

Appendix 8.15

Final Dormouse Survey Report 2014

Abergelli

Abergelli Power Project

Final Dormouse Survey Report

BLANK PAGE

Issuing office

Wyastone Business Park | Wyastone Leys | Monmouth | NP25 3SR
 T: 01600 891576 | W: www.bsg-ecology.com | E: info@bsg-ecology.com

Client	Stag Energy
Job	Abergelli Power Project
Report title	Final Dormouse Survey Report
Draft version/final	FINAL
File reference	7399_R_Dormouse_Final_APPR (2)_241114

	Name	Position	Date
Originated	Niall Lusby	Senior Ecologist	17 November 2014
Reviewed	Matt Hobbs	Principal Ecologist	18 November 2014
Approved for issue to client	Matt Hobbs	Principal Ecologist	18 November 2014
Issued to client	Matt Hobbs	Principal Ecologist	18 November 2014
Updated and 2nd issue to client	Matt Hobbs	Principal Ecologist	24 November 2014

Disclaimer

This report is issued to the client for their sole use and for the intended purpose as stated in the agreement between the client and BSG Ecology under which this work was completed, or else as set out within this report. This report may not be relied upon by any other party without the express written agreement of BSG Ecology. The use of this report by unauthorised third parties is at their own risk and BSG Ecology accepts no duty of care to any such third party.

BSG Ecology has exercised due care in preparing this report. It has not, unless specifically stated, independently verified information provided by others. No other warranty, express or implied, is made in relation to the content of this report and BSG Ecology assumes no liability for any loss resulting from errors, omissions or misrepresentation made by others.

Any recommendation, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that BSG Ecology performed the work.

Nothing in this report constitutes legal opinion. If legal opinion is required the advice of a qualified legal professional should be secured.

Contents

1	Summary	2
2	Introduction	3
3	Methods	4
4	Results	6
	Appendix 1: Figures	8

1 Summary

- 1.1 Abergelli Power Limited (APL) is promoting a new Power Generation Plant with associated Gas and Electricity Connections (the 'Project') on agricultural land within Abergelli Farm north of Swansea in the City and County of Swansea (approximately at National Grid Reference 265284, 201431).
- 1.2 The Preliminary Ecological Appraisal (PEA) (BSG Ecology, 2014) did not identify records of dormouse *Mucardinus avellanarius* within 2 km of the Project Site boundary, but habitat suitable for supporting dormouse was found within the Project Site boundary at the time of the Extended Phase 1 Habitat survey (referred to as the 'Survey Site').
- 1.3 APL commissioned BSG Ecology to undertake a presence/absence survey for dormouse in suitable woodland, hedgerow and scrub habitats within 150 ha of pastoral farmland within the Survey Site, to inform and support an application for Development Consent for the Project. The dormouse survey was undertaken between June and November 2014.
- 1.4 The survey did not record any dormouse in the areas surveyed. Sufficient visits were undertaken to determine the likely absence of this species from the Survey Site in line with best practice guidance for survey.
- 1.5 All accessible woodland, hedgerow and scrub habitats within the Survey Site boundary were included in the survey.

2 Introduction

- 2.1 Abergelli Power Limited (APL) commissioned BSG Ecology in May 2014 to undertake a dormouse survey to inform an application for Development Consent for the Project described below.
- 2.2 APL is promoting a new Power Generation Plant with its associated Gas and Electricity Connections (the 'Project') on agricultural land within Abergelli Farm, north of Swansea in the City and County of Swansea (approximately at National Grid Reference 265284, 201431).

Site Description

- 2.3 The Survey Site consists of approximately 150 ha of pastoral farmland, primarily grazed by horses. The extent of the Survey Site is shown in Figure 1 in Appendix 1 and is centred at National Grid Reference 265284, 201431. The nearest settlement is Felindre, which is located approximately 2 km to the north of the Survey Site, with Swansea approximately 5 km to the south.
- 2.4 The Survey Site is largely agriculturally improved pasture with several areas of marshy grassland, particularly in the north, south and north-western extents of the Survey Site. The fields are bounded by fences, running along the line of defunct hedgerows, and often accompanied by ditches. There is a block of broadleaved woodland on the eastern boundary of the Survey Site and other areas of woodland around the marshy grassland to the west of the Survey Site, and around Felindre Gas Compressor Station and the two National Grid electrical substations that lie at the south-west end of the Survey Site. The habitats in the surrounding landscape are similar to those within the Survey Site boundary which comprise a mixture of improved and marshy grassland interspersed with occasional patches of woodland.

