Llantrisant Health Park,

Ely Meadow, Talbot Green

Dormouse Survey Report

January 2025

T: **029 2065 0331** | E: **enquiries@acerecology.co.uk** | W: **www.acerecology.co.uk**
16 Wordsworth Avenue, Penarth, Vale of Glamorgan, CF64 2RL
Registered in England and Wales No. 7563601

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PLANS AND APPENDICES

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Llantrisant Health Park, Ely Meadow, Talbot Green Dormouse Survey Report				
Revision	Date	Prepared by	Checked by	Approved by
1.0	29 January 2025	Charlotte Ingram Assistant Ecologist	Kat Oliver Assistant Ecologist	Paul Hudson MCIEEM Principal Ecologist

Executive Summary

Brief and Site Location	Acer Ecology Ltd were commissioned by Archus on behalf of Cwm Taf Morgannwg University Health Board to undertake a dormouse survey at land at Llantrisant Health Park (former British Airways Avionics, Engineering site), Ely Meadow, Talbot Green, Llantrisant, CF72 8XL, within the boundary of Rhondda Cynon Taf Borough Council (Ordnance Survey Grid Reference centred at: ST 0362 8387).
Survey Methodology	The survey comprised a dormouse 'nest tube' survey which involved deploying 100 nest tubes across the site. The nest tubes were subsequently checked at monthly intervals from July to November.
Results	The results of the nest tube survey indicate that dormice are likely to be absent from the site. Three wood mouse nests were found during the survey.
Requirements for Additional Survey	None required.
Licensing Requirements	None required.
Recommendations	As the presence of dormice in ecologically connected habitats surrounding the site cannot be ruled out completely, the implementation of precautionary measures will help to further reduce the potential for any adverse impacts to this species.

1. Introduction

1.1. Brief

Acer Ecology Ltd were instructed by Archus on behalf of Cwm Taf Morgannwg University Health Board to undertake a dormouse (*Muscardinus avellanarius*) survey of land at Llantrisant Health Park (former British Airways Avionics, Engineering site), Ely Meadow, Talbot Green, Llantrisant, CF72 8XL, within the boundary of Rhondda Cynon Taf Borough Council (Ordnance Survey Grid Reference centred at: ST 0362 8387)[1]. The location of the site is shown in Plan 1: Location Plan.

1.2. Development Proposals

At the time of writing, the exact development plans are yet to be determined. However, it is anticipated that the plans will involve the demolition of the existing buildings on site, followed by the construction of new buildings in their place.

1.3. Historical Documents

Acer Ecology Ltd undertook a Preliminary Ecological Appraisal (PEA) survey of the site on the 15th of April 2024 which identified the site as being suitable to support dormice. The proposal may entail the clearance of small portions of the woodland and scrub habitats in the southern section site, however, the full extent of the clearance is unknown at the time of writing. The potential for adverse impacts to dormice was therefore identified in the aforementioned ecology report and further dormouse presence/likely absence surveys were subsequently recommended to inform and support a planning application.

A Bat and Nesting Bird Report and Bat Static and Transect Survey Report have also been produced by Acer Ecology (2024). This found that low numbers of common bat species were utilising the site for foraging and commuting.

Additionally, a Reptile Survey Report has been produced by Acer Ecology (2024). This found a low population of slow-worms and a good population of common lizards to be present within the site.

1.4. Site Context

The site proposed for development measures approximately 8.36ha, and mainly comprises three buildings in the centre of the site, all of which are almost identical with the same roof construction and layout. Car parks are located in the eastern area of the site, and woodland is located to the north, south and west of the buildings. Within 100m of the site to the west there is a large woodland area, and to the north are

[1] Latitude and Longitude: 51.545465 , -3.3912730 / what3words: committee.clasping.counts

open fields. There is a hospital to the north of the site. The town of Talbot Green is located to the south-east of the site. The site has flat topography and sits approximately 60m above sea level.

1.5. Legislation

Dormice are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 which continues to apply in UK law through the Conservation of Habitats and Species (Amendment) (EU Exit) ['CHSAEU'] Regulations 2019.

