Tech Note
Aerial Assessment of Trees for Bats



Tyler Grange

Cefn Road, Wrexham
22nd September 2022

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13539_R04	22nd September 2022		Dale Mortiboys BSc (Hons) ACIEEM	John Moorcroft BSc. MSc. MCIEEM. CEnv

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13539/P011: Tree Retention and Removal Plan-Phase 1 Masterplan

Introduction

1.1. This report has been prepared by Tyler Grange Group Ltd. (TG) on behalf of Harworth Group. It sets out the findings of ecological surveys in relation to a parcel of land at Cefn Road, Wrexham (OS Grid Reference SJ 3548 5092), which is proposed for phased residential development.

Context

1.2. The wider site covers an area of 52 hectares and comprises mainly arable fields and amenity grassland in use as playing fields bordered by hedgerows and mature trees; public footpaths also cross the site at several points. Cefn Road runs along the western site boundary, and Bryn Estyn Road along the northern boundary. Residential development lies to the north and west of the site, and agricultural fields to the south and east. Wrexham Industrial Estate is located 1.1km east of the site. The Phase 1 application covers an area of approximately 18.4ha. More details of the site proposals and wider ecological reporting can be found in Ecological Report (Report Ref: 13539 R02b).



Figure 1.1 – Site Boundary (Red Line – All Phases, Blue Line – Phase 1, White Area = inaccessible
(Aerial Imagery © Google 2022)

1.3. The information presented in this note is pursuant to the response to the comments raised by Natural Resources Wales (NRW) on 17th June 2022 consent:

> *"Protected Species*
>
> *Bats*
>
> *We note that the bat report submitted in support of the above application (Mortiboys, D., February 2022, Ecological Assessment, Tyler Grange Ref 13539_R02a) has identified that bats*

are present at the application site. Bats and their breeding and resting places are protected under the Conservation of Habitats and Species Regulations 2017 (as amended).

Although the bat report has been submitted, we advise that there is currently insufficient information to assess potential effects on bats, and how any effects will be avoided or mitigated.

We therefore advise that further information should be submitted with the formal application to assess the extent of adverse effects on the bats and any avoidance or mitigation measures required. This must demonstrate that the proposed development would not be likely to be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range.

Section 3.25 of the Ecological Assessment identifies that some tree removal is proposed. However we note that at the time of writing the report, further details such as locations were not available. Section 4.3 of the Ecological Assessment states that a Preliminary Roost Assessment (PRA) will be needed due to tree removal associated with 'Phase 1' of the development. We concur with the recommendation for a PRA and advise that if the survey confirms the presence of bats, the results of the survey together with proposed mitigation measures should be submitted to the Local Planning Authority as part of any full application made in respect of the proposed development."

1.4. The scope of work considered suitable to respond to the request includes update bat surveys in 2022 of any trees within the site subject to removed/pruned.

1.5. The survey results are presented below together with appropriate mitigation measures, in the form of a method statement, to prevent any impacts to bats during tree works and to ensure their favourable conservation status is maintained.

Legislation and Conservation Status

1.6. As European protected species, all UK bats receive legal protection in England under The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended) (WCA). In addition, planning policy set out in the National Planning Policy Framework 2021 requires planning authorities to consider bats when determining planning applications and to ensure that development proposals do not lead to an adverse effect on the conservation status of bats.

1.7. Several species of bats (barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared *Plecotus uratus*, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *R. hipposideros*, noctule *Nyctalus uratus* and soprano pipistrelle *Pipistrellus pygmaeus*) are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. These are the species found in England which were identified as requiring action under the UK Biodiversity Action Plan (UK BAP) and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

1.8. All British species of bat are listed in Schedule 2 of The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2017 as a European protected species (EPS) of animal. Regulation 41 (1) makes it an offence to:

- Deliberately capture, injure or kill an EPS;
- Deliberately disturb an EPS; or
- Damage or destroy a breeding site or resting place of an EPS.

