

**Bayfields, Chepstow**  
Dormouse Survey

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# 1 Methods

## Desk study

- 1.1 A desk study was undertaken for data held on dormouse by the South East Wales Biodiversity Records Centre (SEWBRc) on 29 March 2017. The search covered an area extending to approximately 2 km around the proposed development. Records of dormouse held by the National Biodiversity Network (NBN)<sup>1</sup> were also interrogated for the Site and a perimeter of 5 km.
- 1.2 Aerial photographs from Google Earth and Ordnance Survey maps from <http://www.getamap.ordnancesurvey.co.uk> (accessed in April 2017) were used to provide landscape context for the site to inform the optimum locations for sampling for dormouse within the Site.

## Field survey

- 1.3 Dormouse survey work was completed by Niall Lusby and Gareth Lang<sup>2</sup> and undertaken in accordance with the best practice survey guidance as set out in English Nature's Dormouse Conservation Handbook (English Nature, 2006). Under this guidance it is recommended that to determine presence/absence within a site a minimum of 50 nest tubes at a spacing of 15-20 m intervals need to be put out in suitable habitats for several months, and these tubes then need to be checked periodically for indications of use by dormouse. The indications of use include finding animals in residence within the tube during the survey or finding a nest characteristic of the species. Dormouse typically make neat nests comprising tightly woven honeysuckle bark (or similar), along with green leaves, normally hazel, though other species are used. This differs from the nests of other small mammals which are typically much messier and lack a distinct structure.
- 1.4 Each month receives a score based on the probability of dormouse occupying the tubes in that month. For a survey to be considered valid a total of 20 or more points are required. The score per month is illustrated in Table 1 below.

**Table 1:** Monthly index of probability for tube occupation.

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

- 1.5 A total of 78 tubes were deployed in the hedgerow, scrub and woodland edge habitats within the Site on 26 April 2017, and were left in place until 09 November 2017, thereby achieving the 20 points required for a valid survey. The tubes were inspected once every month in accordance with

<sup>1</sup> <https://records.nbnatlas.org>

<sup>2</sup> Natural Resources Wales licence numbers for Niall Lusby: 53084:OTH:SA:2016; Gareth Lang: 76038:OTH:SA:2017.

good practice guidance (English Nature, 2006) and the Natural England Advice Note “Hazel or common dormice: surveys and mitigation for development projects”<sup>3</sup>. The tube locations are presented in **Figure 1** in **Appendix 1**.

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<sup>3</sup> Available at <https://www.gov.uk/guidance/hazel-or-common-dormice-surveys-and-mitigation-for-development-projects>. There is no Wales-specific guidance available, and the Natural England guidance is generally followed in Wales.

## 2 Results

### Desk Study

- 2.1 The data provided by SEWBReC include ten historical records of dormouse within 2 km of the Site. The most recent record is dated December 2006, and located in woodland approximately 1.6 km west south-west of the Site. No records were returned for the Site itself.
- 2.2 The NBN also hold data for dormouse in three 1 km squares adjacent to the Site. These records are all more than ten years old. Discussion with the Monmouthshire Council Ecologist also indicated that records of dormouse exist from the woodland immediately adjacent to north-west boundary of the Site.

### Field Survey

- 2.1 Survey visits to check for dormouse presence were completed on six dates between May and November 2017. The results of the survey, along with visit dates and weather conditions, are summarised in **Table 2** below. The full survey results table is provided in **Table A** in **Appendix 2**.

**Table 2:** Summary of dormouse survey results.

Visit	Date	Surveyor*	Weather Conditions	Evidence of use by dormouse	Evidence of use by other mammals
1	30 May 2017	NL	15 <sup>0</sup> C overcast and light rain	None	1 tube containing a seed cache typical of wood mouse <i>Apodemus sylvaticus</i> .
2	22 June 2017	NL	19 <sup>0</sup> C overcast and dry	None	2 tubes containing seed caches typical of wood mouse 1 tube containing a nest of loose structure typical of wood mouse
3	24 July 2017	GL	25 <sup>0</sup> C sunny and dry	None	1 tube containing an old nest of damp, leaves. Structure typical of wood mouse, presumed abandoned
4	23 August 2017	GL	21 <sup>0</sup> C sunny and dry	None	1 tube containing seed cache typical of wood mouse 2 tubes containing damp, vacant wood mouse nests
5	20 September 2017	GL	17 <sup>0</sup> C overcast and dry	None	2 tubes containing nut caches typical of wood mouse 1 tube containing a new nest of thistle seed heads, likely to be wood mouse 2 tubes containing damp, vacant wood mouse nests

