diverse grassland site which includes a good example of the old hay meadow vegetation community. Given this distance from site and lack of ecological connectivity, no impacts are anticipated upon non-statutory designated sites and are not discussed further within this report.

[2]Natural England (2019) SPA Citation.[Online]. Available at : https://publications.naturalengland.org.uk/publication/4885083764817920. Accessed 30/05/2026 . Accessed 30/05/2026.
[3]Natural England 2024 National Character Profile:51 Dark Peak [Online]. Available at: https://publications.naturalengland.org.uk/file/5776166470287360 . Accessed 30/05/2026.

3.2 Habitats

3.2.1 As the proposed development involves the replacement of an existing turbine and is utilising existing infrastructure there will be no habitat loss. No indirect impacts on habitats have been identified when taking into consideration the proposed development type, location and surrounding adjacent habitats. Habitats will not be discussed further within this report.

3.3 Biodiversity

3.3.1 The proposed development falls under the de minimis exemption for Biodiversity Net Gain (BNG) as it meets the following criteria:

- Does not impact a priority habitat.
- Impacts less than 25 square meters of non-priority onsite habitat.
- Impacts less than 5 meters of non-priority onsite linear habitats

3.3.2 As the proposed development utilises existing hardstanding infrastructure there will be no net loss of biodiversity and it will not be discussed further within this report.

3.4 Species Evaluation

3.4.1 The following section identifies the protected and notable species which have the potential to be present on Site. This is based upon a review of the desk study, the availability of suitable habitat on site and ecological connectivity to suitable off-site habitats.

3.4.2 Where species are considered to be present and are likely to suffer adverse impacts as a result of the proposed development, these will be discussed further in the latter sections of the report.

Species

Bats

3.4.3 All bat species in Britain are listed under the Wildlife and Countryside Act (WCA) 1981 (as amended) and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. In addition, a number of bat species are listed as a Species of Principal Importance under NERC S.41. There are seven species of bat most commonly found within the Kirklees District, however the Site lies outside of the Kirklees District Council '*Bat Alert*' layer which '*represents areas that are in close proximity to habitat*

features suitable for bats and is therefore an increased likelihood of a bat roost being present', minimising potential impact.

Roosting Habitat

3.4.4 There is no suitable bat roosting habitat within the Site. Taking into consideration the relative isolation of the turbine within agricultural land there is limited potential for roosting habitat within the wider area with the closest being Quarry House Farm buildings approximately 210-350m away with limited connectivity.

Foraging and Commuting Habitat

3.4.5 The Site offers limited suitable habitat for foraging and commuting bats, consisting of a modified grassland pasture field. In comparison, areas of woodland, waterbodies, meadow and extensive hedgerows are located in the wider landscape, offering more optimal foraging and commuting habitats elsewhere. The nearest optimal habitat is areas of deciduous woodland, the closest being more than 450m to the north of the turbine, and then 690m to the south east.

3.4.6 Some sub-optimal commuting habitat is located with a hedgerow, which at its closest lies 55m to the north, but runs from east to west and has poor connectivity with suitable roosting habitat. Some limited foraging habitat is located with the small trees more than 50m to the west of the site at the field boundary. Both of these sites are outside of the 50m recommended buffer outlined in the Natural England's Technical Information Note TIN051[4] Bats and Onshore Wind Turbines.

3.4.7 There is limited sub-optimal habitat connecting the turbine location to the optimal habitat with immediate surrounding area comprising stone walls and modified grassland pasture. Due to the location (open and exposed) and extent of the Site, there is limited resource to support significant numbers or rarer bat species with only small numbers of pipistrelle bats anticipated. The open pasture may be suitable for noctule however there is a lack of suitable roosting habitat in the area and therefore unlikely to be present.

3.4.8 Although habitat is sub-optimal to support bats there is the potential for the replacement turbine to have an impact and will be discussed further in Section 4.

Birds

[4] TIN051: Bats and Onshore Wind Turbines [Online]. Available at: https://publications.naturalengland.org.uk/file/6122941666295808 . Accessed 30/05/2026.

3.4.9 All birds are afforded protection under the WCA (1981), with several species also listed as Species of Principal Importance under NERC S.41 and under Birds of Conservation Concern (BoCC).

3.4.10 No direct impacts are anticipated on breeding birds as no loss of habitat is to occur with the proposed development being a turbine replacement utilising the existing onsite infrastructure. However there is the potential for indirect impacts as the construction and operation of wind turbines on a site can cause displacement of birds through visual and acoustic disturbance[5]. Turbines can also have detrimental effects on breeding birds that are using a site for feeding. In addition, there is also a risk of bird collision with the moving turbine blades. Recent research[6] suggests that wind farm construction can have greater impacts upon birds than wind farm operation. It should be noted, however, that the reported negative effects during the construction period are based on studies in unenclosed upland habitats and that the findings may not be directly applicable to enclosed agricultural habitats where birds may be more habituated to disturbance. As the proposed replacement turbine has the potential to impact upon breeding birds they will be discussed further in Section 4.