Taken together, this protection makes it an offence to kill, capture, injure, possess or sell an individual. Furthermore, it is also an offence to deliberately disturb or destroy any site used for breeding by dormice. Dormouse is a European Protected Species and a species of high conservation concern nationally; as such it is included as a priority species in the UK and Welsh Biodiversity Action Plans. The legal protection and licensing procedures are summarised in Appendix 2.

Between 2000 and 2022, the UK population has declined by 70% (PTES, 2023).

1.6. Scope of Current Study

The study comprised:

- A review of records of dormice within the local area;
- A nest tube survey of all hedgerows and areas of woodland within the site; and
- A search for nuts opened by dormice.

1.7. Aim of Report

This report aims to:

- Present the methods and results of the survey;
- Provide an interpretation of the results;
- Assess the impacts of the proposals on dormice; and
- Present recommended mitigation and compensation measures that will be implemented and precautionary working methods that will be followed to minimise impacts upon small mammal species.

2. Survey Methods

2.1. Field Study

The dormouse survey was undertaken in accordance with guidance provided in The Dormouse Handbook (Bright et al., 2006). The survey was undertaken by Charlotte Ingram[2] on all survey visits, accompanied by Anwen Moon[3], Evan Smith[4], Kat Oliver[5] and Anasha Pradhan[6].

The main survey method used was a 'dormouse nest tube survey', whereby 100 specially-constructed artificial nesting or roosting tubes were fastened underneath horizontal branches using plastic ties or secured at the base of trees/shrubs that have been coppiced in the past. Nest tubes were left in place over a period of a month (Chanin & Woods 2003, Bright et al. 2006). When present, dormice often find and make nests in these tubes, and their presence can then be detected by means of periodic monitoring to find actual animals, nest remains, feeding remains, droppings or hairs, all of which are distinctive.

The standard survey methodology requires the deployment of at least 50 nest tubes and uses an index of probability to calculate a survey effort score, using the table below. Nest tubes and boxes are most frequently occupied in May, August, and September and so these months score highest. For example, 50 nest tubes installed in March and left in situ until the end of November would score 25 (the sum of probability index figures for each month) and 100 tubes for the same period would score 50, i.e. double the search effort. A minimum search effort score of 20 is required for the survey to be considered thorough and accurate. As stated in the Interim Natural England[7] Advice Note[8] the probability score applies from when the nest tubes are deployed to when they are removed, not just the months where the tubes are physically checked.

The suitable dormouse habitat on site was assessed during a desktop study prior to tube deployment. Potential dormouse habitats within the proposed development site broadly follow linear distributions, with a combined length of approximately 0.45km. Therefore, in order to ensure a minimum interval spacing of 15-20m between the survey tubes, a total of 100 were deployed across the site (see Plan 3: Location of Dormouse Tubes and Survey Results).

[2] Charlotte Ingram graduated with a degree in International Wildlife Biology from the University of South Wales. She works for Acer Ecology Ltd as an Assistant Ecologist, completing survey seasons in 2023 and 2024. She is listed as an accredited agent on Paul Hudson's bat licence (S091671-1).
[3] Anwen graduated from the University of South Wales with a degree in International Wildlife Biology. She is currently working as an Assistant Ecologist and receiving training from Acer Ecology in habitat and protected species survey techniques
[4] Evan Smith is a Conservation Biology and Ecology graduate from the University of Exeter. Evan works for Acer Ecology Ltd as an Assistant Ecologist and is receiving training in habitat and protected species survey techniques.
[5] Kat graduated with an Integrated Masters in Conservation Biology and Ecology from the University of Exeter. She works for Acer Ecology Ltd as an Assistant Ecologist and is receiving training in habitat and protected species survey techniques.
[6] Anasha graduated with a MSc in Environmental Biology from Swansea University and is now working as an Assistant Ecologist and receiving training from Acer Ecology Ltd.
[7] Natural England Guidance is used because no Welsh equivalent guidance has been produced by Natural Resources Wales.
[8] http://bit.ly/1GS23fY

Table 1: Summary of Survey Points

Month	Index of Probability	Factor of 2 (100 tubes deployed)	Points Achieved During Survey
April	1	2	0
May	4	8	0
June	2	4	4
July	2	4	4
August	5	10	10
September	7	14	14
October	2	4	4
November	2	4	4
		Total	40

All hedgerows bordering the site and the woodland to the south and west of the site were surveyed in order to maximise the chance of detecting dormice, which are naturally present at low densities.

