

**Abermule Business Park**  
Abermule, Powys, SY15 6ND

## **Dormouse Survey**

For: Powys CC

23 September 2017

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Gerald Longley Ecological Consultants

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## 1.0 INTRODUCTION

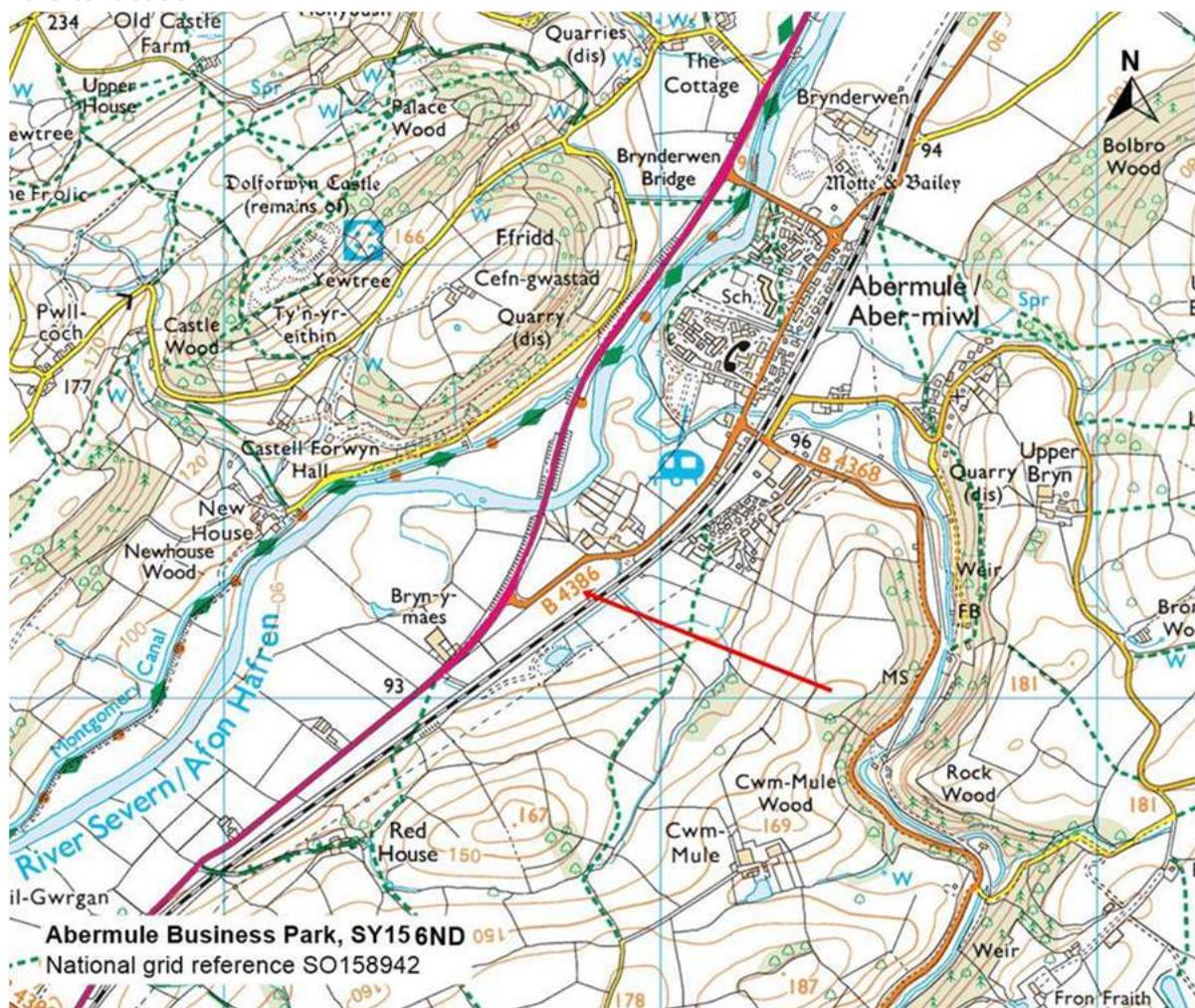
### 1.1 Background - Gerald Longley

Gerald Longley, has been commissioned to undertake a Dormouse (*Muscardinus avellanarius*) Survey on Abermule Business Park, Abermule, Powys, SY15 6ND (Grid reference SO158942). He has more than two decades experience of wildlife surveying and, prior to working as an independent ecological consultant, held posts as Conservation Officer with Montgomeryshire Wildlife Trust and Head of Shrewsbury Countryside Unit. He holds a dormouse survey licences in both England (NE CL10A 2016-22540-CLS-CLS) and Wales (NRW 70922:OTH:SA:2016).

