Appendix 8E
Bat Aerial Tree Climbing Survey Report

November 2025

NGED

Upper Ogmore Grid Connection

Appendix 8E: Bat Aerial Tree Climbing Survey Report

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QUALITY CONTROL

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EXECUTIVE SUMMARY

WSP UK Ltd (WSP) was commissioned by National Grid Electricity Distribution (NGED) to support a Development of National Significance (DNS) application for the proposed Upper Ogmore Wind Farm electricity network ('the Proposed Development'). The Proposed Development is located in south Wales, near Caerau and will partially travel through the town of Maesteg. The Proposed Development route, plus a 25 m buffer either side of the route, is hereafter referred to as 'the Site'.

A Preliminary Ecological Appraisal (PEA) of the Site has been undertaken by CSA Environmental which included a desk study (a search for records of protected and / or notable species within the Site and adjacent land within 2 km of the Site) (CSA Environmental, 2024[a]). A total of 63 records of bats were identified during the desk study. Seven confirmed bat roosts and two possible bat roosts were also returned from the desk study, all of which appear to be associated with the residential area of Maesteg. The closest bat roost record was 300 m to the east of the Site.

Four survey areas where trees may be impacted by the Proposed Development were identified. Subsequently, CSA Environmental undertook a ground level tree assessment (GLTA) to identify any trees within these four areas with potential suitability to support roosting bats (CSA Environmental, 2024[b]). Finally, WSP undertook bat roost surveys in the form of close inspection surveys of trees identified by CSA Environmental as having potential suitability to support roosting bats, based on the recommendations of the CSA Environmental Bat Survey Report (CSA Environmental, 2024[b]).

Whilst no bats were identified during the close inspection surveys, thirteen trees were assessed as having suitability for supporting roosting bats. Nine trees were assessed as having negligible suitability for supporting roosting bats. The trees were classified as follows:

- Potential roost feature (PRF)-M[1] – four trees (T3, T5, T14, T16) ;
- PRF-I[2] – nine trees (T1, T6, T8, T9, T10, T11, T18, T21 and T22) ; and
- Negligible – nine trees (T2, T4, T7, T12, T13, T15, T17, T19 and T20).

Of these, T5 and T18 were identified as being 'at risk' (potentially removed or lopped / pruned to facilitate the Proposed Development) as they fall within 10 m of the Proposed Development route.

Recommendations are outlined within this report to ensure the Proposed Development demonstrates a Net Benefit for Biodiversity (NBB) by following a stepwise approach. Firstly, habitats and features sensitive to bats will be avoided. Additional measures to achieve NBB include provision of alternate roosting features where trees / PRFs with suitability for roosting bats are to be lost; inspection of PRF(s) to confirm the continued absence of bats prior to the removal of trees with bat suitability; sensitive lighting measures to be outlined in a Construction Environmental Management Plan (CEMP); and ecological enhancements to ensure compliance with policy.

1 PRF is suitable for multiple bats and may therefore be used by a maternity colony.

2 PRF is suitable for individual bats or very small numbers of bats.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 WSP UK Ltd (hereafter referred to as 'WSP') was commissioned by National Grid Electricity Distribution (hereafter referred to as 'NGED') to support a Development of National Significance (DNS) application for the proposed Upper Ogmore Wind Farm electricity network. The proposals are located in south Wales, near Caerau and will partially travel through the town of Maesteg. To support this application, WSP was commissioned to undertake bat surveys, as the development of the Upper Ogmore Wind Farm electricity network has the potential to affect bats, directly through the removal of trees / limbs potentially used by roosting bats, or indirectly through the removal or degradation of habitat used by foraging bats.

1.1.2 The proposals, hereafter referred to as the 'Proposed Development', comprise 66 kilovolts (kV) overhead lines (OHL) and underground cables (UGC). The Proposed Development is associated with the nearby Foel Trawsnant Grid Connection and will also integrate the consented DNS of Upper Ogmore Wind Farm and the wider national grid. The Proposed Development route will be approximately 9 km in length and will be split into the following sections:

- 1.1 km western OHL;
- 1.7 km western UGC;
- 3.0 km eastern OHL; and
- 3.2 km eastern UGC.