The tubes/boxes were checked once every month as dormouse nests may degrade and can lose many of their unique characteristics, especially when overtaken by wood mice.

One hundred nest tubes were deployed on the 30th of May 2024 around the site as shown on Plan 3: Location of Dormouse Tubes and Survey Results. Whilst Natural England[9]'s standing advice states that tubes should be placed at 15-20m intervals, in this instance due to the moderate size of the site, the tubes were installed at approximately 4.5m intervals. The tubes were placed in all areas of suitable habitat for dormice within the site. However, it was not possible to place dormouse tubes in certain small areas of scrub, as the vegetation density was insufficient to support the weight of the tubes.

The nest tubes were allowed to 'bed in' for over a month before they were checked in July 2024. The nest tubes were checked again in August, September, October and November 2024. This gives an index of probability score of 40, which represents a thorough survey for dormouse.

During the survey, nests containing *Apodemus* sp. or being highly characteristic of *Apodemus* sp. were emptied to allow dormice to colonise the tube. In addition, searches were also made for hazel nuts showing the characteristic signs of gnawing by dormouse ('nut searches'). Several species of rodents open hazel nuts, but only the dormouse leaves a smooth round opening. Hazel nuts were checked from any parts of the site which supported fruiting hazel. These searches were not done according to a formal methodology, rather they were complimentary to the nest tube surveys.

[9] Natural England Guidance is used because no Welsh equivalent guidance has been produced by Natural Resources Wales. The Dormouse Conservation Handbook states that nest tubes should be placed at 20m intervals.

2.2. Constraints

Survey Effort

Ideally nest tube boxes would be installed on site no later than April, but this was not possible as the work was not commissioned until May. However, September is considered optimal for detecting nests and is in line with good practice guidelines for dormouse nest tube surveys. As a thorough survey was conducted, achieving an index of probability score of 40, it is not considered that these factors were a significant constraint on the survey.

3. Survey Results

3.1. Desk Study

SEWBReC (2023) returned no records of dormice within 2km of the site.

3.2. Field Survey

3.2.1. Nest tube/Box Survey

A full survey of all the nest tubes on site was undertaken on the 8th of July 2024, 22nd of August 2024, 24th of September 2024, 23rd of October 2024 and a final search was undertaken on the 29th of November 2024.

The results of the complete nest tube checks are presented in the table below and on Plan 3: Location of Dormouse Tubes and Survey Results.

Table 2: Dormouse Nest Tube Survey Results

Date	Nest Tube	Observation
24/09/2024	T8	Mass of brown oak leaves, no definite core (Photo 1) - likely wood mouse.
23/10/2024	T8	Wood mouse nest recorded in September remained.
29/11/2024	T8	Wood mouse nest recorded in September remained.
29/11/2024	T63	Brown leaves, no definite core (Photo 2) – likely wood mouse nest.
29/11/2024	T79	Mass of brown leaves, no woven core – likely wood mouse nest.

3.2.2. Photographic Evidence

The photos below show the evidence of suspected wood mouse (*Apodemus sylvaticus*) nests found during the survey. An individual was incidentally sited in the scrub during the survey. However, it was not possible to confirm which *Apodemus* species was present due to the brevity of the encounter. It is possible that the individual was another species such as a yellow-necked mouse (*Apodemus flavicolus*).

Photo 1: September – T8 suspected wood mouse nest.

Photo 2: November – T63 suspected wood mouse nest.

During nest tube checks it was not possible to identify which species of *Apodemus* was present, i.e., whether the mice were yellow neck mice or wood mice, as no individuals were observed in the nest tubes themselves.

3.2.3. Nut Survey

The site supports a very limited number of fruiting hazel shrubs. No evidence of handling by dormice was noted during the survey.

4. Interpretation

4.1. Dormouse - Presence/Likely Absence

The results of the nest tube survey indicate that dormice are likely to be absent from the site. Furthermore, the nut search did not detect any nuts opened by dormice in any area of the site, although nuts were only searched for on an ad-hoc basis whilst visiting the nest tubes.

4.2. Other Species

Three suspected wood mouse nests were found during the nest tube survey. Precautionary measures to avoid harm to small mammals are outlined in Section 6.