[5] Pearce-Higgins, J.W., Stephen, L., Langston, R.H.W., Bainbridge, I.P. & Bullman, R. (2009). The distribution of breeding birds around upland wind farms. Journal of Applied Ecology, 46, 1323–1331.

[6] Pearce-Higgins, J.W., Stephen, L., Douse, A., Langston. R.H.W. (2012) Greater impacts of wind farms on bird populations during construction than subsequent operation: results of a multi-site and multi-species analysis. Journal of Applied Ecology, 49, 386–394, April 2012.

4 DISCUSSION

4.1.1 The development has the potential to impact upon the following ecological receptors which are discussed further in this section:

- South Pennine Moors SPA, SAC and SSSI
- Bats
- Breeding Birds

South Pennine Moors SPA/SAC/SSSI

4.1.2 The South Pennine Moors SPA/SAC/SSSI designated site qualifies under Article 4.2 of the EU Birds Directive by supporting, in summer, a diverse assemblage of breeding migratory birds of moorland and moorland fringe habitats. The surrounding habitat around the turbine has the potential to be functionally linked by supporting lapwing, dunlin, snipe, curlew, redshank and common sandpiper which are qualifying species of the SPA and SSSI. However given the distance between the Site and the designation its considered highly unlikely that qualifying species are utilising adjacent habitats. Habitats present, condition and status have not changed within the area since the existing turbine was constructed. As this is a replacement turbine it is anticipated that any small numbers of qualifying bird species of the SPA/SSSI utilising the surrounding habitats are acclimatised to the current disturbance from the existing turbine. Whilst the new turbine is taller with an increased tip height of 12m and has a slightly higher acoustic output, this is not anticipated to cause an increase in disturbance which would have a likely significant effect on the SPA/SSSI qualifying bird species. No other pathway has been identified to cause an impact to the designation. No further breeding bird survey or Habitats Regulation Assessment (HRA) is considered necessary.

Bats

4.1.3 A review of the habitats present within the surrounding area of the turbine location has been reviewed to determine likely quality and species present. Overall it is determined that the habitat is sub-optimal within the vicinity of the turbine and only small numbers of common bat species are likely to be present. Natural England's Technical Information Note TIN051[7] Bats and Onshore Wind Turbines; has been

[7] TIN051: Bats and Onshore Wind Turbines [Online]. Available at: https://publications.naturalengland.org.uk/file/6122941666295808 . Accessed 30/05/2026.

reviewed to determine the turbines potential risk to the anticipated bat species present. Turbines pose a medium risk to common and soprano pipistrelle bats when taking into consideration their behaviour and ecology. The collision fatality risk is also considered to be medium however impacts to the population is low as they are a common and widespread species. It is known that bats do not become acclimatised to turbines however they are known to develop avoidance. As this is a replacement of an existing turbine, it is anticipated that any small numbers of bats utilising the Site for foraging or commuting would likely avoid the turbine. Overall risk to bats onsite is considered to be very low to negligible based upon:

- Poor surrounding habitat to support significant numbers or species of bats,
- Sub-optimal commuting habitat linking the Site to the wider area;
- No roosting habitat onsite and limited opportunities in the wider area;
- Only common and widespread bat species anticipated to be present onsite in very low numbers for which turbines are of medium risk; and
- Small, open and exposed site with single turbine present.

Therefore, it is considered that the proposed development will not significantly impact upon the conservation status of bats at a local or wider level.

Breeding birds

4.1.4 The Predictive Impact Assessment upon Birds undertaken in 2010 identified limited suitability of the land to attract and support migratory or breeding bird assemblages, owing to the land management regime for the open modified pasture, the relatively high altitude of the site and it's significant exposure to prevailing winds, and the lack of proximal connecting habitat features.

4.1.5 With the proposed development being a turbine replacement there will be limited construction activity with current infrastructure already in place to support the new turbine. The decommissioning and installation of the new turbine is to be undertaken outside of the breeding bird season therefore no impacts are anticipated. As a turbine has been in existence for the past 14 years it is considered that any birds utilising the adjacent habitat for breeding will be acclimatised to the current acoustic output during operation. The potential for bird strike is also considered to be negligible with the turbine being a replacement. Taking the above into consideration it is considered that there will be no significant impact on breeding birds at a local or higher level.

APPENDIX 1 –Site Location Plan

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