

DORMOUSE SURVEY REPORT

USKMOUTH POWER STATION

On behalf of SIMEC Atlantis Energy



ECO00312 Uskmouth Power
Station
Dormouse Survey Report
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24 December 2019

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ECO00312-ECO-006. Dormouse Survey Plan

1 INTRODUCTION

- 1.1.1 RPS were commissioned by SIMEC Energy Atlantic Ltd to undertake a presence/ likely absence survey for dormouse *Muscardinus avellanarius* at Uskmouth Power Station, located near Nash, Newport in South Wales, which is referred to as the Site. The dormouse survey area covered suitable woodland and scrub habitat within and adjoining the proposed development areas. The survey area was centred on SN 141 072 and the coverage of the site is illustrated on the Dormouse Survey Plan (Drawing Number ECO00312-ECO-006).
- 1.1.2 The purpose of the dormouse surveys was to determine the presence or likely absence of dormouse within suitable on-site habitats.
- 1.1.3 Areas of habitat suitable for dormouse are located along the north, east and south of the site. This comprises the following habitats which were included within the dormouse nest tube survey:
- Julian's Gout Land SINC (woodland) and adjoining scrub north of the railway line
 - Dense mixed species scrub bounding the Laydown Area
 - Scrub woodland on the western boundary of the Coal Storage Area
 - Scrub on the southern boundary of the Coal Storage Area
 - Scrub woodland outside the site north of the cooling towers
- 1.1.4 Habitat within the survey area adjoins linear woodland on the boundary of the Sewage Treatment Works and has connectivity to extensive scrub habitat on either side of the railway line and in the Alpha Steel SINC to the north-east of the site.

1.2 Local Status

- 1.2.1 The local record centre (SEWBrEC) had no past records of dormouse within 2km of the Uskmouth power station in the desk study undertaken in September 2018.
- 1.2.2 Old mammal nests most probably made by dormouse have been found in nest tubes placed in dense scrub at Pye Corner in 2018 (RPS pers comm), approximately 1.3km to the north-east of the site. There is a network of hedgerow field boundaries and linear belts of scrub associated with the railway line and the former industrial site to the north of Uskmouth Power Station which creates partial connectivity between the proposed development site and Pye Corner.

1.3 Legislation

- 1.3.1 Dormice are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and are also included on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 as European Protected Species. This legislation protects dormice from killing, injury, and disturbance and protects breeding sites and resting places from damage and destruction. The dormouse is also a Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016 and UKBAP priority species. National objectives and targets include the maintenance of the geographical range and viability of existing Dormice populations to ensure that it remains in favourable conservation status.

2 METHODS

2.1 Nest Tube Locations

- 2.1.1 A total of 79 nest tubes were installed on 31st August 2018, covering all areas of suitable habitat within the site. The locations of the nest tubes are shown in the Dormouse Survey Plan (Drawing Number: ECO00312-ECO-006). Nest tubes were installed at the recommended spacing of 20m (Chanin & Woods 2003).

2.2 Survey Effort

- 2.2.1 The dormouse survey guidelines provide recommendations on the minimum survey effort for presence / absence surveys. A method is outlined for quantifying survey effort based on the number of nest tubes used and the likelihood of encountering dormice during each month between April and November (when dormice are typically active). This method allots each month from April to November a value, referred to as an 'index of probability' score. This reflects the relative likelihood of dormice nests being present in the nest tubes in that month. The 'index of probability' scores for each month are given in Table 2.1.
- 2.2.2 The survey effort is calculated by totalling the index of probability scores for each month in which nest tubes are installed. A total survey effort score of 20 is considered to be the minimum requirement to determine the presence / likely absence of dormouse.

Table 2.1: Dormouse survey months and corresponding index of probability scores

Survey Month	Index of Probability Scores*
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

*Based on 50 nest tubes placed in suitable habitat at 20m spacing

- 2.2.3 The nest tubes were inspected on the following dates for any signs of dormouse occupation or evidence of activity by small mammals or other species was recorded:
- 28th September 2018
 - 23rd October 2018
 - 23rd November 2018
 - 29th April 2019
 - 30th May 2019
 - 27th June 2019
 - 29th August 2019
- 2.2.4 All the survey inspections were specifically undertaken in dry weather to avoid the potential for individuals to be disturbed and leave their nest in the wet weather. The survey effort covered

September 2018 to August 2019, achieving an Index of Probability score of 25 compared to the minimum requirement of 20.