Visit	Date	Surveyor*	Weather Conditions	Evidence of use by dormouse	Evidence of use by other mammals
6	09 November 2017	GL	15 <sup>o</sup> C overcast and dry	None	4 tubes containing nut caches typical of wood mouse  1 tube containing a new nest of thistle seed heads, likely to be wood mouse  1 tube containing a few leaves likely to be the start of a wood mouse nest  2 tubes containing damp, vacant wood mouse nests

\*NL = Niall Lusby; GL = Gareth Lang.

- 2.2 No evidence of dormouse was found during the survey work. The lack of dormouse evidence recorded during the survey in 2017 indicates a likely absence of the species from the Site.

### Limitations to Results

- 2.3 A small number of tubes were damaged or destroyed during the work (through localised fencing works, hedge flailing, and removed by livestock). A total of eight tubes were affected, three of which were damaged/destroyed part way through the survey period and subsequently replaced, and five were destroyed following the penultimate visit. Therefore, 70 of the 78 tubes (greater than the minimum 50 tubes recommended by best practice guidance) remained in place for the entire survey period (six survey visits), and eight tubes were in place for at least three of the six survey visits. It is not considered that this loss of tubes has resulted in a constraint on the survey outcome.
- 2.4 The tubes that were damaged or destroyed, the dates found and dates that they were replaced are identified in **Table A** in **Appendix 2**.



### **3 References**

Natural England (2011). Interim Natural England Advice note: Dormouse Surveys for Mitigation Licensing, Best Practice and Common Misconceptions.

English Nature 2006. The Dormouse Conservation Handbook (2nd edition).

## **4 Appendices**

## **Appendix 1: Figures**

(overleaf)





- LEGEND**
- Site boundary
  - Blue line boundary
  - Nest Tube Locations

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PROJECT TITLE  
 Bayfields, Chepstow

DRAWING TITLE  
 Figure 1: Dormouse Tube Locations

DATE: 28.11.2018      CHECKED: JG      SCALE: 1:2,500  
 DRAWN: GL              APPROVED: JG      VERSION: 1.1

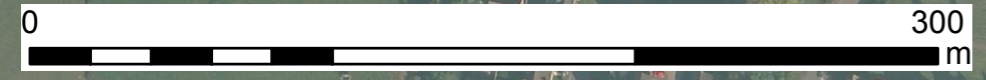
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No dimensions are to be scaled from this drawing.  
 All dimensions are to be checked on site.  
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OS Open data © Crown copyright and database right 2018 | Aerial Photography © Esri  
 Sources: BSG Ecology survey data

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





## Appendix 2: Results Table

**Table A:** Dormouse survey results.

Date	30/05/2017	22/06/2017	24/07/2017	23/08/2017	20/09/2017	09/11/2017
<b>Weather</b>	15 <sup>0</sup> C, overcast and light rain	19 <sup>0</sup> C overcast and dry	25 <sup>0</sup> C, sunny and dry	21 <sup>0</sup> C, sunny and dry	17 <sup>0</sup> C, overcast and dry	15 <sup>0</sup> C, overcast and dry
<b>Surveyor*</b>	NL	NL	GL	GL	GL	GL
<b>Tube No.</b>	<b>Results</b>					
<b>A1</b>	0	Destroyed by fencing works	-	Replaced	0	Woodmouse nest
<b>A2</b>	0	Destroyed by fencing works	-	Replaced	0	Destroyed by flailing
<b>A3</b>	0	0	0	0	0	Destroyed by flailing
<b>A4</b>	0	0	0	0	0	0
<b>A5</b>	0	0	0	0	0	0
<b>A6</b>	0	0	0	0	0	0
<b>A6a</b>	0	0	0	0	0	0
<b>A7</b>	0	0	0	0	0	0
<b>A8</b>	0	0	0	0	0	0
<b>A9</b>	0	0	0	0	0	0
<b>B1</b>	0	0	0	0	0	0
<b>B2</b>	0	0	0	0	0	0
<b>B3</b>	0	0	0	0	0	0
<b>B4</b>	0	0	0	0	0	0
<b>B5</b>	0	Woodmouse cache	0	0	0	0
<b>B5a</b>	0	0	0	0	0	0
<b>B6</b>	0	0	0	0	0	0
<b>B7</b>	0	0	0	0	0	0
<b>B8</b>	0	0	0	0	0	0
<b>B8a</b>	0	0	0	0	0	Cache of 1 hazel nut (not chewed)
<b>B9</b>	0	0	0	0	0	0
<b>B10</b>	0	0	0	Woodmouse nest, damp, vacant	Woodmouse nest, damp, vacant	Few old leaves remaining
<b>B11</b>	0	0	0	0	0	0
<b>B12</b>	0	0	0	0	0	0