1.1.3 The Proposed Development route is shown in **Figure 8E.1**, with an additional 50 m buffer (25 m either side of the route). These areas (approximate central grid reference: SS871949) will hereafter be referred to as the 'Site'.

1.2 ECOLOGICAL BACKGROUND

1.2.1 A Preliminary Ecological Appraisal (PEA) for the Proposed Development was undertaken by CSA Environmental in 2024 (CSA Environmental, 2024[a]). This PEA included a desk study and a UK Habitat Classification ('UKHab') survey of the Site. As a part of the desk study, records of protected and / or notable species within the Site and adjacent land within 2 km of the Proposed Development were requested from the Southeast Wales Biodiversity Records Centre (SEWBReC).

1.2.2 A total of 63 records of bats were identified during the desk study. Bat species returned from the desk study included;

- Common pipistrelle *Pipistrellus pipistrellus*;
- Soprano pipistrelle *Pipistrellus pygmaeus*;
- Nathusius' pipistrelle *Pipistrellus nathusii*;
- Brown long-eared bat *Plecotus auritus*;
- Natterer's bat *Myotis nattereri*;
- Noctule bat *Nyctalus noctula*;

- Serotine bat *Eptesicus serotinus*; and
- Leisler's bat *Nyctalus leisleri*.

1.2.3 Seven confirmed bat roosts and two possible bat roosts were returned from the desk study, all of which appear to be associated with the residential area of Maesteg.

1.2.4 As part of the PEA in 2024, it was recommended that a ground level tree assessment (GLTA) be undertaken of all trees to be impacted by the Proposed Development (CSA Environmental, 2024[a]), to assess roosting suitability as per best practice guidance (Collins, 2023). A total of four survey areas were identified where trees may potentially be impacted by the Proposed Development. These four areas were targeted by CSA Environmental as a part of the GLTA in September 2024 (CSA Environmental, 2024[b]).

1.2.5 Only one area, Area 4 was identified as requiring further surveys following the GLTA. Sixteen trees in Area 4 were identified with potential roost features (PRFs) and therefore assessed as having potential for supporting roosting bats; one was assessed as further assessment required (FAR) and three trees were assessed as having negligible suitability. It was therefore recommended following the GLTA that where impacts to trees with PRFs / FAR cannot be reasonably avoided, further detailed close inspection surveys should be undertaken. Further details on the methodology, results and subsequent recommendations of the GLTA are provided in the CSA Environmental Bat Survey Report (CSA Environmental, 2024[b]).

1.3 BRIEF AND OBJECTIVES

1.3.1 Based on the recommendations of the CSA Environmental Bat Survey Report (CSA Environmental, 2024[b]), NGED commissioned WSP to complete further bat surveys of the Site (where safe and accessible). The brief was to:

- Complete close inspection surveys for trees identified with roosting suitability on Site; and
- Evaluate the value of the Site for roosting bats and make recommendations as to how the Proposed Development should account for bats with respect to legislation, planning and biodiversity policy.

1.3.2 The results of these surveys, and subsequent recommendations, are included within this report.

2 METHODS

2.1 CLOSE INSPECTION SURVEY

2.1.1 Close inspection surveys were carried out on all trees identified during the GLTA as having suitability to support roosting bats. These comprised trees categorised as FAR, and trees containing at least one PRF.

2.1.2 The close inspection survey comprised an endoscope inspection of all PRFs within each tree by an appropriately qualified and licensed ecologist (NPTC CS38[3] tree climbing and aerial rescue, Natural Resources Wales (NRW) Bat Survey Licence, full member of the Chartered Institute of Ecology and Environmental Management (CIEEM)). Inspections were undertaken using a small torch and endoscope (e.g. to search for bats, if any bats were present, and to search for any evidence of bats having previously been present). Inspections were carried out under safe working protocols (Arboricultural Association, 2020[a]; and Arboricultural Association, 2020[b]) and in accordance with best practice guidelines (Collins, 2023).

2.1.3 The following information was recorded during the close inspection survey for each PRF:

- Approximate internal dimensions;
- Whether dry or wet;
- Evidence of use by birds, squirrels, or other non-bat species;
- Evidence of bat activity (smoothing of internal surfaces, droppings, bat fly (*Nycteribiid*) pupae, feeding remains, staining); and / or
- The presence, number and species of bats observed.