5. Impact Assessment

5.1. Potential Direct Impacts

As the nest tube survey indicates that dormice are likely absent from the site, no direct or indirect impacts are anticipated. However, as the survey started late in the season some precautionary measures are still proposed to minimise any potential impact to dormice.

6. Recommendations

The following recommendations aim to avoid or minimise adverse impacts on any dormice potentially inhabiting nearby offsite habitats and small mammal species known to be present within the site. They also provide mitigation and compensation measures where damage is unavoidable, while promoting opportunities to enhance overall biodiversity.

6.1. Licensing Requirements

A dormouse derogation licence will not be required.

6.2. Precautionary Measures

As the presence of dormice in ecologically connected habitats surrounding the site cannot be ruled out completely, the implementation of the following precautionary measures will help to further reduce the potential for any adverse impacts to this species.

6.2.1. Protection of Retained Hedgerows

The habitats on site proposed for retention will be protected by suitable fencing. A protective fence will be erected prior to the commencement of any site works e.g. before any materials or machinery are brought on site, or the development or the stripping of soil commences. The fence shall have signs attached to it stating that no works are permitted within these areas. The protective fence will be constructed in accordance with that detailed in BS 5837:2012 (See Appendix 3). The protective fence will only be removed following completion of all construction works.

6.2.2. Hand and Destructive Searching

Any vegetation works will be proceeded by a hand search of the area by a licensed ecological consultant. They will search features that could be utilised for nests or hibernation sites (e.g., coppice stools, old tree stumps and dense scrub. Both sides of the hedgerow will be thoroughly searched).

Clearance works will be undertaken using the two-stage winter clearance method as detailed in the Dormouse Conservation handbook (Bright et al., 2006).

The two-stage clearance of the hedgerow will involve initially coppicing the hedgerow to a height of 30cm above ground level during the winter months (November to March inclusive), using hand tools to minimise ground disturbance. The works will commence in the centre of the section of hedgerow requiring clearance, and will progressively work outwards towards the retained habitats, thus giving any dormice that may be present the chance to escape the works area into adjacent habitats.

The subsequent grubbing-out of stumps etc. and associated ground works will not then be undertaken until late early May, so that any dormice that may be present will have emerged from hibernation and will be able to disperse into neighbouring areas of woodland.

If the winter timescale for works is not possible, works will take place in the spring, followed by stump extraction and earth removal in the summer.

An appropriately-qualified ecologist will oversee all stages of vegetation clearance. They should be an integral element of the on-site supervisory team and should ensure that work proceeds in compliance with the appropriate legislation.

6.2.3. Working Hours

In order to avoid indirectly disturbing small mammals during any vegetation clearance, demolition and construction works, working hours will be restricted to the hours of daylight. Artificial lighting will be avoided as far as is practical on health and safety grounds.

6.2.4. Introduction of Dangerous Equipment and Materials

Equipment and materials which pose a risk of killing, injuring, small mammal species will be covered or stored securely during hours of darkness. Adhesive coatings will not be used on any equipment or materials within the ecological buffer areas of the site. All open sources of water in proximity to the ecological buffers and hedgerows will be sealed at night, or fitted with escape ramps so that small mammals can escape.

6.3. Mitigation and Enhancement Measures

6.3.1. Management of Existing Hedgerows

Hedgerows surrounding the site will be managed at a height of between 3m – 4.5m. Hedgerows are to be cut with a tractor mounted flail, to a height of no less than 3m. Cutting of hedgerows to improve structure and reduce height will only occur between September and February. The key nesting season for birds is between the 1st of March and 31st of August inclusive. Hedgerows are to be cut on a 2–3-year rotational basis, to create an A-shaped hedge with adequate density throughout its height. The use of rotational hedge cutting will ensure that there are always some uncut hedges on the site that will provide suitable habitats for mammals, invertebrates, and nesting birds, whilst also preventing the hedges from becoming gappy and thin at their base.

6.3.2. Hedgerow Enhancement

The hedgerows within the car parking areas in the northern and eastern sections of the site will be enhanced by the replacement of non-native species with species of native provenance.