### 1.2 Background – This Survey.

The request for this work comes from the applicant's and planning team's need to establish whether the actual land take, and consequences of building works, habitat division and species dispersal in the surrounding area, could have any effect on a European Protected Species. This follows an initial survey of the site and the production of a Preliminary Ecological Appraisal (GLEC-0896a-01) which recommended a dormouse survey as there was habitat suitable for dormice on the site. A full citation of the law with regard to dormice is given in the Appendices.

### 1.3 Site location



## 1.4 Report Summary

**Abermule Business Park, Abermule, Powys, SY15 6ND**

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The 3.75ha Business Park site consisted of sheep grazed fields, hedges and woodland along the south side of the broad River Severn valley, just south of the large village of Abermule. Works to construct vehicular access, an estate road, sewers and services had been carried out approximately 7-10 years previously. The site has mature, native hedgerow boundaries, and 2 areas of plantation woodland. It is well connected to the wider network of hedges and woodland.

A desk study carried out for the Preliminary Ecological Appraisal found the nearest dormice record was approx. 1.5km SE 1997.

The survey followed standard techniques from the Dormouse Conservation Handbook (Bright et al. (2006)) of two methods: searches for dormice evidence such as hazel nuts opened by dormice and dormice summer nests and a dormouse nest tube survey. 50 nest tubes were laid out fixed to branches at approximately 20m intervals along the whole length all the hedgerows and in the plantation woodland on site on 18 April 2017. Nest tubes are corrugated plastic square section tubes about 30cm long, with a wooden tray insert that are specifically made and sold for dormouse surveying. The wooden tray insert is just slid in and is not fixed.

Five survey visits were then made at the end of the following months: May, June, July, August, September, to look for signs of dormice in and below the hedge and check the tubes for dormouse nests. The surveyor was Gerald Longley, dormice survey licence NRW 70922:OTH:SA:2016. Evidence was found of wood mouse, with two small mammal nest of grasses and leaves being found in nest tubes characteristic of wood mouse.

**No dormice evidence was recorded either in searches in the hedges or in the 50 nest tubes placed in the hedges in the survey.**

As no dormice were recorded no Mitigation Plan for dormice is proposed.

### **It is recommended that:**

1. The apparent absence of dormice from the site means there is now no ecological constraint with regard to dormice on the proposed development. If it were to go ahead without mitigation, it is very unlikely any dormice would be negatively affected.
2. In the unlikely event of any dormice being found during development work, work should stop and Natural Resources Wales or a suitably licensed ecologist contacted for advice.
3. Hedgerows and plantation on the site are retained where possible, gaps planted up with native species. New hedges and shrub planting as part of the development should be of native plant species. See appendix 7.3 for suitable species.

## 2.0 METHODOLOGY

### 2.1 Aims of the Survey

- To establish the presence or absence of dormice on the site.
- To make recommendations for mitigation accordingly.

### 2.2 Desk Study

A desk study was carried out as part of the Preliminary Ecological Appraisal in 2017.

### 2.3 Site Survey

The survey followed standard techniques from the Dormouse Conservation Handbook Bright et al. (2006) of two methods: searches in and below the hedges for dormice evidence such as hazel nuts opened by dormice and dormice summer nests **and** a dormouse nest tube survey. 50 nest tubes were laid out fixed to branches at approximately 20m intervals along the whole length of all the suitable hedgerows and in the two areas of plantation woodland on site on 18 April 2017. The two lengths of recent roadside hedges either side the entrance to the Business Park were too short and intensively managed to have tubes put in them.

Five survey visits were then made at the end of the following months: May, June, July, August, September, to look for signs of dormice in and at the base of the hedges and check the nest tubes for dormouse nests.

The tubes were all collected from the site 04 October 2017 and the site left tidy.

Nest tubes are corrugated plastic square section tubes about 30cm long, with a wooden tray insert that are specifically made and sold for dormouse surveying. The wooden tray insert is just slid in and is not fixed.

Bright et al. (2006) recommends using 50 nest tubes which when the Index of probability of finding dormouse in the months surveyed is summed, should lead to a score greater than 20 for the "search effort score". In this survey the recommended number of nest tubes was used i.e. 50. This means that the score obtained by surveying in May (4), June (2), July (2), August (5), September (7) (scores for each month in brackets) is 20.