2.1.4 Each tree with suitability to support roosting bats was subsequently categorised as either being a confirmed roost or as having PRF-M or PRF-I suitability (see **Table 2-1**), based on the PRFs present. Where a single tree exhibited multiple PRFs of varying degrees of suitability for roosting bats, the tree was categorised according to the PRF with the highest suitability. If a tree was found to have no suitability for roosting bats, it was described as negligible.

2.1.5 Trees were categorised in line with the descriptions in **Table 2-1**. Trees identified as having PRF-M suitability to support bat roosts were subject to further surveys. The level of survey effort employed was proportional to the level of potential for roosts to be present (Collins, 2023); as per **Table 2-1**.

2.1.6 Following all surveys an indication was also given to the potential roost types that could be supported:

- Maternity (occupation by a maternity colony during pregnancy and nursery periods);
- Transitory / summer day roost (occupation by 1-3 bats during this period);
- Mating (occupation by any number of bats during the mating period); and
- Winter (occupation by any number of bats during the winter period).

3 City & Guilds / NPTC Level 2 Award in Tree Climbing and Rescue - units 206 and 306 and refresher training (where relevant).

Table 2-1 – PRF Suitability Categorisation (Collins, 2023)

Category	Description	Minimum number of survey visits
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.	At least three visits between May – September, with at least two in the period May – August.
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitat.	At least one visit between May – August.

2.2 DATES OF SURVEY AND PERSONNEL

2.2.1 All bat surveys were led by an experienced surveyor (who holds a NRW Bat Survey Licence) and has 14 years' experience of ecological surveys.

2.2.2 The first close inspection survey of the trees on Site identified with suitability to support roosting bats was completed in May / June 2025. Trees with PRF-M suitability to support bat roosts were subject to repeat inspections in July and August 2025. During the close inspection surveys, two additional trees (T21 and T22) were identified with suitability for supporting roosting bats and were therefore also subject to inspection. The three trees (T7, T17 and T19) identified by CSA Environmental as providing negligible suitability for supporting roosting bats were not subject to close inspection by WSP.

2.2.3 The first close inspection surveys were undertaken over two days on the 28 May 2025 and the 4 June 2025. Subsequently, trees T3, T5, T14 and T16 were subject to two repeat inspections on the 6 July 2025 and 13 August 2025. In addition, tree T9 was first subject to a close inspection survey on the 13 August 2025, however this tree was assessed as having PRF-I suitability for supporting roosting bats and therefore no further close inspection surveys are required.

2.3 NOTES AND LIMITATIONS

2.3.1 The ecological survey data collected as part of this report is considered valid for 18 months (CIEEM, 2019) unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or changes in management.

2.3.2 Records held by local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.

2.3.3 The level of survey effort for the trees present on Site were in line with good practice survey guidelines (Collins, 2023) and is therefore considered sufficient to establish the likely absence of bat maternity roosts. Bats typically demonstrate seasonal use of different roosts, and being highly mobile species, may be roosting elsewhere during the period a tree was surveyed. For this reason, bats may use the trees on Site but remain undetected. RESULTS

In addition to the 17 trees identified with suitability for supporting roosting bats during the GLTA undertaken by CSA Environmental, an additional two trees (T21 and T22) were identified with suitability for supporting roosting bats during the close inspection survey. These 19 trees were subjected to close inspection survey.

2.3.4 Following the GLTA undertaken by CSA Environmental, the categorisations of six trees (T2, T4, T12, T13, T15 and T20) were downgraded to negligible. The remaining thirteen trees were

considered to offer either PRF-M or PRF-I suitability to support roosting bats (as per good practice survey guidance (Collins, 2023)). These were classified as follows:

- PRF-M – four trees (T3, T5, T14, T16) ; and
- PRF-I – nine trees (T1, T6, T8, T9, T10, T11, T18, T21 and T22).

2.3.5 The locations and results of the trees surveyed are shown in **Figure 8E.2**. Descriptions of the PRF type(s) identified on each tree, along with the bat species considered likely to use each PRF (based on the type and species of bats known within the local region (The Mammal Society, 2020)), are provided in Appendix A. Select photographs of tree PRFs are provided in Appendix B.

