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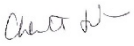
Ecological Walkover Report

Hazlehead Battery

Presented to **Banks Renewables**

Issued: February 2020

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Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
2	Final	7th February 2020	-			
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1.0 Context and Purpose

Delta-Simons was instructed by Banks Renewables ('the Client') to undertake an Ecological Walkover Survey of land at Hazlehead Wind Farm, Barnsley ('the Site'). The proposed development comprises a Lithium-ion battery, which will be housed in a shipping container, an inverter or power management unit, installation of a cable to connect to the existing sub-station on-Site and installation of a transformer. Access to the Site will utilise existing access to the windfarm.

The aims of the Ecological Walkover were to:

- Identify habitat types on the Site using the standard methodology devised by the Joint Nature Conservation Committee (JNCC, 2010);
- Identify areas of potential for protected species/ species of conservation concern within, and immediately adjacent to, the Site;
- Identify any invasive plant species included within Schedule 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended);
- Prepare a Phase 1 Habitat Plan of the Site; and
- Propose recommendations for further surveys, mitigation measures and potential ecological enhancements, where appropriate.

2.0 Legislation

Specific habitats and species of relevance to the Site receive legal protection in the United Kingdom under various pieces of legislation, including:

- National Planning Policy Framework (NPPF, 2019);
- The Conservation of Habitats and Species Regulations 2017;
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;

- The Natural Environment and Rural Communities Act (NERC) 2006;
- The Hedgerow Regulations 1997; and
- The Protection of Badgers Act 1992.

Where relevant, this appraisal takes account of the legislative protection afforded to specific habitats and species.

3.0 Methodology

3.1 Desk Study

A search for international statutory designated sites for nature conservation within 6 km of the Site was undertaken, together with a search for national statutory designated sites for nature conservation within 2 km of the Site centre, using the Multi-Agency Geographic Information for the Countryside (MAGIC) website.

In addition, free and publicly accessible Ordnance survey maps and aerial photographs were searched for waterbodies on, or within, 500 m of the Site boundary. This information has been used to assess the Site for its potential for amphibians.

Furthermore, a review of available documents submitted as part of the planning applications for Hazlehead Wind Farm and substation was completed along with an internet trawl for any relevant information.

3.2 Site Walkover

The habitats on the Site and on adjoining land to 100 m, were surveyed on 13th January 2020 by a Delta-Simons ecologist. A series of waterbodies south-east of the Site were surveyed up to 500 m.

The following was undertaken during the survey:

- Habitats were classified and mapped using the standard JNCC Phase 1 habitat classification and methodology (JNCC, 2010). Dominant plant species were recorded in each different habitat. The plant species nomenclature followed that of Stace (2010);
- Terrestrial habitats on-Site were surveyed for the presence of, or potential for the following protected or notable species:
  - Birds: All species with special reference to key species (such as those on Schedule 1 of the WCA, 1981 (as amended), England Biodiversity Priority Species (EBP) (previously UK Biodiversity Action Plan (UKBAP) species) and Birds of Conservation Concern (BoCC) (Eaton et al., 2015);
  - Amphibians: Great Crested Newt (GCN) *Triturus cristatus*;
  - Reptiles: common lizard *Zootoca vivipara*, adder *Vipera berus*, slow worm *Anguis fragilis* and barred grass snake *Natrix helvetica*; and
  - Mammals: bat (all species) and badger *Meles meles*.
- Off-Site aquatic habitats were assessed for their potential to support, and any signs of otter *Lutra lutra*, water vole, *Arvicola amphibius,* white clawed crayfish *Austropotamobius pallipes*, GCN, and barred grass snake; and
- The presence of any widespread terrestrial invasive species listed on Schedule 9 of the WCA 1981 (as amended) were recorded. These are Japanese knotweed, *Fallopia japonica* giant knotweed *Fallopia sachalinensis* hybrid knotweed, *Fallopia baldschuanica*, giant hogweed *Heracleum mantegazzianum*, Himalayan balsam *Impatiens glandulifera* and New Zealand pygmyweed *Crassula helmsii*.

4.0 Limitations

The survey was undertaken during the sub-optimal time of year for identifying plant species on the Site. However, at this Site the majority of the ground was bare ground or hardstanding with limited floral diversity and, therefore, potential misidentification of habitats or their value is not considered to be a significant constraint.

5.0 Results

Designated Sites

The Site sits approximately 2.31 km east of the South Pennine Moors Special Area of Conservation (SAC) and the Peak District Moors (South Pennine Moors Phase 1) Special Protection Area (SPA), both of which are underpinned by the Dark Peak Site of Special Scientific Importance (SSSI). The Peak District National Park is located 1.65 km south of the Site, at it's closest point, whilst the Moorland Line lies 450 m west of the Site, which is also designated as Upland Heathland, a UK Biodiversity Action Plan (BAP) Priority Habitat.

