



Cambrian Ecology Ltd
5 Tan y Bwlch
Maentwrog
Gwynedd
LL41 3YU

chris@cambrianecology.com

07765 254035 (Chris Hall)

**Trawsfynydd Power Station
Proposed Filling Works
Potential Bat Roost Tree Survey (2)
15th August 2024**



Report by: Chris Hall ACIEEM

Client: Magnox Ltd

**Planning
Authority:** Snowdonia National Park Authority

**Grid
Reference:** SH 68910 38380

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Trawsfynydd Power Station
Proposed Filling Works
Potential Bat Roost Tree Survey (2)
8th August 2024

1 Summary

A Preliminary Ecological Appraisal (PEA) was carried out at the Trawsfynydd Power Station, (ARUP 2023) in relation to proposed filling works. The filling works will be the result of the disposal of material from proposed works to reduce the height of the reactor buildings on the decommissioned power station.

The PEA identified the potential for trees in the vicinity of the filling works to be impacted by the proposed filling operation and recommended that a survey for 'Potential Roost Features' (PRFs) should be carried out within a 30m radius of the proposed works.

The survey for PRFs was subsequently carried on 7th August 2024 and the following conclusions reached:

- No trees are to be removed as a result of the proposals.
- There are no PRFs in any of the trees within the 30 meters radius survey area and as a result there is no potential for disturbance of bats or bat roosts as a result of noise/dust/vibrations during the course of the works.
- Due to the fact that no trees are to be removed, there will be no physical habitat fragmentation.
- Due to the fact that there will be no nighttime working, there will be no requirement for illumination of the working area and therefore no habitat fragmentation due to temporary lighting.
- There will be no permanent illumination installed which could result in habitat fragmentation.

The proposed filling works were therefore assessed as having 'No' potential to have any negative impact on bat roosts or habitat connectivity (J, Collins, 2023). No further bat survey work or mitigation measures will therefore be required.

A biological records search was carried out as an integral part of the PEA. This, and all other protected species and biosecurity issues are covered in the PEA report, (ARUP 2023).

Under Chapter 6 of Planning Policy Wales 11, Planning Authorities must seek to maintain and enhance biodiversity in the exercise of their functions. It is also a priority for developments in Wales to consider ecosystem resilience and green infrastructure in the development of enhancement schemes.

Cambrian Ecology have been informed that NRS are in the process of agreeing a programme of biodiversity enhancements in relation to wider decommissioning activities at the site, which will encompass any loss of biodiversity resulting from this development.

2. Introduction

A PEA was carried out at the Trawsfynydd Power Station, (ARUP 2023) in relation to proposed filling works (see Figure 1). The filling works will be the result of the disposal of material from proposed works to reduce the height of the reactor buildings on the decommissioned power station.

The PEA identified the potential for trees in the vicinity of the filling works to be impacted by the proposed filling operation and recommended that a survey of PRFs should be carried out within a 30m radius of the proposed works. The survey for PRFs was subsequently carried on 7th August 2024.

An ecological survey report is required by Snowdonia National Park Authority, (SNPA) as an integral part of the necessary planning application for the works.

The proposed filling works are to be located within the secure site boundary Grid Reference: SH 68910 38380.



Figure 1: Proposed working area.

3. Methodology

The survey was carried out on 7th August 2024 by licensed bat worker Chris Hall (Bat Licence No S092195-1). Chris has been working as an independent ecologist for 18 years and has held a bat license from Countryside Council for Wales (CCW)/ Natural Resources Wales (NRW) for 28 years and an otter licence (No S089662-2) for 20 years. He is an associate member of Chartered Institute of Ecology & Environmental Management, (CIEEM).

Survey Objectives:

- Identify any PRFs in trees within a 30m radius of the proposed works as recommended in the PEA report, (RUP 2023).
- Assess the potential for roost loss or disturbance should any PRFs be located.
- Assess the potential for habitat fragmentation as a result of either tree loss or inappropriate lighting.
- Make recommendations for mitigation/compensation or any further survey work required in order to comply with current legislation.

The trees were inspected from ground level using binoculars to establish the location of any potential roosting features such as rot holes, cavities, longitudinal splits in branches etc.

In this case, as the survey was carried out when the trees were all in full leaf, when the full crown was not always visible, an assessment was made for the potential for PRFs to be present was made based on the age and condition and species of the tree.

4 Results

For the purposes of this survey, the trees were divided into groups based on their location in relation to the proposed working area, (see Figure 2).