2.3.6 No bats, or evidence of use by bats, were identified during the close inspection surveys.

3 IMPLICATIONS FOR DEVELOPMENT

3.1 TREES

3.1.1 The Proposed Development has the potential to affect bats, directly through the removal of trees / limbs to facilitate the Proposed Development. The results of the close inspection surveys completed on Site have concluded that bat roosts are likely absent from the trees surveyed on Site. The definitive absence of roosting bats is very difficult to prove; however, it is considered unlikely that maternity roosts or other roosts of high conservation status are currently present.

3.1.2 Two trees with suitability to support roosting bats are considered to be 'at risk' of being affected by the Proposed Development, through direct removal or pruning / lopping of limbs. Trees are considered at risk if they fall within 10 m of the Proposed Development route. These comprise:

- PRF-M – T5; and
- PRF-I – T18.

3.1.3 All other trees assessed as having suitability for supporting roosting bats (T1, T3, T6, T8, T9, T10, T11, T14, T16, T21 and T22) will be retained according to the current Proposed Development design.

3.2 LEGAL COMPLIANCE

3.2.1 The legislation and planning policy relevant to bats and their roosts is set out below. Recommendations as to how the legislation and planning policy may be satisfied are set out in Section 5.

3.2.2 Bats and their roosts are afforded a high level of protection under The Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations) (Her Majesty's Stationary Office (HMSO), 2019), the legislation means that it is an offence to:

- Deliberately capture, injure or kill a wild bat;
- Deliberately disturb wild bats; '*disturbance of animals includes in particular any disturbance which is likely:*

  (a) to impair their ability; —

  (i) to survive, to breed or reproduce, or to rear or nurture their young; or

  (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

  (b) to affect significantly the local distribution or abundance of the species to which they belong.'; and
- Damage or destroy a breeding site or resting place used by this species.

3.2.3 Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) (WCA) (HMSO, 1981) with respect to disturbance of animals when using places of shelter, and obstruction of access to places of shelter.

3.2.4 Due to the high level of protection afforded to bats and their habitat, mitigation for this species is governed by a strict licensing procedure administered by NRW (normally, planning permission must be obtained before a licence can be sought). Licencing is subject to three tests, as defined under the Habitats Regulations, these must also be applied by the planning authority before granting permission for activities affecting bats. For permission to be granted the following criteria must be satisfied:

- The proposal is necessary for '*preserving 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*';
- '*There is no satisfactory alternative*'; and
- The proposals '*will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range*'.

3.2.5 Certain species of bats including the barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule bat, brown long-eared bat, common pipistrelle, soprano pipistrelle bat, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros* are also listed as Priority Species under Section 7 of the Environment (Wales) Act 2016. Under Section 7 of the Environment (Wales) Act 2016, Welsh Ministers must take all reasonable steps to maintain and enhance the living organisms and types of habitats included on any list published under this section and encourage others to take such steps.

3.3 PLANNING POLICY COMPLIANCE

3.3.1 At the national level the Planning Policy Wales (PPW) (Welsh Government, 2024) forms the basis for planning system decisions with respect to conserving and enhancing the natural environment, including protected species such as bats.

3.3.2 PPW (Edition 12, 2024) states:

> *"A Resilient Wales can be supported by protecting and providing sufficient scale, extent, diversity and connectivity within, and between, landscapes and habitats to maintain and enhance biodiversity and the resilience of ecosystems. This support will enable them to withstand the pressures of change, to tackle pollution, to protect and enhance water resources, to protect soils and to enable flood mitigation, the creation of carbon sinks (especially in urban areas), and to promote opportunities for social and economic activity based on valuing and enabling access to the natural, historic and built environment."*

3.3.3 The PPW sets out, amongst other points, how at an overview level the '*planning system should contribute to and enhance the national and local environment by*:

- *Recognising the wider benefits of ecosystem services*; and
- *Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*.

3.3.4 A list of principles which local planning authorities should follow when determining planning applications is included in the PPW, and includes the following:

- '*If significant harm resulting from a development cannot be avoided…adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused*;
- *Opportunities to incorporate biodiversity in and around developments should be encourage*d; and
- *Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland unless the need for, and benefits of, the development in that location clearly outweigh the loss*'.