Replacing non-native species within the hedgerows with native species will provide crucial food resources and shelter while reducing predation risks. Additionally, native plants support a wider range of invertebrates, which in turn benefit dormice and other small mammals by increasing food availability. Furthermore, native hedgerows will provide better shelter, nesting opportunities, and connectivity between habitats, overall increasing the suitability of the site to support a range of species including dormice.

6.3.3. Sensitive Lighting Plan

A sensitive lighting strategy will form part of the development both during construction and operational phases. This will mitigate and minimise impacts against any light disturbance to small mammals using the hedgerows and woodland. This will involve limiting external lighting installed upon the external elevations of the new buildings which face the existing/new hedgerows. In addition, no works will be undertaken at night.

External lighting installed elsewhere on site (during both construction and post-development stages) will be kept to the minimum level which meets the needs of security and health and safety. Lighting will be installed at low-level only (i.e., no higher than eaves level and lower than 2.4m) and directed downward (i.e., below the horizontal plane). Front and side hoods/shields or cowls will be installed to prevent upwards and horizontal light spill.

The exact models are yet to be finalised. However, any security lights used will operate off a passive infrared (PIR) motion sensor sensitive to large objects only, to avoid constant triggers and with timers set on a short duration (i.e. a maximum 'on' time of two minutes) to reduce the amount of 'lit time'. The bulbs in the lights will ideally be low intensity (i.e. circa 11 watts), glass-glazed and the light source will either be compact fluorescent light sources fitted with appropriate UV filters, low pressure sodium bulbs, or warm light LED bulbs. White lighting sources including mercury or metal halide, CPO and CDO (ceramic discharge metal-halide) bulbs which have a significant effect on dormice and other wildlife will be avoided.

Lighting will not be situated around the perimeter of the site and will be focussed away from the existing/ new hedgerows.

7. References

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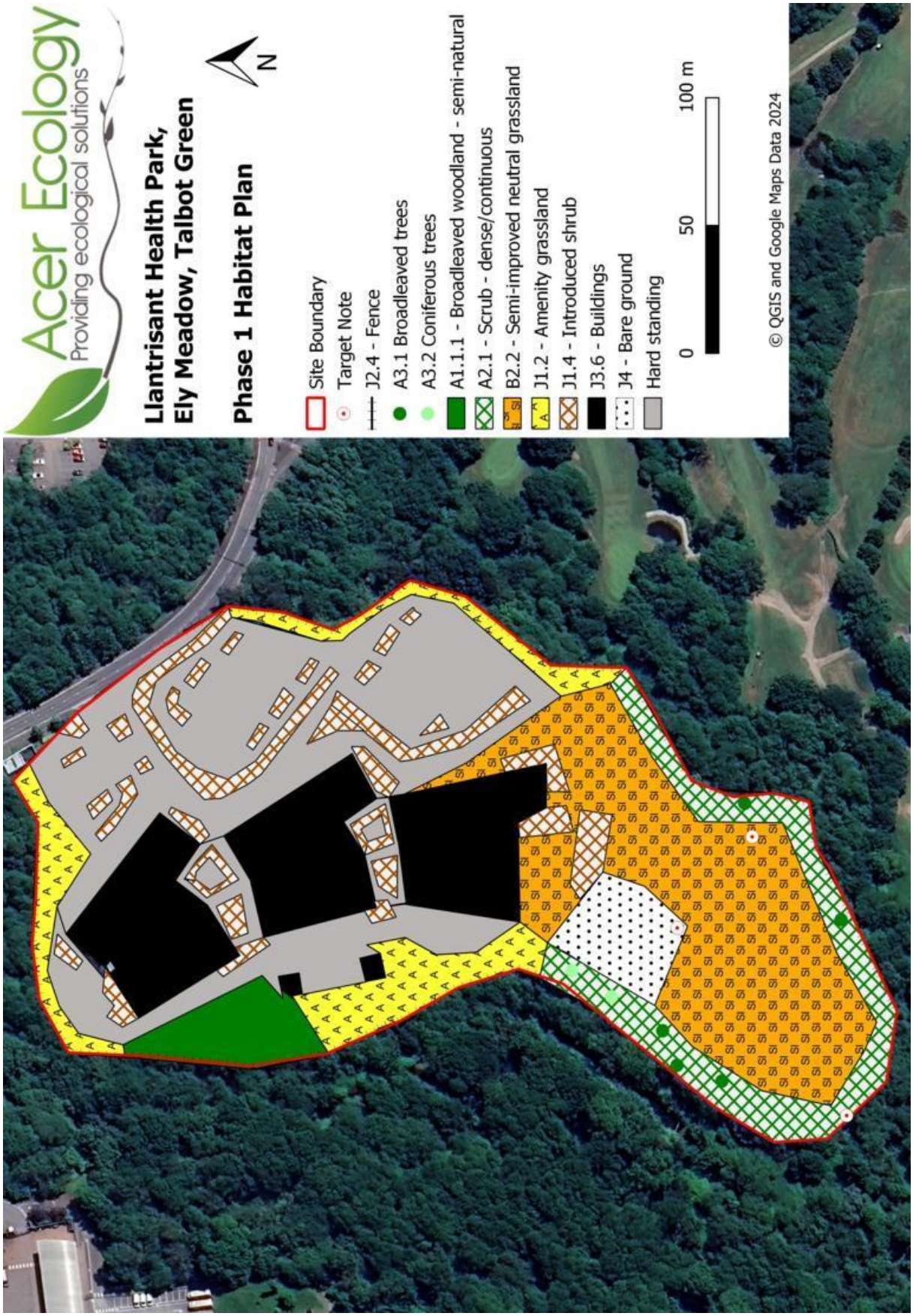
Plan 1: Location Plan