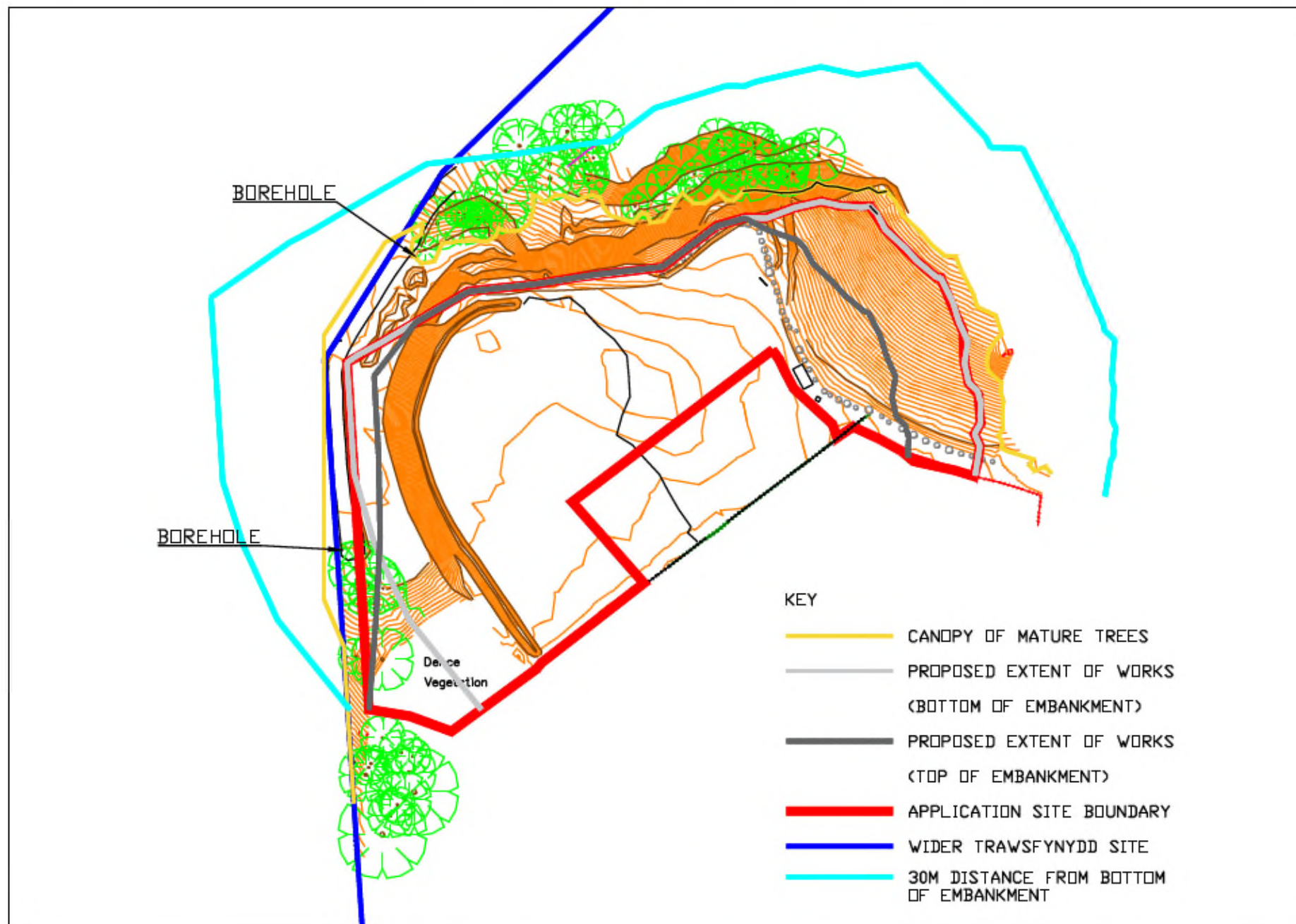


Figure2: Location of tree groups.

4.1 Group 1

The trees in Group 1 will be unaffected by the proposals.

The trees in this group are all immature specimens planted as part of a more recent landscaping scheme. Due to the young age and good condition of the trees, no PRFs are present.

Species present include willow; (*Salix caprea* & *S. cinerea*), birch; (*Betula pendula*), ash; (*Fraxinus excelsior*) and Scot's pine; (*Pinus sylvestris*).

4.2 Group 2

The trees in Group 2 are outside the secure perimeter fence and will be unaffected by the proposals.

The trees in this group are all relatively immature specimens planted as part of a more recent landscaping scheme. Due to the young age and good condition of the trees, no PRFs are present.

Species present include willow, birch, Scot's pine and occasional young oak; (*Quercus petraea*) and rowan; (*Sorbus aucuparia*).

4.3 Group 3

The trees in Group 3 will be unaffected by the proposals.

Some of the trees in this group are more mature and appear to have been planted as part of a much earlier landscaping scheme. The trees in this group also appear to have never been thinned. As a result, the canopies have been shading out the lower growth on the trees leaving the tall, straight stems exposed. While some parts of the canopy were not always visible, these areas comprised primarily of thinner branches in which cavities large enough to provide PRFs are considered highly unlikely to be present.

No PRFs were identified in any of the trees in this group, all of which appear to be in good condition.

The dominant species within this group is beech; (*Fagus sylvatica*) with some young sycamore; (*Acer pseudoplatanus*) also present along with oak, willow and ash.

4.4 Group 4

The trees in Group 4 will be unaffected by the proposals.

Group 4 is also dominated by beech with sycamore, birch, willow, oak, hawthorn; (*Crataegus monogyna*), and hazel; (*Corylus avellana*) also present but as relatively minor components.