Date	30/05/2017	22/06/2017	24/07/2017	23/08/2017	20/09/2017	09/11/2017
Weather	15°C, overcast and light rain	19°C overcast and dry	25°C, sunny and dry	21°C, sunny and dry	17°C, overcast and dry	15°C, overcast and dry
Surveyor*	NL	NL	GL	GL	GL	GL
Tube No.	Results					
<b>B13</b>	0	Woodmouse nest	old woodmouse nest. Damp, disused	old woodmouse nest. Damp, disused	old woodmouse nest. Damp, disused	old woodmouse nest, damp, disused
<b>B14</b>	Woodmouse cache	Woodmouse cache	0	Woodmouse cache	Nest of thistle seeds, likely woodmouse	Thistle seeds
<b>C1</b>	0	0	0	0	0	0
<b>C2</b>	0	0	0	0	0	Woodmouse cache
<b>C3</b>	0	0	0	0	0	0
<b>C4</b>	0	0	0	0	0	0
<b>C5</b>	0	0	0	0	0	0
<b>C6</b>	0	0	Damaged by sheep	Replaced	0	0
<b>C7</b>	0	0	0	0	0	Destroyed by flailing
<b>C8</b>	0	0	0	0	0	Destroyed by flailing
<b>C9</b>	0	0	0	0	0	0
<b>C10</b>	0	0	0	0	0	0
<b>C11</b>	0	0	0	0	0	Destroyed by flailing
<b>C12</b>	0	0	0	0	0	Destroyed by flailing
<b>C13</b>	0	0	0	0	0	Destroyed by flailing
<b>C14</b>	0	0	0	0	0	0
<b>C15</b>	0	0	0	0	0	0
<b>C16</b>	0	0	0	0	0	0
<b>C17</b>	0	0	0	0	0	Loose woodmouse nest
<b>C18</b>	0	0	0	0	0	0
<b>C19</b>	0	0	0	0	0	0
<b>C20</b>	0	0	0	0	0	0
<b>D1</b>	0	0	0	0	0	0
<b>D2</b>	0	0	0	0	0	0
<b>D3</b>	0	0	0	0	0	0

Date	30/05/2017	22/06/2017	24/07/2017	23/08/2017	20/09/2017	09/11/2017
Weather	15°C, overcast and light rain	19°C overcast and dry	25°C, sunny and dry	21°C, sunny and dry	17°C, overcast and dry	15°C, overcast and dry
Surveyor*	NL	NL	GL	GL	GL	GL
Tube No.	Results					
D4	0	0	0	0	0	0
D5	0	0	0	0	0	0
D6	0	0	0	0	0	0
D7	0	0	0	0	0	0
D8	0	0	0	0	0	0
D9	0	0	0	0	0	0
D10	0	0	0	0	0	0
D11	0	0	0	0	0	0
D12	0	0	0	0	0	0
D13	0	0	0	0	0	0
D14	0	0	0	0	0	0
D15	0	0	0	0	0	Cache of 3 hazelnuts (not chewed)
E1	0	0	0	0	Cache of 2 hazel nuts (not chewed)	Cache of 1 hazel nuts (not chewed)
E2	0	0	0	0	0	0
E3	0	0	0	0	Cache of 1 hazel nut (not chewed)	0
E4	0	0	0	0	0	0
E5	0	0	0	0	0	0
E6	0	0	0	0	0	0
E7	0	0	0	0	0	0
E8	0	0	0	0	0	0
E9	0	0	0	0	0	0
E10	0	0	0	0	0	0
E11	0	0	0	0	0	0
E12	0	0	0	0	0	0
F1	0	0	0	0	0	0
F2	0	0	0	0	0	0
F3	0	0	0	0	0	0
F4	0	0	0	0	0	0
F5	0	0	0	0	0	0

\*NL = Niall Lusby; GL = Gareth Lang.