Plan 2: Habitats and Vegetation Plan



Plan 3: Location of Dormouse Tubes and Survey Results

Appendix 1: Development Proposals

Appendix 2: Legislation Protecting Dormouse

The dormouse (*Muscardinus avellanarius*) is an arboreal, nocturnal, small mammal which is usually found in habitats which provide a diverse supply of fruit and seeds and which have a dense structure such as woodland with a rich understorey or species rich hedgerows. They were thought to be reliant on woodlands with hazel but have now found to be much more flexible in their habitat requirements and are increasingly being found in unexpected areas such as scrub, gorse and reed beds (Chanin & Woods, 2003).

Dormice sleep during the day in nests up in the canopy or tall vegetation, woven of honeysuckle bark, grass, moss and leaves. During the night they spend most of their time in the canopy feeding on seeds, flowers, fruits and insects. Nuts, including chestnuts, acorns and hazelnuts, are important food sources prior to hibernation. They hibernate over from late October to early April when food is generally unavailable to them. They hibernate on the ground in a tightly woven nest under moss or leaf litter.

Dormice are fully protected under the amended Wildlife and Countryside Act 1981 through inclusion in Schedule 5. Dormice are also protected under The Conservation of Habitats and Species (Amendment) (EU Exit) ['CHSAEU'] Regulations 2019. Under the above legislation it is an offence to:

- Intentionally or recklessly kill, injure or take an individual of such a species;
- Possess any part of such species either alive or dead;
- Damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- Disturb such a species whilst using any place of shelter or protection; and
- Sell or attempt to sell any such species.

Natural Resources Wales can issue licences under the Habitats Regulations to permit otherwise prohibited acts where there is considered to be for imperative reasons of overriding public interest (primarily developments). Licences for certain activities can be granted providing:

1. The action is in the interests of public health or public, safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
2. That there is no satisfactory alternative.
3. That the action proposed will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