The surveyor was Gerald Longley, dormice survey licence. He has a long experience of dormouse surveying organising a Montgomeryshire Dormouse Survey along with site based nest box and nest tube surveys whilst working at Montgomeryshire Wildlife Trust and since on development based surveys. He first held a dormouse survey licence in 1990.

## 3.0 RESULTS

### 3.1. Desk Study

A 2km buffer desk study for sites and wildlife records revealed that there were no coincident statutory wildlife sites or SSSIs. The nearest SSSIs were the Montgomery Canal SSSI, approximately 400m north of the site at the nearest point

Records for dormice were found for several locations in the 2km buffer. The nearest to the site were approximately 1.5km southeast (1997).

### 3.2 Site Survey

The approximately 3.75ha Business Park site consisted of sheep grazed fields along the south side of the broad River Severn valley, just south of the large village of Abermule. The area surveyed was two parcels of land; the main part of the site (approximately 3.6ha) and part of a small paddock (approximately 0.15ha) separated from the main part of the site by a track, underpass and level crossing; access for Maesderwen farm to land beyond the railway line. Works to construct vehicular access, an estate road, sewers and services had been carried out approximately 7-10 years previously (Powys Council planning consent M/2002/1133). The site was bordered to the southeast by a single track railway line on an embankment with a pond and sheep grazed fields beyond. The northwest the site was bordered by the A483 and B4386 roads with grazed fields and the River Severn beyond. To the northeast was the edge of the built up residential area of Abermule and to the southwest grazed fields. Maesderwen farmyard was on the north corner of the site, just across the B4386, and the buildings of Bryn-y-maes farm were across the A483 to the east of the site. The landscape surrounding the site was one of pasture fields with some hedgerows, streams, small patches of trees and larger areas of woodland.

Three areas of the site had been planted with a mix of broad-leaved species including wild cherry, ash, hazel, silver birch, field maple, hawthorn and elder. The plantations were judged to be approximately 15-20 years old so would have been planted prior to the access and service works described above.

The southeast boundary of the site was approximately 575m of outgrown native species hedge along the base of the wooded railway embankment. The hedge extended beyond the site to both the northeast and southwest. It was mainly of hawthorn and hazel with occasional trees including an ash and an elm.

The southern section of the northwest boundary hedge, approximately 100m, was also uncut and included hazel, hawthorn and blackthorn along what would once have been the south side of the old road. Immediately beyond this hedge and just outside the site was the old road, grown over with grass, and a second hedge alongside the existing road.

Of the remainder of the northwest boundary hedge, approximately 265m was planting of hawthorn associated with the creation of the business park access road, and a further 311m was mature established roadside hedge, again dominated by hawthorn.

At the north end of the main part of the site was an outgrown hawthorn boundary hedge with mature oak and ash trees along a small stream. The base of the hedge was heavily grazed by sheep.

As part of the assessment of the hedgerows, a count of the number of woody species in representative 30m sections was undertaken. A count of 7 woody species per 30m classifies hedges as “important” under the Hedgerows Regulations 1997. Other relevant features are also taken into account, including being beside a footpath, containing at least one tree per 50m, having a bank, ditch or wall associated with the hedge, having a parallel hedge within 1.5m or connections with other hedgerows. The hedgerows around the site did not meet sufficient criteria to be classified as ‘important’ under the Regulations.

