

## Appendix 7.6 Ecology Scoping Report

This page is intentionally blank.



MacArthur  
Green

# Cumberhead West Wind Farm

## Ecology Scoping Report Technical Appendix 7.6

---

**Date:** 30 October 2020

**Tel:** [REDACTED]

**Web:** [www.macarthurgreen.com](http://www.macarthurgreen.com)

**Address:** 93 South Woodside Road | Glasgow | G20 6NT

---





**Cumberhead West Wind Farm:  
Ecology Scoping Report**

---

**Prepared by:** Rafe Dewar  
**Reviewed by:** Claudia Gebhardt

**Date:** 10 October 2019

**Tel:** [REDACTED]  
**Web:** [www.macarthurgreen.com](http://www.macarthurgreen.com)  
**Address:** 93 South Woodside Road | Glasgow | G20 6NT

---

**Document Quality Record**

<b>Version</b>	<b>Status</b>	<b>Person Responsible</b>	<b>Date</b>
0.1	Draft	Rafe Dewar	22/07/2019
0.2	Reviewed	Claudia Gebhardt	30/07/2019
0.3	Updated	Rafe Dewar	06/08/2019
1	Internal Approval	Rafe Dewar	10/10/2019

**CONTENTS**

1 INTRODUCTION ..... 1

2 METHODOLOGY..... 1

    2.1 Desk Based Study ..... 1

    2.2 Designated Sites..... 3

    2.3 Field Survey Requirements..... 3

3 REFERENCES ..... 5

4 APPENDIX 1: ECOLOGICAL ACTIVITY AT OTHER LOCAL SITES ..... 6

**LIST OF TABLES**

Table 1 Timeline of baseline ecological surveys carried out at nearby wind farm sites ..... 2

Table 2 Timing of various ecological surveys carried out at nearby wind farm sites ..... 2

Table 3 Designated sites within 5km of Douglas West Wind Farm Extension..... 3

**LIST OF FIGURES**

Figure 1 Proposed Development Site and Local Wind Farms

## **1 INTRODUCTION**

This report sets out the planned ecology survey requirements for the proposed Cumberhead West Wind Farm (the “proposed development”).

The proposed development site (‘the site’) is located within an area of active commercial forestry within the larger Cumberhead Forest complex, and is adjacent to the north eastern extent of the Muirkirk Uplands Site of Special Scientific Interest (SSSI) which is designated for its blanket bog habitats. The site adjoins the existing cluster of operational and consented wind farms around Hagshaw Hill, known as the ‘Hagshaw Cluster’.

Ecological surveys have regularly taken place for wind farm projects in the immediate vicinity of the proposed development over the last 15 years (Table 1). It is therefore considered to be the case that the ecological baseline conditions within the local area are well known.

This report summarises the existing information available for the proposed development site and surrounding area, and outlines which further ecological surveys are considered, and are not considered, necessary to allow a robust environmental impact assessment for the proposed development.

## **2 METHODOLOGY**

The baseline conditions within the proposed development site and surrounding area will be determined in the environmental impact assessment via a combination of a desk study and field surveys.

### **2.1 Desk Based Study**

The desk study will gather ecological information from a variety of online sources and consultation with conservation organisations, such as those listed below:

- National Biodiversity Network NBN Atlas Scotland (<https://scotland.nbnatlas.org>); and
- Scottish Natural Heritage, including Sitelink (<https://sitelink.nature.scot/home>).

In addition, ecological information available in the public domain relating to applications of the following local wind farm projects (see Figure 1) will be referred to:

- Douglas West & Dalquhandy DP Renewable Energy Project (DW);
- Douglas West Community Wind Farm (DWCW);
- Douglas West Extension Wind Farm (DWX);
- Dalquhandy Wind Farm (DQ);
- Hagshaw Hill Extension Wind Farm (HH);
- Hagshaw Hill Repowering Wind Farm (HHR);
- Galawhistle Wind Farm (GA);
- Nutberry Wind Farm (NU);
- Cumberhead (Nutberry Extension) Wind Farm (CU);



- Auchrobert Wind Farm (AR);
- Kype Muir Wind Farm (KM);
- Kype Muir Extension Wind Farm (KMX); and
- Dungavel Wind Farm (DG).

This information includes scoping reports, environmental statements and consultation responses from relevant stakeholders.

A timeline of baseline surveys carried out for the above wind farm projects is presented below in Table 1, with specific ecology survey dates shown in Table 2. Results of these surveys are summarised in Appendix 1.

