the ecology partnership

Shoreham Port Wind Turbines

Bird Strike Survey 2016

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Contents

1.0 INTRODUCTION 3
BACKGROUND 3
SITE CONTEXT AND STATUS 4
2.0 METHODOLOGY 5
BIRD STRIKE SURVEY 5
VANTAGE POINT SURVEY 5
LIMITATIONS 5
3.0 RESULTS 6
4.0 DISCUSSION 6
5.0 CONCLUSIONS 7
6.0 REFERENCES 8

LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

1.1 The Ecology Partnership Ltd was commissioned by Norvento Wind Energy Ltd to undertake a bird strike survey of two wind turbines on the southern spur of land forming the eastern arm and breakwater of Shoreham Harbour.

1.2 The preliminary ecological appraisal of the site by The Ecology Partnership in 2014 found that the site did not support habitats associated with protected bird species and that there would be no impacts on protected sites within the surrounding area. However, monitoring was recommended post-development to assess any potential impacts on birds, particularly bird strikes. This survey, therefore, is part of a 3-year monitoring scheme, which was conditioned as part of the permission notice by Adur District Council in late 2014. Condition 15 states:

"The development shall not operate unless and until a scheme has been submitted to and approved by the Local Planning Authority in respect of post development monitoring for 3 years from first electricity export to assess the number of bird strikes by the wind turbines and a scheme for any necessary mitigation measures. The approved scheme shall be operates as agreed.

Reason: In the interests of wildlife in accordance with 1995 Adur Local Plan policy AP6; Draft Adur Local Plan Policy 1; Sustainable Develoment Policy 2 Spatial Strategy; Policy 8 Shoreham Harbour Regeneration Area and Policy 32 Biodiversity; Draft Shoreham Harbour Joint Area Action Plan Policy JAAP2 South Quayside; and National Planning Policy Framework."

1.3 This report presents the results of The Ecology Partnership's surveys in and around the site, which aims specifically to determine if any bird strikes have occurred and if so, which species have been affected by the scheme.

1.4 Section 2 of this report sets out the methodologies of The Ecology Partnership's surveys. In section 3 the results of the surveys are presented. Discussions and implications for

mitigation are found in section 4. Conclusions drawn from the report are presented in section 5.

Site Context and Status

1.5 The site is situated on the south coast adjacent to the English Channel and Shoreham Harbour. It is bounded to the north by the industrial premises of Shoreham Port and to the east and west by the beach and coastal defences, with the beach and sea located to the south. The aerial photograph below (Figure 1) shows the site and its immediate surroundings. The red line depicts the approximate site boundary and survey area.



Figure 1: Approximate location of the red line boundary

1.6 The site itself does not fall within or adjacent to any statutory or non-statutory designations. The nearest designation is the Shoreham Beach Local Nature Reserve, which is approximately 0.8km west of the site. Given the scale of the development and its distance from the LNR, it was considered that there would be no direct or indirect impacts on this protected area. There were no important habitats on site and it was largely devoid of vegetation.

1.7 Two 100KW medium-sized (34.5m from base to blade tip) wind turbines were built on site and completed in 2016. They are located along the northern edge of the site, roughly 30m apart.

2.0 Methodology

Bird Strike Survey

2.1 A bird strike survey was carried out by ecologists Emma Bagguley BSc (Hons) MSc ACIEEM and Natalie Kay BSc (Hons) MSc GradCIEEM on 18th October 2016. This involved searching for and identifying the remains of any birds which had collided with the wind turbines. A route around both turbines was walked as much as access would allow to ensure that any potential remains were not missed.

Vantage Point Survey

2.2 Once this survey was completed, the surveyors then carried out a vantage point survey. This involved observing the flight path of birds flying close to the site, particularly species that had been identified as being at risk of collision. These included gulls, including Mediterranean gull, starling, hobby and peregrine. Surveyors were positioned where there was a clear line of site of both turbines and any birds flying around the site.