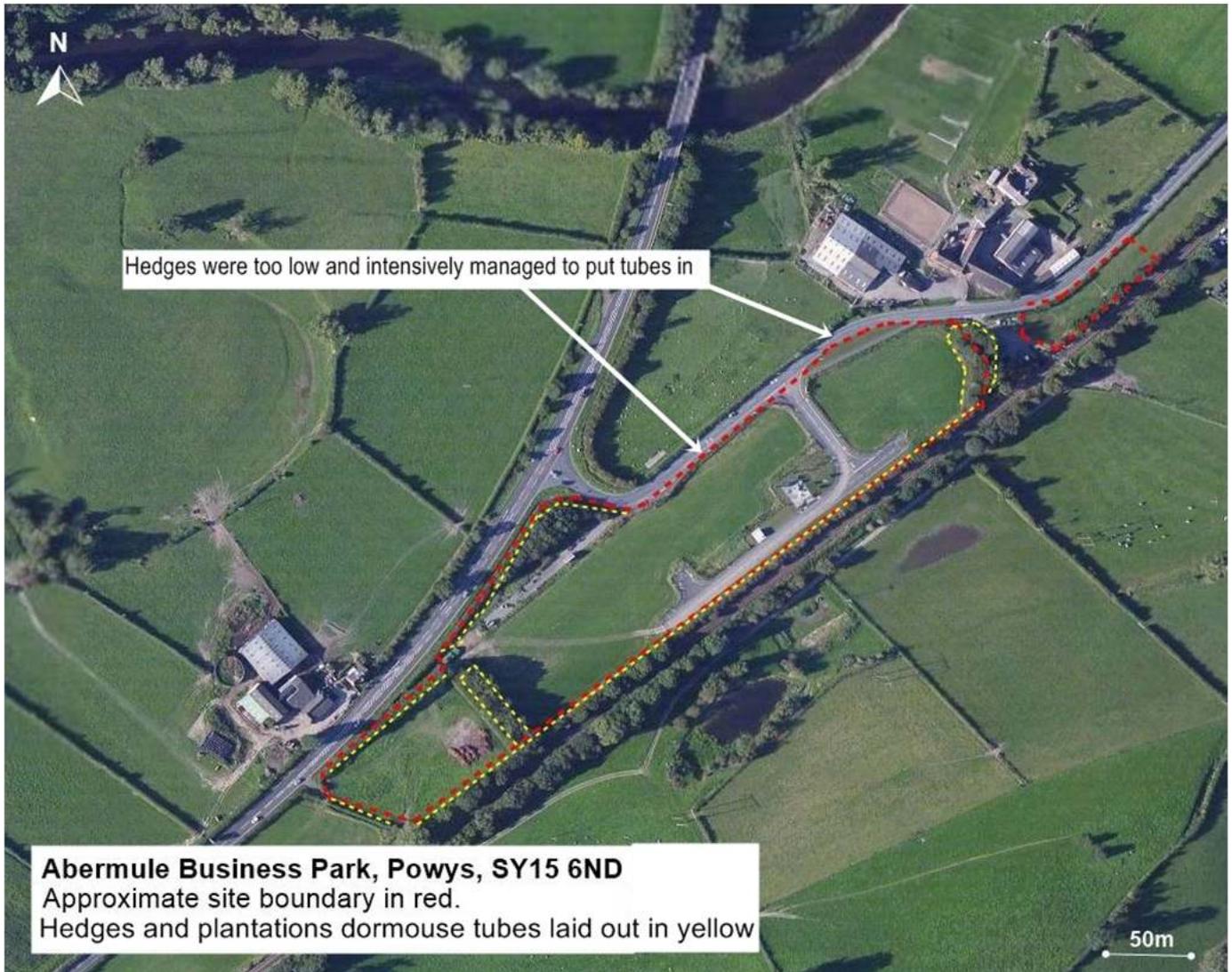
The hedges were checked in and below for dormouse evidence and the 50 nest tubes checked for the same in the months on the dates shown in Table 1 below. On the first survey in May one of the tubes was missing. It was replaced with a new one. It was thought to be caused by wind or being removed by a person (it was near the A483 roadside).

Limited evidence was found of wood mouse, with three small mammal nest of grasses and leaves being found in nest tubes (nos. 12, 14 and 33) characteristic of wood mouse. No definitive evidence was found of voles, but both field and bank voles would occur in these hedges. Wood mouse and vole species are common widespread species. Dormouse nests with in particular stripped bark, especially honeysuckle and opened hazel nuts and fruit stones opened in a very distinctive way - no evidence of either was found.

Birds were using some of the tubes to roost in with bird droppings found in them.

**No dormice evidence was recorded either in searches in the hedges or in the 50 nest tubes placed in the hedges in the survey.**

<b>Table 1:Dormouse Survey</b>				
Abermule Business Park, Abermule, Powys, SY15 6ND				
Nest tubes - 50 laid out in all hedges (approx. 20m intervals) and plantations 18 April 2017				
<b>Survey Month &amp; Date check carried out</b>	<b>Dormouse opened nuts or nests in hedges?</b>	<b>Dormouse evidence inside nest tubes?</b>	<b>Index of probability of finding dormice present in nest tubes in this month Bright et al. (2006)</b>	<b>“Search effort score” based on 50 nest tubes in these months Bright et al. (2006) (50 tubes and a score of 20 is the minimum acceptable)</b>
<b>May</b> 26/05/2017	none	none	4	4
<b>June</b> 27/06/2017	none	none	2	2
<b>July</b> 27/07/2017	none	none	2	2
<b>August</b> 29/08/2017	none	none	5	5
<b>September</b> 23/09/2017	none	none	7	7
<b>Total</b>				<b>20</b>



## **4.0 DISCUSSION AND INTERPRETATION**

### **4.1 Dormice**

Dormice were not recorded during this site survey. Their presence seems unlikely given the lack of records made during these extensive surveys carried out over part of two survey seasons and employing a “search effort score” of 20 which is the recommended amount required for an acceptable survey Bright et al. (2006).