**Table 1 Timeline of baseline ecological surveys carried out at nearby wind farm sites**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
HH	■														
DG	■														
NU		■													
GA					■	■									
KM					■	■	■								
DWCW						■	■	■	■						
AR								■	■						
KMX										■					
DQ								■	■						
CU										■	■	■			
DW									■	■	■	■		■	
HHR															■
DWX															■

**Table 2 Timing of various ecological surveys carried out at nearby wind farm sites**

Project	Phase 1	NVC	Protected Species	Bats	GCN	Fish
Hagshaw Hill Extension	2004	-	2004	2004	-	-
Dungavel	2004	2004	2004	-	-	-
Nutberry	2005	2005	2005	2005	-	-
Galawhistle	2008-09	2009	2008-09	2008-09	-	2009
Kype Muir	2010	2010	2010	2010	-	2010
DWCW	2010	2012	2009-10	2010	2012	2010
Auchrobert	2011-12	2011-12	2011-12	2012	2012	-
Kype Muir Extension	2013	2013	2013	2013	-	-
Dalquhandy	2011	2012	2011-12	2011-12	2011-12	-
Cumberhead	2013	2014	2014	2014	2014	2014
Douglas West	2014	2014	2014, 2017	2014-15	2014-15	2012
Hagshaw Hill Repowering	2018	2018	2018	2018	-	-
Douglas West Extension	2018	2018	2018	2018	-	-

## 2.2 Designated Sites

Table 3 below details the designated sites located within 5 km of the proposed development site that have ecological interests.

**Table 3 Designated sites within 5km of Cumberhead West Wind Farm**

Name	Distance	Qualifying interests	Status
Muirkirk Uplands SSSI	Adjacent to site	Blanket bog	Unfavourable No change
Coalburn Moss SAC and SSSI	3.8km	Active raised bog Degraded raised bog	Favourable Maintained Unfavourable Recovering
Blood Moss and Slot Burn SSSI	4.8km	Blanket bog	Unfavourable No change

It is not anticipated that an appropriate assessment under the Habitats Regulations Appraisal process will be required for any Natura 2000 site, with no connectivity of habitats (blanket bog) likely for the closest Special Area of Conservation (SAC), at 3.8km distant (i.e. no likely significant effects are predicted). Due to its proximity to the site, effects on the Muirkirk Uplands SSSIs will be assessed as part of the EIA process.

## 2.3 Field Survey Requirements

Based on the information presented above, and the survey data available from the various projects (see Appendix 1), the following ecology surveys have been/are being carried out for the proposed development site in 2019:

- Habitats:** Phase 1 habitat surveys were undertaken on site in 2013 as part of the Cumberhead Wind Farm project. An updated NVC Habitat survey was carried out in 2019 within up to a 300m buffer of all planned infrastructure to allow for indirect effects on Ground Water Dependent Terrestrial Ecosystems and microsites. The vegetation was surveyed by suitably qualified and experienced botanical surveyors using the NVC scheme (Rodwell, 1991-2000; 5 volumes) and in accordance with NVC survey guidelines (Rodwell, 2006).
- Protected species:** within up to 250m of buffer of planned infrastructure, targeted towards terrestrial mammal species likely to be present, based on results from other local wind farm projects (see Appendix 1 - likely to be badger and otter). The surveys will also include checks for any suitable bat roost structures. Surveys will follow the species specific survey guidelines (for otter as described in Bang & Dahlstrøm (2001), Sargent & Morris (2003) and Chanin (2003); for badger as described in Neal and Cheeseman (1996), Bang and Dahlstrøm (2001), and SNH (2001).
- Great crested newts:** based on the absence of great crested newts at other project sites, it is considered very unlikely that the species is present on site. It was agreed with SNH during consultation for the recent Hagshaw Hill Repowering Wind Farm and Douglas West Extension Wind Farm application processes that the species is likely to be absent from the local area. No specific surveys are therefore planned.
- Bats:** 3 x seasonal temporal (static detector) surveys were undertaken from June to September 2019 from 14 locations within the site, for a minimum of 10 nights per survey. Static detector surveys have followed guidelines as described in SNH et al. (2019) and data will be analysed using

the Ecobat tool<sup>1</sup>. Checks during protected species surveys did not identify any potential roost structures, and no further surveys were deemed necessary. Appendix 1 shows that the same bat species were consistently recorded across local wind farm project sites. Based on the results of detector surveys and roost checks in 2019, and roost and activity surveys carried out at local wind farm project sites, it is concluded that sufficient information will exist to be able to robustly assess potential effects on bats.