Limitations

2.3 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment.

2.4 This bird strike assessment provides a preliminary view of the likelihood of birds being affected by the turbines, based on the any direct evidence on site and the proximity of flight paths. It should not be taken as providing a full and definitive survey of bird species affected. The assessment is only valid for the time when the survey was carried

out. Additional surveys may be recommended if, on the basis of this assessment it is considered reasonably likely that there are significant impacts on birds occurring.

3.0 Results

3.1 No dead birds were found anywhere in or around the site in the vicinity of the turbines. All areas of the beach and public footpath were searched. It should be noted that it was a high tide at the time of the survey with waves coming right up to the public walkway. It should also be noted that neither of the wind turbines were on at the time of the survey as one was being checked by an engineer.

3.2 During the vantage point survey, a number of bird species were seen to be flying within 250m of the turbines. These included greater black-backed gull (*Larus marinus*), herring gull (*Larus argentatus*), yellow-legged gull (*Larus michahellis*), cormorant (*Phalacrocorax carbo*), turnstone (*Arenaria interpres*), carrion crow (*Corvus corone*) and common starling (*Sturnus vulgaris*). There were also numerous juvenile gulls observed but these could not be identified to species.

4.0 Discussion

4.1 No dead birds were found anywhere around the two turbines. However, it must be noted that high tides are likely to wash away any carcasses located on the beach front. It is also possible that any bird remains would be scavenged by foxes or other birds including gulls.

4.2 This means that in addition to the collision surveys, recordings by the Shoreham Port Authority, who manage this area, will be crucial in providing an overall indication of any impacts. According to the Bird Monitoring Scheme submitted by Norvento enerxia, any collisions reported to the Shoreham Port Authority by staff and members of the public will be recorded and reported to the appointed consultant. So far no collisions have been reported.

4.3 In terms of flight paths, a number of species were recorded within 250m of the turbines during the survey, only a few individuals were observed. Activity was concentrated on the beach with a handful of passes near to the turbines. These observations were made whilst the turbines were off, however, and so bird behaviour may be different when the blades are turning as opposed to when they are still. Therefore, the next survey should be conducted when the turbines are moving.

4.4 Notwithstanding this, considering the low number of turbines present, their medium size and the fact that there are warehouses situated immediately behind, it is considered unlikely that this small area is an important flight path for many birds and that the species observed in the vicinity could easily fly around the turbines.

4.5 Monitoring will need to continue for the next 3 years with two visits a year, one in autumn (October) and the other in spring (March). Given the small scale of this project, it is considered that this survey effort along with reports by the Shoreham Port Authority are sufficient for monitoring impacts at this site.

5.0 Conclusions

5.1 No dead birds were found anywhere around the two turbines on site and no collisions have been reported so far. The next survey is to be carried out in March 2017 should take place when the turbines are moving and at low tide to ensure that the whole beach is visible to assess for the presence of carcasses.

5.2 Further surveys are required over the next 3 years (2016-2019) to accurately assess any impacts of the turbines in addition to records collected and reported by Shoreham Port Authority.

6.0 References

Cook, A.S.C.P., Johnston, A., Wright, L.J. & Burton, N.H.K. (2012) A review of flight heights and avoidance rates of birds in relation to offshore wind farms. *BTO Research Report 618*, 1-61.

BirdLife International (2003) *Windfarms and Birds: An analysis of the effects of windfarms on birds and guidance on environmental assessment criteria and site selection issues.* Council of Europe.

Bright, J.A., Lnagston, R. & Anthony, S. (2009) *Mapped and written guidance in relation to birds and onshore wind energy development in England.* Royal Society of the Protection of Birds.

Natural England (2010) *Technical Information Note TIN069 Assessing the effects of onshore wind farms on birds.* Available from: www.naturalengland.org.uk [Accessed 18.10.2016]

Internet resources:

Google Earth: www.earth.google.co.uk

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