3.3.5 Under Section 6 of the Environment (Wales) Act 2016 public authorities that exercise their functions in relation to Wales have a duty to maintain and enhance biodiversity and promote the resilience of ecosystems.

3.3.6 One of the seven goals of the Well-being of Future Generations (Wales) Act (2015) is to create a resilient Wales. This comprises maintaining and enhancing '*a biodiverse natural environment with healthy functioning ecosystems that support ecological resilience'*.

4 RECOMMENDATIONS

4.1 AVOIDANCE

4.1.1 The full extent of the Proposed Development footprint is not yet currently known; however, it has been assumed that any trees within 10 m of the Proposed Development route are 'at risk'. Due to the value of trees as a potential roosting and foraging resource, in the first instance, steps should be taken to ensure all trees on Site (or as many as practicable) are retained where feasible.

4.1.2 Permanent and temporary vegetation clearance is proposed to enable the construction of the Proposed Development; however, this will be minimal. This will be achieved through 'micro-siting' or precise placement of OHL poles. Permanent habitat loss will entail the vegetation clearance required within the footprint of the OHL poles. Temporary habitat loss will entail vegetation clearance within a buffer around each OHL pole. Grassland habitats will be the main habitat impacted by the vegetation clearance works, with some immature trees to be lost in scrub habitat. Nevertheless, no tree felling or facilitation lopping / pruning of any trees with suitability for supporting roosting bats is anticipated outside of trees T5 and T18. Should the design of the Proposed Development change, or if any trees beyond 10 m from the Proposed Development route are to be affected, an ecologist should be consulted for further advice.

4.1.3 Where habitat loss is anticipated, habitat replacement and enhancement are proposed as outlined in Section 5.4.

4.2 MITIGATION MEASURES

4.2.1 Bats roosting in trees exhibit an increased frequency of roost switching behaviours (BTHK, 2018); all trees with roosting suitability should therefore be considered an important part of the wider roosting resource available to bats within the Site (Collins, 2023). Recommendations for mitigation for the loss of trees / PRFs with roosting suitability are stated in **Table 4-1**. Furthermore, where trees with bat roosting potential cannot be avoided, recommendations for mitigation for further measures are outlined within Section 5.2 – Precautionary Methods.

Table 4-1 – Proposed Mitigation

Tree	Overall Suitability	Recommended Mitigation
Trees likely to be 'at risk'– mitigation only implemented if trees / PRF are to be removed		
T5	PRF-M	Installation of two bat boxes in a location adjacent to the tree as specified by an ecologist.
T18	PRF-I	Installation of one bat box in a location adjacent to the tree as specified by an ecologist.

4.3 PRECAUTIONARY METHODS

4.3.1 Although no evidence of use by bats was identified at the time of the close inspection surveys, two trees have been assessed as having suitability for supporting roosting bats and are considered 'at risk' of being affected by the Proposed Development. Tree T5 was assessed as PRF-M, meaning the tree has at least one PRF which is suitable for multiple bats and may therefore be used by a maternity colony. Tree T18 was assessed as PRF-I, meaning the tree has at least one PRF which is suitable for individual bats or very small numbers of bats, either due to size or lack of suitable surrounding habitats.

4.3.2 The bat hibernation season is generally considered to be November – March and some species use tree roosts during the winter months and can even move roosts in the winter months. The type of PRF present on T5 is considered to have suitability for hibernating species such as noctule. In order to establish the presence / absence of hibernating bats, it is recommended that a minimum of one close inspection survey is carried out during the peak hibernation period (January – February (and perhaps December)). Further surveys may be required depending on the results of the initial winter close inspection surveys.

4.3.3 No further surveys beyond the winter close inspection survey are required to be carried out on these trees. However, owing to their highly mobile and opportunistic nature of roosting, bats may start using a roosting site after it has been surveyed or may have been roosting somewhere else during the period it was surveyed. Therefore, it is recommended that all trees with bat roosting suitability which are anticipated to be impacted by the Proposed Development (T5 and T18 according to current design) should be fully inspected by a licenced bat ecologist immediately prior to works to ensure no bats are present.

4.3.4 In the event that bats are found to be present during the pre-works inspection, works would be postponed, and advice sought from NRW. It may be necessary to apply for a licence from NRW to allow the lawful removal of the tree.