- **Fish:** a fisheries and freshwater pearl mussel habitat assessment will be undertaken in 2019, to determine the likely presence of species, and their potential usage of watercourses within and adjacent to the site. Based on the results from this, and the information available from other local wind farm projects (particularly any which share the same catchment of watercourses) it is considered that sufficient information exists to be able to robustly assess potential effects on fish and freshwater pearl mussel.

---

<sup>1</sup> <http://www.mammal.org.uk/science-research/ecostat/>

### 3 REFERENCES

- Bang, P., and Dahlstrøm, P. (2001). *Animal Tracks and Signs*. Oxford University Press, Oxford.
- Chanin, P. (2003). *Monitoring the Otter (Lutra lutra)*. Conserving Natura 2000 Rivers Monitoring Series No.10 English Nature, Peterborough.
- Neal, E., and Cheeseman, C.L. (1996). *Badgers*. Poyser Natural History, London.
- Rodwell, J.S. (Ed), et al. (1991 – 2000). *British Plant Communities* (5 volumes). Cambridge University Press, Cambridge.
- Rodwell, J.S. (2006). *NVC Users' Handbook*. ISBN 978 1 86107 574 1.
- Sargent, G., and Morris, P. (2003). *How to Find and Identify Mammals*. The Mammal Society, London.
- SNH (2001). *Scotland's Wildlife: Badgers and Development*. SNH, Battleby, Perthshire.
- Scottish Natural Heritage, Natural England, Natural Resources Wales, Renewable UK, Scottish Power Renewables, Ecotricity Ltd, the University of Exeter & Bat Conservation Trust (BCT). (2019). *Bats and Onshore Wind Turbines: Survey Assessment and Mitigation*.

#### 4 APPENDIX 1: ECOLOGICAL ACTIVITY AT OTHER LOCAL SITES

A summary of the ecological findings for other local wind farm projects is presented below. The location of these projects is shown in Figure 1.

Species	Hagshaw Hill Extension	Dungavel	Nutberry	Galawhistle	Kype Muir	DWCW	Auchrobert	Kype Muir Extension	Dalquhandy	Cumberhead	Douglas West	Hagshaw Hill Repowering	Douglas West Extension
<b>Badger</b>	No evidence	Present	Present	Present	Present	Present	Present	No evidence	Present	Present	Present	Present	Present
<b>Otter</b>	No evidence	Present	No evidence	Present	Present	Present	Present	Present	Present	Present	Present	No evidence	No evidence
<b>Water Vole</b>	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence
<b>Pine Marten</b>	Not surveyed	No evidence	Not surveyed	Not surveyed	Not surveyed	Not surveyed	No evidence	Not surveyed	Not surveyed	No evidence	No evidence	No evidence	No evidence
<b>Red Squirrel</b>	No evidence	No evidence	No evidence	No evidence	Not surveyed	No evidence	No evidence	Not surveyed	No evidence	No evidence	No evidence	No evidence	No evidence
<b>Great Crested Newt</b>	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	No evidence	No evidence	Not surveyed	No evidence	No evidence	No evidence	Not surveyed	Not surveyed
<b>Common Pipistrelle</b>	Not surveyed	Not surveyed	Not surveyed	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
<b>Soprano Pipistrelle</b>	Not surveyed	Not surveyed	Not surveyed	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
<b>Nathusius' Pipistrelle</b>	Not surveyed	Not surveyed	Not surveyed	No evidence	Present	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence
<b>Myotis spp.</b>	Not surveyed	Not surveyed	Not surveyed	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
<b>Nyctalus spp.</b>	Not surveyed	Not surveyed	Not surveyed	No evidence	Present	Present	Present	Present	Present	Present	Present	Present	Present
<b>Brown Long-eared Bat</b>	Not surveyed	Not surveyed	Not surveyed	Present	Present	No evidence	Present	No evidence	No evidence	Present	Present	No evidence	Present
<b>Brown Trout</b>	Present	Present	Present	Present	Present	Present	Not surveyed	Present	Not surveyed	Present	Present	Not surveyed	Not surveyed
<b>Atlantic Salmon</b>	No evidence	No evidence	Present	No evidence	No evidence	No evidence	Not surveyed	No evidence	Not surveyed	No evidence	No evidence	Not surveyed	Not surveyed
<b>European Eel</b>	No evidence	No evidence	No evidence	No evidence	No evidence	No evidence	Not surveyed	No evidence	Not surveyed	No evidence	No evidence	Not surveyed	Not surveyed