The Site falls within the Impact Risk Zone (IRZ) for the South Pennine Moors SAC, Peak District Moors SPA and Dark Peak SSSI, which requires the Local Planning Authority (LPA) to consult Natural England on the likely risks from specific development proposals. However, none of the listed potential impacts are expected as a result of the proposed development.

Habitats

The Site measures approximately 815 m^2 and is characterised by the existing Hazelhead Wind Farm Substation and Aux transformer, surrounded hardstanding. The southern and western portions of the Site comprised spoil from the previous land use as a quarry and landfill which has become colonised by ground flora.

Figure 1 shows the extent of habitat types and boundary features. Descriptions of the habitat types and dominant plant species found at the Site are provided below. Habitat descriptions are by broad habitat type, as listed in the Phase 1 Habitat Survey Manual (JNCC, 2010).

Habitats recorded on Site are:

Spoil

The southern and western sections of the Site comprised rocky substrate indicative of the land's former use as a quarry and landfill. This semi-permeable surface resulted in waterlogged ground and pools of standing water due to recent heavy rainfall. The ground was colonised with moss sp., with occasional soft rush *Juncus effusus* and marsh thistle *Cirsium palustre* (Appendix A – Photograph 1 and 2).

Building

A single storey brick-built structure with a pitched slate tiled roof was present on-Site, which served as the sub-station for the existing Hazlehead Wind Farm. A metal Aux Transformer unit was also present within the northern area of the Site (Photograph 1).

Hardstanding

Hardstanding surrounded the buildings in the northern section of the Site, comprising compressed hardcore and gravel.

Fence

A short post and wire fence bordered the gravel surrounding the battery storage unit towards the centre of the Site.

Species

Birds

The buildings at the Site were well sealed and did not provide any bird nesting opportunities. Furthermore, there was no structural vegetation on-Site to support a nest. The ground is anticipated to be regularly waterlogged due to the substrate and presence of moss, such that it is not considered ideal to support ground nesting birds.

The Site falls within a Countryside Stewardship Area for snipe *Gallingo gallingo*, curlew *Numenius arquata* and lapwing *Vanellus vanellus*, however, it is not currently managed for those species. Nesting birds are not considered to be a constraint at the Site and are not considered further in this Report.

Great Crested Newts (GCNs)

Whilst the Site supported waterlogged ground and pools of standing water at the time of the survey, no permanent waterbodies were present to support breeding amphibians. A review of OS Maps and aerial imagery indicated that there are at least 10 waterbodies within 500 m of the Site centre, the closest being approximately 40 m to the south-west. In addition, a network of shallow ditches cross the surrounding land. Previous surveys of the area undertaken for the development of the wind farm and associated infrastructure in 2006 did not consider GCNs to be a constraint due to the nature of the waterbodies, the acidic nature of the water in the area and terrestrial habitats affected. Furthermore, an internet search did not reveal any information to indicate the presence of GCNs in the local area.

The terrestrial habitat at the Site included hardstanding and spoil comprising a rocky substrate predominately colonised by moss. This is not considered to provide optimal habitat for GCNs since shelter from predators would be limited. In addition, the Site was not considered suitable for hibernation due to the waterlogged ground.

Reptiles

The Site is not considered optimal for the majority of reptile species since it comprised a rocky substrate, which impermeable nature resulted in waterlogged ground conditions and pools of standing water. The flora present indicates these are common conditions at the Site such that it does not provide suitable basking or hibernation opportunities for reptiles. If present within the local area, grass snake may utilise the Site for basking, although shelter from predators is limited and it is anticipated that any basking would be limited to the edges of the Site. Given the limited risk of reptiles occurring and the nature of the development, it is anticipated that should reptiles be present, they would disperse into surrounding habitat away from construction activity. Reptiles are, therefore, not considered to be a constraint at this Site and are not considered further within this Report.

Bats

The buildings at the Site were of relatively recent construction and were well sealed with no potential roost features identified. They were, therefore, assessed as having negligible Bat Roost Potential (BRP). The Site provided limited opportunities for foraging and commuting bats; however, it was unlit and when considered with the surrounding landscape, there is potential for bats to disperse over the Site.

Badgers

The Site was not considered suitable to support badger given the substrate type and waterlogged nature of the ground. No evidence of badger activity was recorded during the survey. Badger are, therefore, not considered to be a constraint at the Site and are not considered further within the Report.

Invasive Plants

There were no invasive plant species recorded on-Site during the survey.