Description of Project

- 2.5 APL is promoting a new Power Generation Plant with associated Gas and Electricity Connections within Abergelli Farm. The Power Generation Plant would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical capacity of up to 299 Megawatts (MW). It would be fuelled by natural gas, supplied by a new underground gas pipeline connecting Power Generation Plant to the existing National Grid Gas (NGG) National Transmission System (NTS). It would also connect to the National Grid Electrical Transmission System (NETS) via underground cable or overhead lines.
- 2.6 BSG Ecology has been appointed as the ecological consultant to undertake ecology surveys, which include a desk study and Extended Phase 1 Habitat Survey as well as a range of Phase 2 surveys, including a dormouse survey. These baseline surveys will be included in an appendix to the ecology chapter of an Environmental Statement, which is intended for submission in support of the application for Development Consent.

Aims of Study

- 2.7 The aims of the dormouse survey were to identify whether dormouse are present in woodland, hedgerow and scrub habitats within the Survey Site boundary using standard survey methods (as specified in Section 3).

3 Methods

Desk Study

- 3.1 Existing ecological information for the Survey Site and its surrounding area was requested from the South East Wales Biodiversity Records Centre (SEWBRc). Information on protected¹ species, including dormouse, was requested covering the Survey Site and land up to 2 km from the Survey Site boundary. In addition, on-line mapping and aerial photography of the area were also reviewed to identify areas of suitable habitat that might be present outside of the Survey Site that could be connected to habitats within the Survey Site, or support off-site populations that maintain linkages through habitats in the Survey Site.

Scoping Survey

- 3.2 A Preliminary Ecological appraisal (PEA) was carried out by BSG Ecology in February 2014 and updated in April and July 2014 (BSG Ecology, 2014). As part of the PEA woodland, hedgerow and scrub habitats were assessed with regard to their suitability to support dormouse in terms of woody species diversity and structure. The connectivity of woodland habitats within the wider landscape was also considered.

Field Survey

- 3.3 The survey was 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 stated that to determine presence/absence within a woodland that 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 monthly 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 nest of other small mammals which are typically much messier and lack a distinct structure.
- 3.4 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.

¹ Wildlife and Countryside Act 1981 Schedules 1, 5 & 8; Conservation of Habitats and Species Regulations 2010; Protection of Badgers Act.

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

3.5 A total of 143 tubes were deployed in woodland, scrub, and hedgerow habitats across the Survey Site with 110 tubes deployed in May and June. Due to difficulties in gaining access permission for the access road the deployment in this area was undertaken later in June. The tubes were deployed as follows:

- 55 tubes were deployed on 9 May 2014, the locations of which are shown in red on the Plan provided as Figure 1:
- A further 55 tubes were deployed on 4 June with the locations shown in green on Figure 1; and
- When access to the National Grid land was obtained, a further 33 tubes were deployed along the access road on 24 June. The locations of these tubes are shown in blue on Figure 1.

Limitations of study

3.6 The Survey Site was surveyed with a sufficient number and density of tubes to comply with best practice guidance on dormouse survey. Most tubes were deployed within the Survey Site between June to November inclusive, which scores 20 points under best practice guidance. 20 points is the minimum number of points required for a survey to be considered valid.

3.7 Some of the tubes (33) were not deployed until 24 June. This was due to late permission to survey the National Grid Access road margins. This led to the areas of suitable dormouse habitat adjacent to the National Grid access road being surveyed from July, rather than June. This area is a small part of the wider habitat within the Survey Site that was identified as having the potential to support dormouse. The road margins here are connected to other blocks of woodland and scrub in the western and, to a lesser extent (as habitat connections are fragmented in the middle part of the Survey Site) the eastern part of the Survey Site and are considered to be contiguous with these areas and therefore part of the same dormouse survey area. The results of the survey are clear and robust enough to conclude that dormouse is likely to be absent from the Survey Site, regardless of the lack of one month of data from a small section of the site, and this is not considered to be a significant constraint.