1.9. All British bats are listed in Schedule 5 of the WCA and in England and Wales are protected under 9 (4)(b), 9 (4) (c) and 9 (5) which makes it an offence to:

- Disturb any bat while it is occupying a structure or place which it uses for shelter or protection; or
- Obstruct access to any structure or place which any such animal uses for shelter or protection.

1.10. Section 41 of the NERC 2006, states that decision-makers such as Local Planning Authorities must have regard to Species of Primary Importance (SoPI) in all their activities, including when making decisions on planning applications.

1.11. The following bat species are SoPIs: Barbastelle; Bechstein's bat; noctule; soprano pipistrelle; brown long-eared; greater horseshoe bat; and lesser horseshoe bat. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

Previous Surveys

1.12. Bat surveys of the site were undertaken by Tyler Grange in 2021 identified: Bat activity surveys of a moderate level of commuting and foraging within the site

Survey Methodology

1.13. As the site is proposed for a Phased development and the works are not due to take place on Phase 1 for several years and with no indicative masterplan for Phases 2 onwards, it was decided to assess the trees known to be impacted within Phase 1. This is because of the timespan of validity for the surveys and the findings within this report. Bat roosts, particularly in trees, are transitory in nature and the findings if this report are valid for 12 months. As such eight trees were identified as being in need of aerial inspections-T1,T2,T3,T4,T6,T8,T20&T28. Should the indicative masterplan change, further trees may be required to be surveyed

1.14. Trees outside of Phase 1 or shown to be outside the developed area of the phase were not surveyed and it is assumed if indicative plans change or future phases identify trees that will be impacted, these will be conditioned to have further survey work.

1.15. A tree climbing survey was undertaken on 10th August 2022 by John Moorcroft MSc MCIEEM CEnv, an experienced tree climber holding a MP2C CS 38 Tree Climbing and Aerial Rescue qualification and a CL18 level 2 bat licence.

1.16. This survey was completed in accordance with best practice guidelines as set out in Bat Conservation Trust (BCT) guidelines (Collins, 2016), Bat Mitigation Guidelines (Mitchell-Jones, A.J., 2004), the Bat Workers Manual (Mitchell-Jones, A.J. and McLeish, A.P., 2004), Bat Roosts in Trees Bat Tree Habitat Key (Andrews, H, 2018) and with the aim of determining the presence or likely absence of bats within the identified trees.

1.17. All surveys were daytime inspections and the conditions for all surveys was considered optimal.

1.18. All impacted trees as identified in the Arboricultural Impact assessment (AIA) produced by Tyler Grange (Report Ref: 13539_R01a AIA) were inspected from the ground using binoculars, high powered torch, digital camera and endoscope for accessible features. Potential Roosting Features (PRFs) of interest include: woodpecker holes, frost cracks, deadwood, knot holes and limb wounds.

1.19. The potential of the trees to support roosting bats was assessed using the criteria shown in Table 1.

Table 1: Building Assessment Criteria - adapted from Collins, 2016.

Suitability	Description of Roosting Habitats	Survey Effort
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further surveys
Low	A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Pre inspection check immediately ahead of felling
Moderate	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).	Two nocturnal surveys/aerial inspections (May to September, inclusive. One survey to take place before end of August)
High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three nocturnal surveys/aerial inspections (May to September, inclusive. One survey

		to take place before end of August)

Survey Limitations

1.20. Bats use a variety of roosts, ranging from maternity, mating or swarming and hibernation roosts, containing many individuals, to mating or night-time feeding roosts containing few individuals or single animals. Bats also tend to be nomadic (although are faithful to certain favoured roosting sites), spending variable lengths of time in a variety of roosts. Thus, even with considerable survey effort it is possible that small transient roosts of bats may have been missed, although these tend to be less important to bats and so this should not affect the evaluation and recommendations made.