4.4 LIGHTING

4.4.1 Artificial lighting can deter bats from accessing highly illuminated habitat, including roosting features. There is a risk that high levels of artificial light-spill onto retained trees and linear vegetation could deter bats from accessing suitable roost features. Whilst works are anticipated to centre around day-light hours, it is possible that during the winter months some impromptu lighting may be required at the start or end of the work shift due to shorter day length.

4.4.2 To minimise the impacts of lighting on bat activity, the following measures are recommended to be outlined within a Construction Environmental Management Plan (CEMP):

- There will be no night-time working with works taking place between 07:00 and 19:00 hours on weekdays and 07:00 to 13:00 on Saturdays. In exceptions, there may be a requirement for a 7-day work week. This would be agreed with the local council as appropriate; and
- During the winter months when day length is shorter some site lighting will be required. Site lighting will be controlled to prevent incidental spillage on to features that may be used by nocturnal species.

4.4.3 Such control measures may include:

- Use of directional lighting to ensure only task areas are lit, avoiding direct illumination of retained trees, rough grassland and boundary vegetation features;
- Use the minimum light levels necessary for the relevant task / function, this may equate to reducing light intensity, and / or using the minimum number or light sources or minimum column height;
- Use narrow spectrum light sources where possible to lower the range of species affected by lighting, specifically avoiding shorter wavelength blue light, using instead warm / neutral colour temperature <4,200 kelvin lighting (Bat Conservation Trust (BCT), 2018); and
- Use light sources that emit minimal ultra-violet light to avoid attracting night-flying invertebrate species which in turn may attract bats to the light.

4.5 ECOLOGICAL ENHANCEMENT MEASURES

4.5.1 Net Benefit for Biodiversity (NBB) in association with development is required by PPW (Edition 12, 2024) and is required under Section 6 of Part 1 of the Environment (Wales) Act 2016. The below recommendations aim to comply with a NBB approach, in the way of delivering an overall improvement in biodiversity. By engaging with these recommendations in the early stages of the Proposed Development, it is hoped that ecosystem resilience and wider ecosystem benefits can be achieved. This approach will support local authorities in achieving their Section 6 duty to “promote the resilience of ecosystems” when determining planning applications.

- Permanently removed trees which are proposed to be removed within the ‘at risk’ area should be replaced at a 3:1 ratio. This will be achieved by planting additional trees / tree lines throughout the Site.
- Planting of additional trees / tree lines will support in bolstering existing commuting and foraging routes for bats and also will create new routes, improving the connectivity within the Site and surroundings for bats.
- Existing habitats in poor condition for biodiversity, such as parcels of improved grassland, are recommended to be enhanced through incorporation of species-rich grassland seed mixes or plugged with suitable species recorded in adjacent species-rich habitats. Enhancing the floral diversity within the Site will improve the suitability for a greater variety of invertebrates, which provide more diverse foraging opportunities for bats.
- Installation of bat boxes on trees within the Site would provide additional roosting opportunities.

5 CONCLUSIONS

5.1.1 In total there are thirteen trees with suitability for roosting bats within the Site:

- PRF-M – T3, T5, T14, T16 ; and
- PRF-I – T1, T6, T8, T9, T10, T11, T18, T21 and T22.

5.1.2 Of those thirteen trees, two trees (T5 and T18) are considered to be at risk of being removed or lopped / pruned as part of the Proposed Development. The remaining eleven trees are considered likely to be retained under the current Proposed Development design.

5.1.3 No bats, or evidence of use by bats, were identified during the close inspection surveys. However, due to the suitability of the identified trees within the Site to support roosting bats, and the regular roost switching nature of bats particularly of tree roosting bats, a precautionary method of working is recommended. This includes the following:

- All trees on Site should be protected and incorporated into the final design where possible. Where trees / PRFs with suitability for roosting bats are to be lost, alternative roosting provision should be provided in the form of bat boxes;
- Prior to the removal of trees with bat suitability, trees will be inspected by a licensed bat ecologist to confirm the continued absence of bats. If roosting bats are found to be present, works will stop and an NRW licence may need to be sought prior to removal works continuing;
- Consideration should be given to lighting through the provision of a CEMP highlighting precautions to be taken during the construction phase in order to reduce the likely disturbance of bats foraging and commuting behaviours throughout the Site; and
- Ecological enhancements in relation to landscape and provision of future roosting opportunities are provided, in the form of compensatory planting and bat boxes within trees throughout the Site.