4 Results

Desk Study

- 4.1 There were no records of dormouse provided by SEWBREC within 2 km of the Survey Site.
- 4.2 The lack of records in the immediate surrounds of the Survey Site does not necessarily indicate the absence of dormouse. A lack of records can be due to a lack of survey, which in turn could be based on former assumptions of dormouse habitat requirements. In recent years dormice have been recorded in habitats previously discounted as unsuitable, meaning that survey for this species in sub-optimal habitats is currently recommended.

Scoping Survey

- 4.3 The Survey Site was assessed for its suitability to support dormouse during the PEA survey. It was found to support numerous fragments of woodland, some of which are designated as Ancient Woodland, as well as several treelines that follow stream corridors or are remnants of former wooded areas that have been cleared historically.
- 4.4 The habitats within the Survey Site were assessed as being sub-optimal for dormouse for the following reasons:
- There is a very low occurrence of hazel *Corylus avellana* within the Survey Site, along with a low diversity of other woody species present on the Survey Site. Dormice typically require a variety of woody species to ensure, year round availability of food;
 - Many of the woodlands have been grazed and lack a well-developed understorey, typically required by dormouse; and
 - The Survey Site lacks hedgerows, with most of the field boundaries comprising post and wire fences. Some tree lines are present, where hedgerows have become defunct through a lack of active management. Some small areas of hedgerow are present along the National Grid access road and these were included in the survey. The lack of hedgerows reduces the suitability of the Survey Site as hedgerows typically serve to provide habitat linkages between small woodlands such as those found on the Survey Site and its wider surrounds.

Field Survey

- 4.5 The first survey was carried out on 25 June which excluded the 33 tubes put out the day before along the National Grid Access Road. The 33 tubes not included on 25 June were first surveyed on 9 July after having been left to “bed in”². The second survey (on 9 July included all the tubes and was undertaken on 23rd and 24 of July. The surveys were carried out by Niall Lusby CMIEEM (licence number 53084:OTH:SA:2014) and Gareth Lang (licence number (44285:OTH:SA:2013).
- 4.6 The survey results are summarised in Table 2 below.

Table 2: Survey results.

Visit number	Survey Date	Tubes covered	Result	Probability index points per 50 tubes
1	25/06/14	1 st and 2 nd deployment	No evidence of dormouse found	June: 2 points over 143 tubes
	9/07/14	3 rd deployment	No evidence of dormouse found	
2	23/07/14 and 24/07/14	All deployments	No evidence of dormouse found	July: 2 points over 143 tubes
3	19/08/14	All deployments	No evidence of dormouse found	August: 5 points over 143 tubes
4	23/09/14	All deployments	No evidence of dormouse found	September: 7 points over 143 tubes
5	16/10/14	All deployments	No evidence of dormouse found	October: 2 points over 143 tubes
6	14/11/14	All deployments	No evidence of dormouse found	November: 2 points over 143 tubes
Total Score				20

² Bed in – this phrase is used to describe a period of time that the tubes are left before the first survey is carried out. During this time the scent of humans disappears from the tube, and dormice are more likely to use them.