The largest tree in this group is a dying ash tree believed to be infected with ash die-back; (*Hymenoscyphus fraxineus*). This tree however has not yet reached a state of decay where any cavities are present.

No PRFs were recorded in any of the trees in this group.

5 Survey Limitations

Bats are highly mobile animals, and some species move roosts on a regular basis. It is often possible to find signs of bat occupation outside of the time that they are resident, in the form of droppings and feeding remains, however, these dissipate over a period ranging from a few days to several months. Many species are crevice-dwelling and signs may be impossible to find. An accurate assessment of the potential of a building, structure or tree to support bats is therefore important to establish the need for further survey work.

6 Ecological Impacts.

6.1 Roost Loss

There will be no negative ecological impact on bats at any level as a result of roost loss.

No trees are to be lost as a result of the proposals and no PRFs were recorded in any of the trees within the 30m survey zone, which was recommended as a result of the PEA, (ARUP 2023).

6.2 Disturbance

There will be no negative impact on bats as a result of disturbance due to noise, dust or vibration due to the fact that there are no PRFs in any of the trees within the 30m survey area.

6.3 Habitat Fragmentation

There will be no removal of habitat which could result in physical fragmentation.

There will therefore be no negative impact on bats as a result of physical habitat fragmentation.

While there will be no removal of habitat which could result in physical fragmentation, artificial lighting can have a similar negative impact on bat movements to physical fragmentation and can cause a 'light barrier' effect in some species, in particular, *Rhinolophus*, *Plecotus* and *Myotis* species, all of which are known to be present in the area, (BCT 2018). Even species such as *Pipistrellus* can be discouraged from flying across brightly lit spaces and any illumination of roost entrances could result in the abandonment or failure of uptake of roosts.

In this case, due to the fact that there will be no nighttime working, there will be no requirement for illumination of the working area and therefore no habitat fragmentation due to temporary lighting.

There will be no permanent illumination installed which could result in habitat fragmentation.

There will therefore be no negative impact on bats as a result of habitat fragmentation due to inappropriate lighting.

7 Mitigation & Recommendations

7.1 Bats

Due to a lack of any potential negative impact on bats as a result of roost loss, disturbance or habitat fragmentation, no mitigation measures relating to bats and the proposed filling works are considered necessary.

8 Biodiversity Enhancements& Green Infrastructure Statement

8.1 Biodiversity Enhancement

Under Chapter 6 of Planning Policy Wales 11, planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions.

The location of all biodiversity enhancements must be clearly shown on final plans for the development.

Cambrian Ecology have been informed that NRS are in the process of agreeing a programme of biodiversity enhancements in relation to wider decommissioning activities at the site, which will encompass any loss of biodiversity resulting from this development.

8.2 Green Infrastructure Statement

Table 1 below shows how the 'stepwise' approach has been implemented in order to achieve the goals of Chapter 6 of the Planning Policy Wales (Updated 2023).

Table 1- How the stepwise approach will be implemented on this development.

Stepwise Step	How the step has been implemented
1- Avoid	<p>Any impact on bats as a result of roost loss will be avoided as there are no PRFs impacted by the proposed works.</p> <p>Any impact on bats as a result of disturbance due to noise, dust or vibrations will be avoided as there are no PRFs within a 30 metre radius of the proposed working zone.</p> <p>Any negative impact on bats as a result of physical habitat fragmentation will be avoided as no trees are to be removed as part of the proposed works.</p>

	Any permanent negative impact on habitat connectivity for bats will be avoided as no new lighting will be installed. Any temporary negative impact on habitat connectivity for bats will be avoided as there will be no night time working and no requirement to illuminate the working area.
2 – Minimise	N/A
3 – Mitigate	N/A
4 – Onsite compensate	N/A
5 – Offsite compensate	N/A

9 Legal Implications

9.1 Bats

Bats are protected under UK law by the Wildlife and Countryside Act 1981 (as amended) and also under European law by the Habitat and Species Regulations 2017. Under these laws it is an offence to deliberately kill or injure a bat, to disturb a bat or to damage, destroy or block access to a roost. Bat roosts are protected under these laws whether the animals are present at the time of survey or not. NRW are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest.

10 References

ARUP (2023) Preliminary Ecological Appraisal, (PEA) Trawsfynydd Filling Works

Bat Conservation Trust (2018) Bats and artificial lighting in the UK.

Planning Policy Wales v12 (2023)

12. Appendices

11.1 Site Photographic Record



Group 1 Trees.



Group 2 Trees outside the secure perimeter fence.



Above and below. Group 3 Trees where more mature trees are present dominated by beech.





The woodland edge of Group 4 Trees.



While the ash in the centre is dying, it has not yet reached the stage where cavities may be present.

11.2 Review Table

Name	Task	Date
Chris Hall	Author	08.08.2024
Ben Box	Review	09.08.2024
Heaven Kyriacou	Final Proofreading	12.08.2024
Chris Hall	Amendments	15.08.2024