Ecological Features and Evaluation

1.21. Eight trees at the site were inspected (**Plan 13539/P011**), of these:

1.22. Two were considered negligible bat roost potential (T2, T20)

- One was considered low bat roost potential (T28)
- Three were considered moderate bat roost potential (T6,T8,T1)
- Two were considered high bat roost potential (T4 ,T3)

1.23. A description of the trees, together with detail of access points/roosting features, bat roosting category.

Tree No. (As per Tree Survey Plan)	Proposed Impact	Notes	Bat potential following climbing inspection	Recommendation
1	Not to be directly or indirectly impacted. Avoiding impacts by the lighting schedule.	**Climbed, Mature Oak** all suitable PRF examined with torch and endoscope. 8 PRFs identified spread across all aspects. Includes callus rolls, limb breaks and small cavities within limbs	Moderate	No proposed direct or indirect impacts. No further works required.
2	Not to be directly or indirectly impacted. Avoiding impacts by the lighting schedule.	**Climbed, Immature Sycamore** Young sycamore tree with stem diameter of approximately, 15cm. Height is approximately 8m bifurcates at 2m. No potential roost features have developed.	Negligible	No proposed direct or indirect impacts. No further works required.
3	Not to be directly or indirectly impacted. Avoiding impacts by the lighting schedule.	**Climbed, Sycamore** all suitable PRF examined with torch and endoscope. 4 PRFs identified spread across all aspects. Includes 3 knot holes offering low potential for individual bats and a large trunk cavity with a ramshorn feature which offers high potential offering wider bat roosting opportunities	High	No proposed direct or indirect impacts. No further works required.
4	Not to be directly or indirectly impacted. Avoiding impacts by the lighting schedule.	**Climbed, Mature Oak** all suitable PRF examined with torch and endoscope. 6 PRFs identified spread across all aspects. Includes tear outs from the main trunk leading to cavities as well as broken limb features.	High	No proposed direct or indirect impacts. No further works required.
6	Pruning On Western aspect	**Climbed, Mature Oak** all suitable PRF examined with torch and endoscope.	Moderate	Supervise the works with suitably licenced ecologist. If pruning works are away from PRF. No

		6 PRFs identified spread across all aspects. Includes tear outs from the main trunk leading to cavities as well as broken limb features		further works required. If PRF could be indirectly impacted, complete pre works inspection. If PRF to be removed as part of the works, complete 2x inspection climbs or nocturnal surveys. A NRW licence will be required if roosting is found within the PRF.
8	Pruning on eastern aspect	**Climbed, Mature Oak** all suitable PRF examined with torch and endoscope. 6 PRFs identified spread across all aspects. Includes tear outs from the main trunk leading to cavities as well as broken limb features.	Moderate	Supervise the works with suitably licenced ecologist. If pruning works are away from PRf. No further works required. If PRF could be indirectly impacted, complete pre works inspection. If PRF to be removed as part of the works, complete 2x inspection climbs or nocturnal surveys. A NRW licence will be required if roosting is found within the PRF.
20	To be removed	**Climbed, Ash** all suitable PRF examined with torch and endoscope. 6 PRFs identified spread across all aspects. Includes tear outs from the main trunk leading to cavities as well as broken limb features	Negligible	No Further survey required
28	To be removed	**Not Climbed, Dead Standing Oak** Tree unsuitable to climb as no safe anchor points. The tree is dead and all bark has fallen off leaving hard wood dead standing tree.	Low	Soft felling with pre-inspection check from MEWP due to inability to climb this tree

Mitigation and Method Statement

Impacted trees

1.24. The proposed development within the will include removal of two trees and pruning of two further trees the site boundary. Details below

- T6: To be pruned on the western aspect. Anticipated works are crown lifting to reduce footpath conflicts. The features noted on the inspection for potential roosting were recorded at 8m and 13m. This is likely to be above the required pruning height. It is proposed at the time of works a suitably qualified ecologist attends site with the arboriculturist to discuss the proposed works. If the works can be completed without affected the PRF, the works can take place as proposed. If the works will affect the PRFs, further surveys in the form of nocturnal surveys or aerial inspections will be required to ensure the features are not being used that season by bats. If bats are found to be present a NRW licence will be required to remove/disturb the bat roost. This approach has been recommended due the likely length of time between the issuing of this report and the pruning works actually taking place and the need for valid surveys at the time of works.