2.3 Limitations and Constraints

- 2.3.1 The scrub and woodland habitat largely comprise shrub willows *Salix* sp., hawthorn *Crataegus monogyna* and alder *Alnus glutinosa*, extensive thickets of bramble *Rubus fruticosus* agg., hawthorn and the non-native butterfly bush *Buddleia davidii*.
- 2.3.2 Hazel *Corylus avellana* is largely absent and an additional hazel nut search survey for signs of hazelnuts opened by dormice was not possible.
- 2.3.3 Parts of the dense scrub habitat to the south of the railway line were impenetrable and nest tubes could not be placed in this location. The area largely comprises sub-optimal habitat dominated by butterfly bush with some hawthorn adjoining the banks of drainage channels. Alternative access routes were used to place nest tubes throughout the adjacent woodland and scrub to the north of the railway line and around the Laydown Area.
- 2.3.4 There are therefore no constraints which adversely affected the survey coverage or the validity of survey finding.

3 RESULTS

3.1 Potential Dormouse Habitat

- 3.1.1 Within the site are habitats with the potential to be utilised by dormouse including areas of scrub and woodland that will be permanently lost due to the development proposals.
- 3.1.2 Connectivity between the on-site habitat is limited, with the main connections between suitable dormouse habitat within the site and surrounding landscape being at the north-east of the site in habitat to the north and south of the railway. The River Usk to the north and extensive reedbeds in the Newport Wetlands to the south are significant barriers to dormouse movement into the on-site habitat.

3.2 Nest Tube Survey

- 3.2.1 No signs of dormouse were recorded within either the on-site or off-site habitat during the nest tube survey visits. The results of the nests tube survey are summarised in Table 3.1.

Table 3.1: Summary of nest tube survey results

Survey visit Date	Dormouse signs found in nest tubes	Other species signs found in nest tubes	Location
28/09/2018	None	None	-
23/10/2018	None	None	-
23/11/2018	None	<i>Apodemus</i> sp. nest	Scrub woodland adjoining the site north of the cooling towers (Tube 79)
29/04/2019	None	Active bird nest	Scrub on the southern boundary of the Coal Storage Area (Tube 62)
30/05/2019	None	None	-
27/06/2019	None	None	-
29/08/2019	None	Wood mouse nest	Woodland - Julian's Gout Land SINC (Tube 29)

- 3.2.2 There were no significant constraints on the survey, which was undertaken between September – November 2018 and April – August 2019 in accordance with the Dormouse Conservation Handbook guidelines. A survey effort score of 25 has been achieved with a minimum of 20 required for a full dormouse presence/absence survey. The surveys covered all suitable dormouse habitats within and adjoining the application site considered to have potential to be utilised by dormice.

4 CONCLUSION

- 4.1.1 Potential dormouse habitat within the site includes the woodland within Julian's Gout Land SINC, dense scrub/woodland on the southern side of the South Drain and the linear block of scrubby woodland between the northern boundary of the power station and intertidal areas of the River Usk.
- 4.1.2 Overall the habitats within and adjoining the site do not have strong connectivity with areas of high value dormouse habitat in the wider landscape, reducing the likelihood of a dormouse population territory falling within or overlapping the site but there are narrow linear belts of scrub and woodland along the sides of the railway line which are connected to extensive established scrub and regenerating woodland 1km to the north.
- 4.1.3 The survey confirmed the absence of any nests within the nest tubes placed in suitable habitats within the site. Considering the optimum survey conditions and absence of dormouse signs the survey indicates the very likely absence of a dormouse population using habitats within the power station site and this species would not require further consideration in relation to any developments within the site.

5 REFERENCES

Bright, P.W., Morris, P.A and Mitchell-Jones, T., 2006. *The Dormouse Conservation Handbook - Second edition*. English Nature, Peterborough.

Chanin, P. and Gubert, L. (2012). Common dormouse (*Muscardinus avellanarius*) movements in a landscape fragmented by roads. *Lutra* 55:3-15.

FIGURES

- ECO00312-ECO-006. Dormouse Survey Plan



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- Survey area
- Dormouse tube

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