6 REFERENCES

PROJECT REFERENCES

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Annex A

CLOSE INSPECTION SURVEY RESULTS

Table 0-1 - Close Inspection Survey Results

Tree No	Tree Species	PRF No. and Type					Evidence of roosting bats	Peak Count	Potential for different roost types*				Overall, Tree Bat Roost Potential
		PRF ID	PRF Type	PRF Aspect and Height	PRF Description	PRF Grade			B	T	M	H	
T1	Oak *Quercus sp.*	1	Woodpecker hole	Approximately 7 m on southern aspect of main stem.	Three woodpecker holes, each one extends approximately 8cm horizontally.	PRF-I	-	-	-	Y	-	-	PRF-I
T3	Oak	1	Knothole	Approximately 8 m on northern aspect of tree	Excavated knothole, extends 30 cm up and down	PRF-M	-	-	Y	Y	Y	Y	PRF-M
T5	Oak	1	Woodpecker hole	On western aspect of tree, approx. 2-3 m high	All transverse snaps, active birds nest identified, possibly treecreeper *Certhia familiaris*	PRF-M	-	-	Y	Y	Y	Y	PRF-M
T6	Ash *Fraxinus excelsior*	1	Tear out	9 m high on north of main stem	Tear out wound exposed and quite open, with an opening of approximately 30 x 10 cm. Tear out extends both up and down and has bees nesting within it.	PRF-I	-	-	-	Y	-	-	PRF-i
T8	Ash	1	Woodpecker hole	Approximately 8 m on the top of the main stem	Series of three woodpecker holes, the lower two connect into hollow in main stem.	PRF-I	-	-	Y	Y	-	-	PRF-I
T9	Oak	1	Woodpecker hole	5m high on eastern aspect	Knothole extending in 20 cm, with a diameter of 6 cm. Smooth and dry inside. Birds nest at base.	PRF-I	-	-	-	Y	-	-	PRF-I

Tree No	Tree Species	PRF No. and Type					Evidence of roosting bats	Peak Count	Potential for different roost types*				Overall, Tree Bat Roost Potential
		PRF ID	PRF Type	PRF Aspect and Height	PRF Description	PRF Grade			B	T	M	H	
T10	Oak	1	Split	Approximately3-4 m on eastern aspect of tree	Split limb which has crevices in dead wood, extending inwards approximately 8 cm and with opening approximately 5 cm wide	PRF-I	-	-	-	Y	-	-	PRF-I
T11	Birch *Betula sp.*	1	Wound	1.5 m high on southern aspect of tree.	Wound with approximately 10 cm tube opening on both sides, dry and smooth inside	PRF-I	-	-	-	Y	-	-	PRF-I
T14	Oak	1	Tear out	Approximately 8 m on southern aspect of tree	Tear out is approximately 3 cm in diameter and extends in approximately 60 cm and is smooth, polished and clean	PRF-M	-	-	Y	Y	Y	Y	PRF-M
		2	Wound	Approximately 7 m high on the southern aspect of tree	Wound is large and open with a bird's nest at the base	PRF-I				Y			
T16	Oak	1	Wound	On the northern aspect of tree, 3 m high.	Tube extends inwards approximately 15 cm and has an approximate diameter of 10 cm. Feature tapers to a point, is quite open, wet and has mud inside	PRF-M	-	-	Y	Y	Y	Y	PRF-M
		2	Fused stems - weld	On southern aspect of tree	Fused stems on top of joining branches	PRF-I				Y			
T18	Ash	1	Butt rot	On southern aspect of tree, 0 m high	Tube has butt rot extending upwards approximately 40 cm with an entrance and total diameter of approximately 6 x 6 cm. Dry inside and top of chamber jagged	PRF-I	-	-	-	Y	-	-	PRF-I