- T8: To be pruned on the eastern aspect. Anticipated works are crown lifting to reduce footpath conflicts. The features noted on the inspection for potential roosting were recorded at 6m and 12m. This is likely to be above the required pruning height. It is proposed at the time of works a suitably qualified ecologist attends site with the arboriculturist to discuss the proposed works. If the works can be completed without affected the PRF, the works can take place as proposed. If the works will affect the PRFs, further surveys in the form of nocturnal surveys or aerial inspections will be required to ensure the features are not being used that season by bats. If bats are found to be present a NRW licence will be required to remove/disturb the bat roost. This approach has been recommended due the likely length of time between the issuing of this report and the pruning works taking place and the need for valid surveys at the time of works.

- T20: To be removed. This tree is of negligible potential for roosting bats and no further surveys are required. If works are not completed within 24 months, the tree should be resurveyed.

- T28: To be removed. This tree is of low roosting potential for bats. According to the guidance the tree requires no further nocturnal surveys but will require inspection by a suitably qualified and licenced ecologist immediately prior to removal. Due to the location of the tree next to the road and the state of deterioration it is recommended that this takes place from a MEWP (Mobile Elevated Work Platform) as no safe anchor points for tree climbing could be found during the August 2022 inspection.

1.25. Roost destruction, disturbance of bats and killing or injuring of individual bats would be a breach of either the Conservation of Habitats and Species Regulations 2017 (as amended) or the Wildlife and Countryside Act 1981 (as amended).

1.26. Due to the temporal nature of bat survey data for the potential roosting features (being only valid for 12 months) and the likely timescale for development for site it is not considered suitable to complete further survey work on the trees aerially inspected in August 2022 and found to hold bat roosting potential. This is because no evidence of roosting was found during the thorough inspection and by the time the proposed tree works take place the 2022 survey data is not likely to be valid.

Non impacted trees

1.27. Further to the trees discussed above, four other trees within Phase 1 were assessed. These are not currently shown as being impacted directly or indirectly and good commuting lines exist between their location and the wider habitat on site. If plans change and further trees are highlighted for removal/pruning/ impacts such as lighting; T1,3,4 all have bat roosting potential, further work would be required.

Further Works (if required)

1.28. For any tree with bat potential that is due to be directly or indirectly impacted by the proposals, these trees should be surveyed within a survey season (May to September, inclusive) closest to works. The survey effort is in proportion to the level of bat roosting suitability. Surveys should comprise of nocturnal surveys or aerial inspections (where climbing is feasible). Survey effort should be in line with those laid out in Table 1.

1.29. If a roost is identified a further step is required. To allow this tree to be removed without breaching these regulations, a licence issued by the relevant nature conservation authority will be required. In Wales the appropriate Authority is NRW.

1.30. For a licence to be granted, three tests must be satisfied. These are:

1. There is a need for the works to be undertaken
2. There is no satisfactory alternative
3. The conservation status of the species will be maintained

1.31. The need for the works must come from an imperative reason of overriding public interest (IROPI). This test will be determined by the local planning authority and the need for the works will be confirmed by the issuing of planning consent.

1.32. The second test, no satisfactory alternative, must be satisfied through the mitigation hierarchy, i.e. avoid, mitigate, compensate and enhance. The proposed development is for the construction of residential scheme. The proposed development would not be viable to leave the existing trees standing. In some cases this is due to there poor state as detailed in the Arboricultural Impact Assessment.