5 References

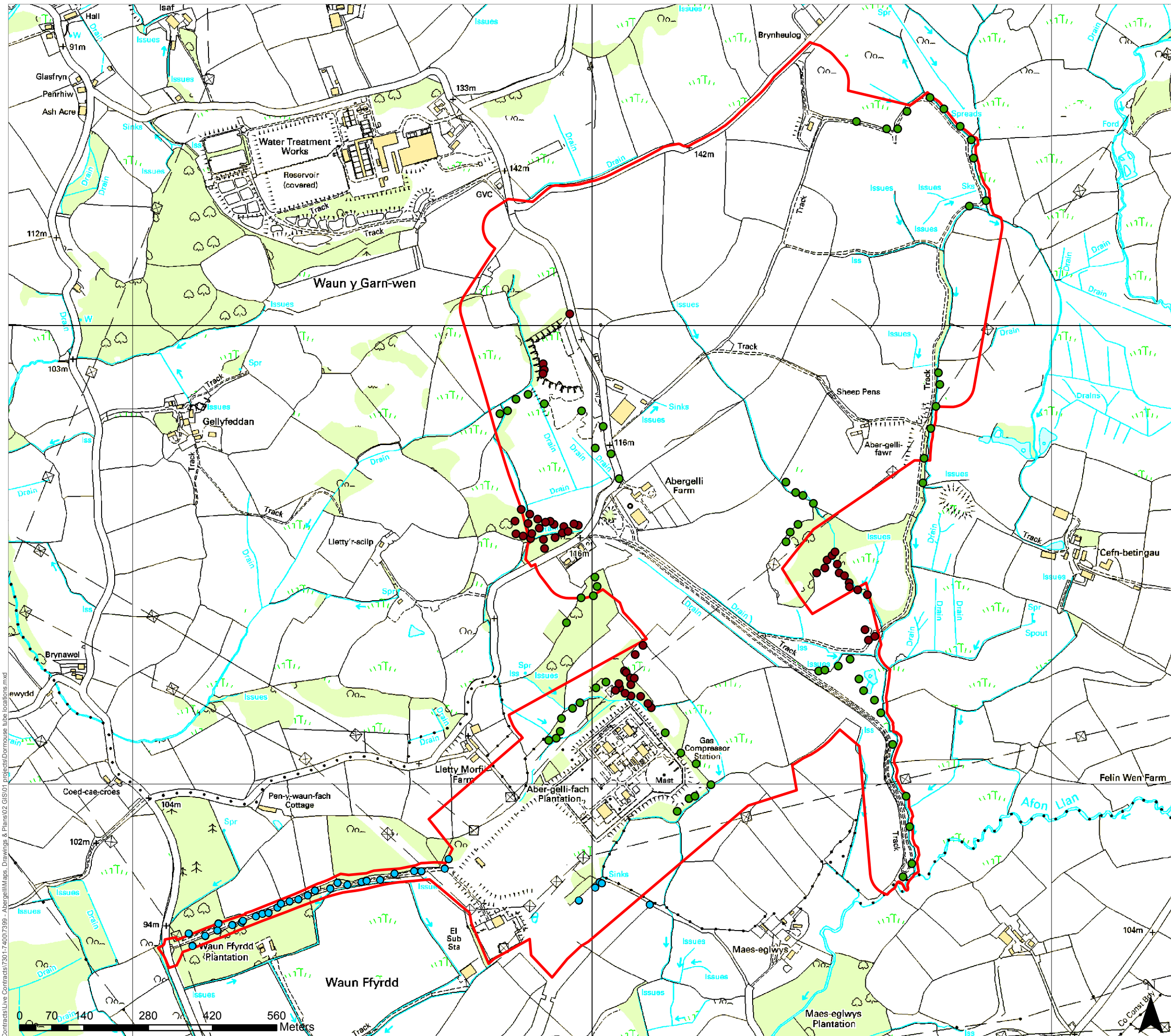
BSG Ecology (2014). Abergelli Power Project: Preliminary Ecological Appraisal.

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

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

Appendix 1: Figures

(overleaf)



LEGEND

- Survey Site Boundary
- Dormouse Deployment 1
- Dormouse Deployment 2
- Dormouse Deployment 3

BSG | ecology

OFFICE: Monmouth
 T: 01600 891576
 JOB REF: 7399

PROJECT TITLE
ABERGELLI POWER PLANT

DRAWING TITLE
Figure 1 - Dormouse tube locations

DATE: 17.11.2014 CHECKED: MH SCALE: 1:8,000
 DRAWN: NL APPROVED: MH STATUS: FINAL

Copyright © BSG Ecology
 No dimensions are to be scaled from this drawing.
 All dimensions are to be checked on site.
 Area measurements for indicative purposes only.
 This drawing may contain: Ordnance Survey material by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright 2012. All rights reserved. Reference number: 10048980
 OS Open data © Crown copyright and database right 2012 | Aerial Photography © Bing Maps
 Sources: Ordnance Survey

Y:\Contracts\Live Contracts\730174007399 - Abergelli\Maps, Drawings & Plans\02 GIS\01 projects\Dormouse tube locations.mxd