Other Protected and Notable Species

There was not evidence of any other protected or notable species, or habitats that could support them, on-Site.

6.0 Conclusions

Designated sites-statutory sites/non-statutory sites

The Site lies approximately 2.31 km from the South Pennine Moors SAC and Peak District Moors SPA and associated SSSI designations. The proposed development does not meet any of the criteria for the associated IRZ, the habitats on Site are common and widespread and do not meet the criteria of the SAC designation and also the Site does not support the appropriate habitats to support the bird species that inhabit the SPA. There are, therefore, not anticipated to be any significant adverse impacts as a result of the proposed development on any international or national statutory designated sites identified.

Habitats

Overall the Site is considered to be of low ecological value due to the substrate present limiting floral diversity.

Species

In the unlikely event that GCNs do occur within the surrounding waterbodies, the risk of them dispersing onto Site it considered to be minimal due to the nature of the surrounding waterbodies and on-Site terrestrial habitat, and the nature and scale of the proposed development, however, a precautionary approach should be applied to mitigate any risk to this species.

Whilst the Site provides only limited opportunities for foraging and commuting bats within the context of the local area, any lighting at the Site has the potential to impact on bat behaviour and as such, if required, lighting should be sensitive and kept to the minimum required for health and safety.

7.0 Recommendations

Further Survey Requirement

The findings of the initial Site assessment are considered sufficient to inform the planning application and no further surveys are required at this time.

Species Protection

GCNs

Due to the limited potential for GCNs to occur within the local area, it is recommended that the following precautionary approach is applied during construction activities, that is proportionate to the nature and scale of the proposed development:

Toolbox Talk

- All site operatives, including contractors and sub-contractor staff, will receive a briefing to include details of the legal protection of GCN, the precautionary methods of working (outlined in this document), how to identify GCN and procedures to follow should the species be discovered during the works.

General Practices

- Stockpiling of materials will be kept to a bare minimum and restricted to specific agreed locations, ideally on hard standing or other unsuitable terrestrial habitat. Waste materials will be removed from the Site and disposed of at the earliest opportunity and should not be stockpiled to prevent amphibians using this as shelter. If materials need to be stored on-Site, they should be kept off the ground on pallets or similar or kept within storage containers to prevent amphibians sheltering underneath. Refueling and servicing vehicles/ machinery will be undertaken within a designated area with an impermeable base away from waterbodies or other significant ecological features. Fuel, oil and other potential pollutants are to be stored in bunded tanks in a designated area away from waterbodies. Spillages are to be cleared up immediately.

Hand Searching and Supervision of Topsoil Strip

- Prior to initial Site clearance works, an experienced newt surveyor holding a Natural England survey licence will undertake a hand search of the area if the works are to be undertaken during the active newt season (March – October, inclusive, but weather dependent). During the hand searching, any debris (e.g. logs and rubbish) would be lifted and removed from the working area and any areas of denser vegetation (i.e. tussocks of moss) would be parted to look for newts and other amphibians. Hand searching would be timed for immediately prior to the onset of works. Once an area has been cleared by the ecologist a topsoil strip will be undertaken. This will further reduce the suitability of the working area throughout the duration of the works, reducing the risk to GCNs and other amphibians.

Working Methods

- Any open excavations left overnight are to be covered to prevent amphibians becoming trapped and will be checked by a designated contractor prior to works commencing the following morning.

Procedure if GCNs are Found During Works

- If a GCN is found at any time during construction, all works should cease immediately and the ecologist will make an assessment of the situation and determine whether additional precautionary measures can be implemented, or whether a licence would be required before work proceeds. Guidance would be sought from Natural England, where necessary.

Bats

- If lighting is required at the Site it should be functional and directional and in line with current guidance (BCT, 2009; BCT, 2014; Stone, E.L. (2013). It should avoid excessive up-lighting and light spill.

Site Protection

All works on Site should follow an appropriate working methodology to avoid inadvertent damage to any habitats and associated fauna surrounding, the Site. All works should be undertaken in accordance with the UK governments 'Pollution Prevention for Business's' guidance (www.gov.uk); and

General Site Enhancement

Following the issue of the NPPF (2019), by the Ministry of Housing, Communities and Local Government, "Planning policies and decisions should contribute to and enhance the local environment by (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures…" ; and, therefore, we recommend the following principles of design should be followed:

- Installation of two bat boxes on new or retained buildings on Site. Bat boxes should be installed avoiding a southerly direction and a minimum height of 3 m. Consideration should be given to the location of any light installations and connectivity to surrounding habitat. Since the nearest turbine is more than 200 m to the north and habitat of greater foraging potential exists to the south, inclusion of bat roosting features at this location is not considered to conflict with the use of the wider site.