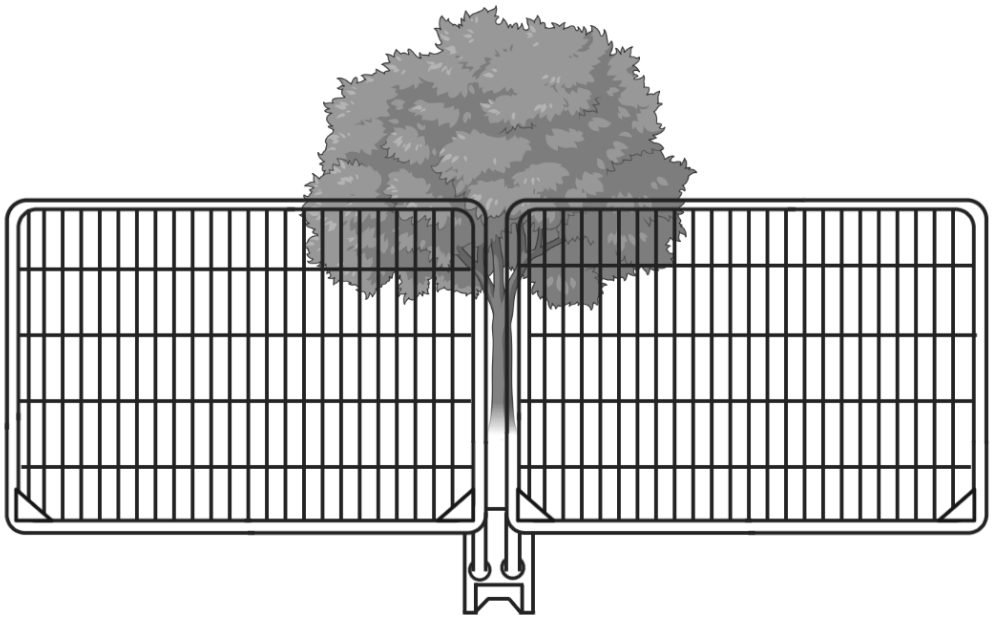
Conservation status is assessed as favourable when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain the population on a long-term basis.

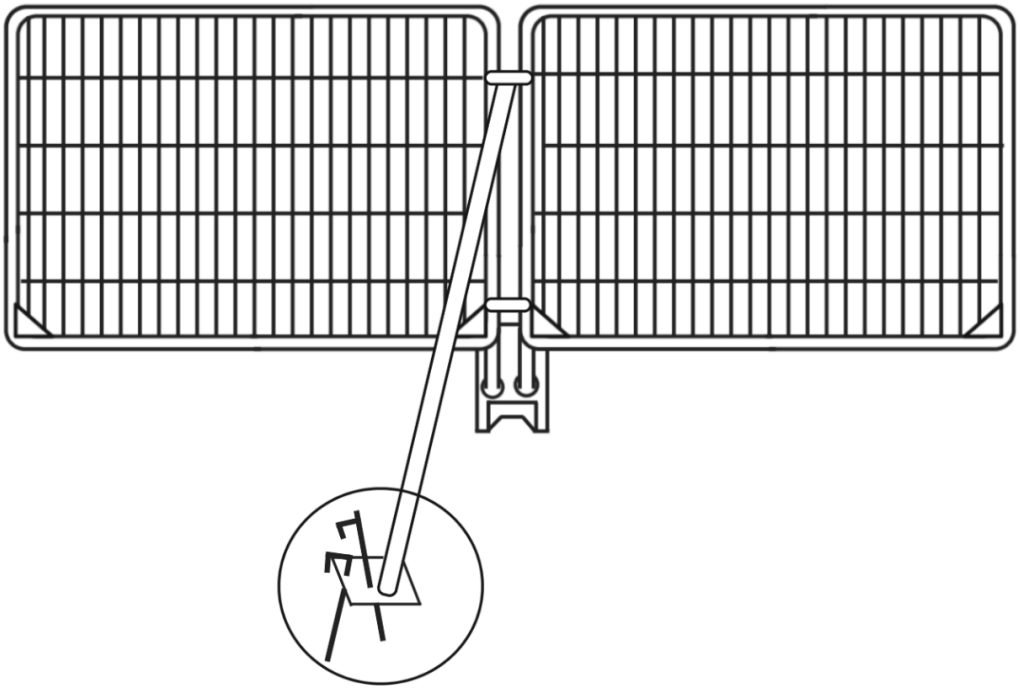
Failure to obtain a derogation would render any actions which cause harm or disturbance to dormice illegal, including any activities which might be undertaken under a valid planning consent. The possession of planning consent does not alleviate or override the requirements of the Habitats Regulations and is no guarantee that a derogation will obtained. Natural Resources Wales take approximately 8 to 10 weeks to process licence applications.

The dormouse is a priority species in the UK and Welsh Biodiversity Action Plans and is subject to a species action plan in the Newport City Council Local Biodiversity Action Plan.

Appendix 3: Protective Barriers



Wildlife barrier surrounding tree



Stabilizer strut with base plate secured with ground pins

Redrawn by Acer Ecology Ltd after BS 5837:2012 Figure 1