Tree No	Tree Species	PRF No. and Type					Evidence of roosting bats	Peak Count	Potential for different roost types*				Overall, Tree Bat Roost Potential
		PRF ID	PRF Type	PRF Aspect and Height	PRF Description	PRF Grade			B	T	M	H	
		2	Woodpecker hole	At top of butt rot (PRF-I)	Woodpecker hole in deadwood on butt rot. Extends inwards approximately 7cm with an entrance and total diameter of 5 x 5 cm	PRF-I				Y			
T21	Oak species	1	Wound	On top of main stem facing upwards, 4 m high		PRF-I	-	-	-	Y	-	-	PRF-I
		2	Transverse snap	Approximately 4 m high facing upwards		PRF-I				Y			
T22	Oak	1	Tear out	Approximately 1 m high on south-western aspect of main stem	Tear out wound extends almost to ground level, blue tit nest in the bottom	PRF-I				Y			PRF-I

Annex B

PHOTOGRAPHS

Photo 1 – T1	Photo 2 – T3
	
Photo 3 – T5	Photo 4 – T6
	

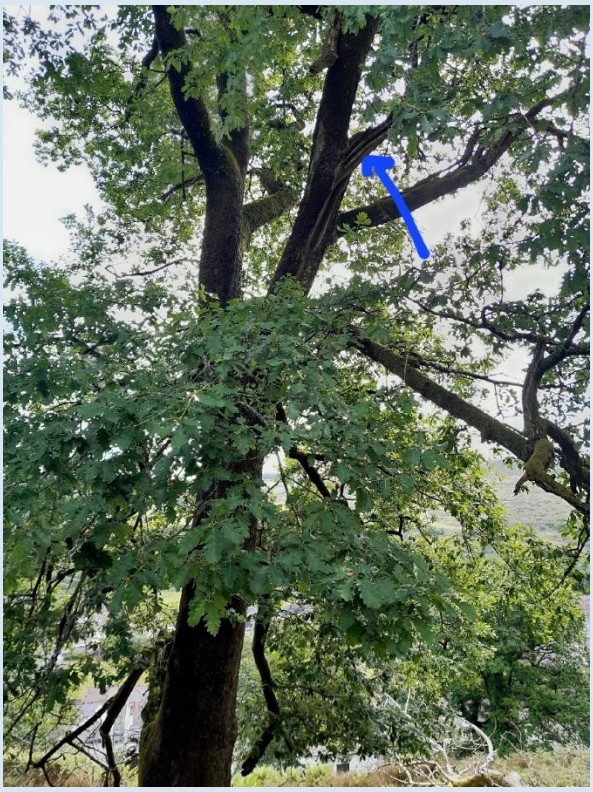
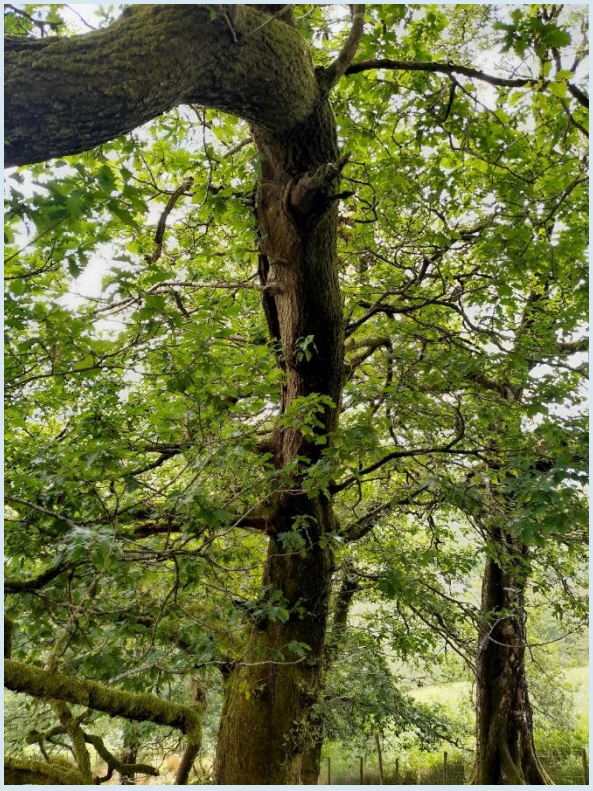
Photo 5 – T8	Photo 6 – T10
	
Photo 7 – T11	Photo 8 – T14
	

Photo 9 – T16	Photo 10 – T18
	
Photo 11 – T21	Photo 12 – T22
	

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