1.33. The third test is to preserve the conservation status of the species. By creating a mitigation strategy that will provide replacement roosts and outline how works will be undertaken to ensure that no bats are killed or injured during site works, the conservation status of the species will be preserved.

Mitigation Strategy

1.34. The following is an outline of the mitigation strategy proposed for the site which will be sufficient to respond to the NRW comments of the 17th June 2022 in full.

1.35. Overall, the removal of trees and hedges across the site is limited and the proposals show that good connectivity to commuting and foraging areas will remain across the area. The findings of the detailed inspections on the trees identified no confirmed roosts. Due to the transient nature of bat roosts it is recommended the trees be reinspected closer to the time of the works. This should be conditioned within the planning application decision.

Timing of works

1.36. Once the proposed works are scheduled bat surveys on the trees with potential roosting features should take place within the closest valid bat survey season (May to September).

Pre-works inspection, supervision and contractor briefing

1.37. Prior to demolition works commencing, trees will be subject to a detailed inspection by a Suitably Qualified Ecologist (SQE) to determine if bats are currently present. If present a NRW licence will need to be sought to allow removal of the bats/destruction of the roosts via exclusion/ destructive search and soft felling.

1.38. A toolbox talk will be delivered by the SQE to all demolition contractors before any works are undertaken at the trees.

Conclusion

1.39. With the implementation of the mitigation plan outlined above, the proposed works can be undertaken without breaching any legislative protection of bats and also with the additional roosting features proposed for enhancement the work will also comply with national and local planning policy and will result in a net gain for bat species as a result of the works.

1.40. If the project is delayed beyond 12 months of the date of the surveys, update surveys may be required. In this instance further advice should be sought by a Suitably Qualified Ecologist (SQE). If circumstances change and further trees require removal, trees with recognised bat roosting potential should be subject to further surveys (if Moderate BRP) and/or soft-felling where necessary under the supervision of a NRW bat-licensed ecologist (if Low BRP).

Appendix 1

Proposal Plans

TTE_UD_v2



TETRA TECH

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KEY

- Site boundary
- Phase 1 area
- Proposed residential parcel
- Potential location for primary school
- Retained Rugby Club
- Retained sports pitch
- Proposed public open space
- Retained trees / hedgerows
- Proposed trees / hedgerows
- Existing pond
- Proposed SUDS ponds
- Proposed spine road with green verge
- Proposed road network
- Road feature / traffic calming
- Placemaking / gateway feature
- Retained / proposed pedestrian / cycle link
- Retained / proposed pedestrian / cycle route
- Existing bridge linking Ysgol Morgan Llwyd School to sports pitches to be retained

Document control

Rev	Description	Date	Dwn	Chk	App
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Cefn Park Wrexham

Harworth Group

STRATEGIC MASTERPLAN

TTE Proj No	Drwn/date	Checked/date	Appr'd/date	Scale @ A3	Suitability
B024030	BR / Jan '22	AC / Jan '22	AC / Jan '22	1:5000	S0

Client Proj No	Originator	Vol/System	Level/Location	Type/Code	Role	Number	Revision
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Issuing office

Tetra Tech Manchester Quay West at MediaCityUK
Manchester M17 1HH | Tel: 0161 872 3223

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Plans:

Plan 1: 13539_P011 Tree Retention and Removal Plan-Phase 1 Masterplan

Category A - Trees of High Quality and Value

Category B - Trees of Moderate Quality and Value

Category C - Trees of Low Quality and Value

Root Protection Areas

Tree Shading Constraints

RPA Incursions

Proposed Tree Removals

*Denotes trees and groups not identified on topographical survey. Locations approximated using measurements taken on site.



Tyler Grange

Head Office: Marsden Estate, Rendcomb, Cirencester, Gloucestershire GL7 7EX

www.tylergrange.co.uk

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