Dormice do not use gappy hedges to the extent they use thick and intact hedges as they prefer not to cross gaps in woodland, scrub or hedges by traversing the ground, they are almost entirely arboreal. They like to stay arboreal, its safer from potential predators. Although many of the hedges were intact, there were gaps with no hedge at all up to 5m in some cases, especially along the railway side.

Therefore no specific Mitigation Plan for dormice is proposed except that the recommendation 3 in this report to protect and enhance hedgerows and plant new ones and any landscaping to be with native species.

## 4.2 Constraints

There were no significant constraints. During the first survey in May one of the tubes near the A483 had disappeared, it was replaced. It could have been missing possibly for the whole month from the previous surveys. Therefore during each of the survey months not all of the tubes would have been available to nest in for dormice. This is a small number, 1 out of 50 i.e. 2% of the total. It is considered that this was not a significant factor in the finding of a negative result.

As with all wildlife surveys, the data collected is only a representation of the species and species presence markers found during the actual dates of the survey. There are other seasons and many species are mobile or transitory.

## 5.0 RECOMMENDATIONS

1. The apparent absence of dormice from the site means there is now no ecological constraint with regard to dormice on the proposed development. If it were to go ahead without mitigation, it is very unlikely any dormice would be negatively affected.
2. In the unlikely event of any dormice being found during development work, work should stop and Natural Resources Wales or a suitably licensed ecologist contacted for advice.
3. Hedgerows and plantation on the site are retained where possible, gaps planted up with native species. New hedges and shrub planting as part of the development should be of native plant species. See appendix 7.3 for suitable species.

## 6.0 REFERENCES

1. Bright PW and Morris PA (1989). A practical guide to dormouse conservation. The Mammal Society.
2. Bright PW, Morris PA and Mitchell-Jones A (2006). Dormouse Conservation Handbook, 2nd Edition. English Nature, Peterborough.
3. Bright PW, Mitchell P and Morris P A (1994). Dormouse distribution: survey techniques, insular ecology and selection of sites for conservation. *Journal of Applied Ecology*, 31: 329-339.
4. Bright P and Morris P (2005). *The Dormouse*. The Mammal Society.
5. Bright P, Morris P and Mitchell-Jones A (1996). Surveying Dormice using nest tubes. English Nature Report 524.
6. Chanin P and Woods M (2003). Surveying dormice using nest tubes: Results and experiences from the South West Dormouse Project. English Nature Research Report No. 524.

## 7.0 APPENDICES

### 7.1 Dormouse - legislation

Dormice are fully protected under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) by the Countryside Rights of Way (CROW) Act 2000. They are also listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended), making them a “European Protected Species”. Under the current legislation it is illegal to intentionally or deliberately kill, injure or capture dormice, deliberately disturb dormice (whether in a nest or not); or to damage, or destroy dormouse breeding sites or resting places. Dormice are also a UK Biodiversity Action Plan (BAP) priority species and a Species of Principal Importance.

### 7.2 Field equipment used for the survey:

Access Cam Pro-Sight colour video endoscope (1m probe).

Telescopic mirror

100 (plus replacements) proprietary dormouse nest tubes and wooden insert trays supplied by NHBS and fixings.

### 7.3 List of native trees/shrubs/climbers to plant

Native Trees, Shrubs and Climbers		
<a href="http://www.geraldlongley.co.uk">www.geraldlongley.co.uk</a>		
No. of Species	Scientific name	Common name
1	<i>Cornus sanguinea</i>	Dogwood
2	<i>Corylus avellana</i>	Hazel
3	<i>Crataegus monogyna</i>	Hawthorn
4	<i>Euonymus europaeus</i>	Spindle
5	<i>Frangula alnus</i>	Alder Buckthorn
6	<i>Ilex aquifolium</i>	Holly
7	<i>Ligustrum vulgare</i>	Wild Privet
8	<i>Lonicera periclymenum</i>	Honeysuckle
9	<i>Malus sylvestris</i>	Crab Apple
10	<i>Prunus padus</i>	Bird Cherry
11	<i>Prunus spinosa</i>	Blackthorn
12	<i>Rhamnus cathartica</i>	Buckthorn
13	<i>Salix cinerea</i>	Grey Willow
14	<i>Sambucus nigra</i>	Elder
15	<i>Viburnum opulus</i>	Guelder-rose
16	<i>Fraxinus excelsior</i>	Ash
17	<i>Quercus robur</i>	Oak

## 8.0 SITE PICTURES