8.0 References

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Enclosed:

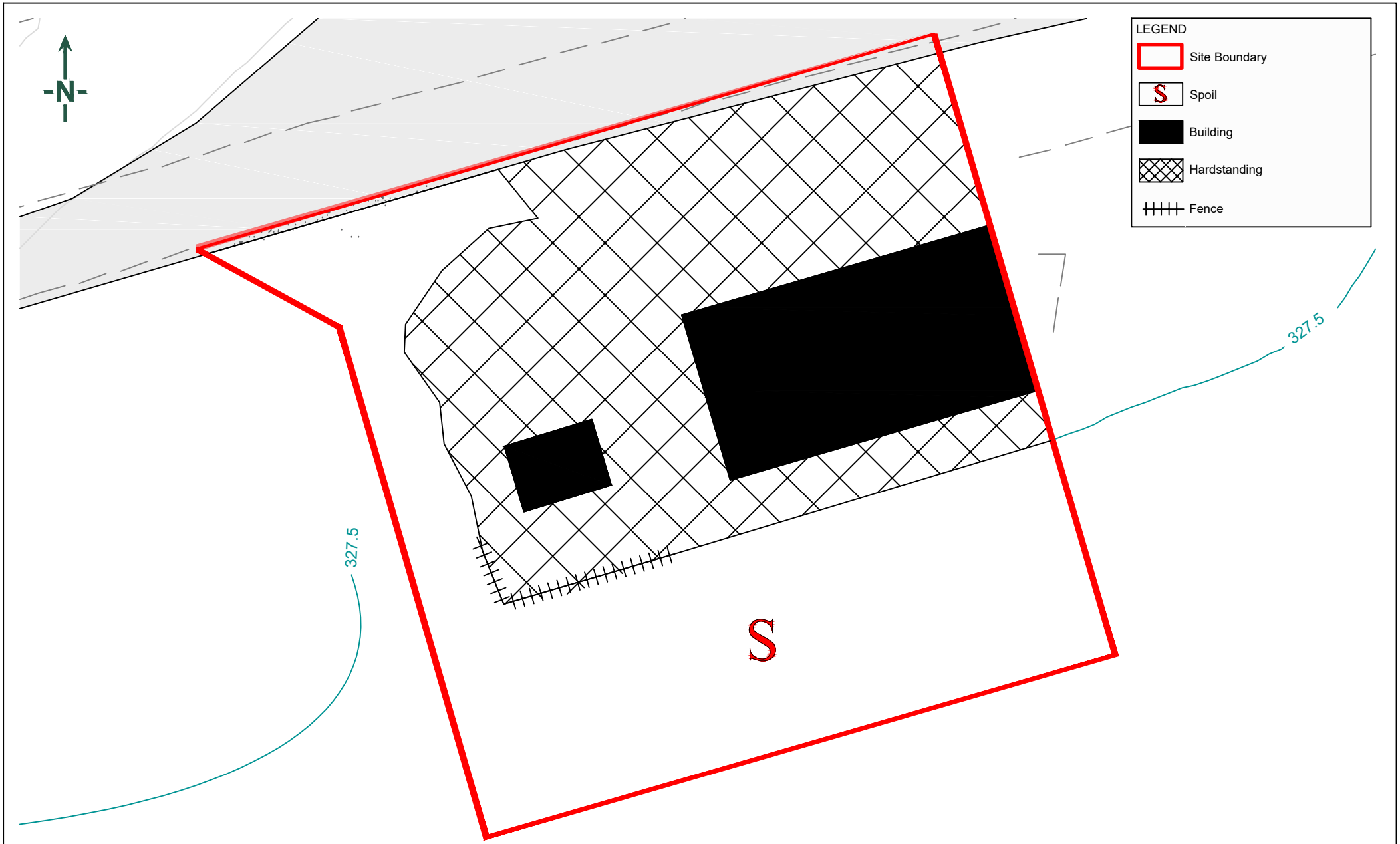
Figures

Figure 1 Site Layout Plan

Appendices

Appendix A Site Photographs

Figure 1 – Site Layout Plan



Site Plan Provided by Client

deltasimons
Environment - Health & Safety - Sustainability

TITLE:
Site Layout Plan
Hazelhead Wind Farm, Flint Lane, Holmfirth
South Yorkshire

DRAWN BY: CD	SCALE: Not to Scale	PROJECT NO: 19-2126.01
CHECKED BY: JB	REVISION: 1	FIGURE NO: 1
DATE: 31 January 2020		

Appendix A – Site Photographs

Site Photographs



Photograph 1 – Existing buildings within the northern extent of the Site and adjacent colonised spoil



Photograph 2 – Colonised spoil and pools of standing water