

Preliminary Bat Roost Assessment-

Tree and habitat at land adjacent to the rear of Lynton Field Lane, Field Lane Estate, Knowsley.



7th August 2025: Version 1
Planning application No 25/00103/FUL

By

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Project No.:Title: 9026 (00)**Client:****Date:** 7th August 2025**Office:** Omagh Enterprise Centre**Status:** FINAL**Author** Shea O' Neill**Technical reviewer** Derek Richardson

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Version History

Version	Date	Modified by	Approved by	Comment/Reason(s)
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Summary

A Bat Roost Potential (BRP) assessment of a site off Field Lane, Knowsley and a mature Goat Willow (*Salix caprea*) within the adjacent garden (outside red line boundary) was carried out to inform proposals to construct a four-bed dwelling. The plot which is overgrown with vegetation was assessed for its Bat roosting and foraging potential because it is going to be cleared to facilitate the development. The plot is located in close proximity to Lime Tree Woods and the River Alt which may offer good Bat foraging potential. Please note that the mature *Salix caprea* is not included within the red line boundary. The proposed plot was previously part of the garden of Lynton (dwelling), but it was sold following the previous approval of a planning consent. The previous planning consent for a dwelling has lapsed. Please refer to Architects Layout drawings prepared by LJ Architects with the planning application (Figure 4) for the proposed building layout and landscaping.

A site visit to undertake a Preliminary Roost Assessment of the *Salix caprea* (outside red line boundary) and an ecology survey of the proposed development plot were carried out on the 27th July 2025 at 7pm. These surveys assessed the *Salix caprea* as having moderate (BRP) potential to support crevice roosting bats, due to the mature size and potentially suitable cracks and crevices from multiple pruning wounds. The tree was healthy and was not hollow. There was no peeling bark. There were no large holes to support multiple crevice roosting Bats. There were some small suitable cracks and crevices, but there were high levels of disturbance and artificial lights from the adjacent busy roads Field Lane and A506 Valley Road. The adjacent habitat of Lime Tree Woods, River Alt and Kirby Municipal Golf Course offers good habitat for foraging Bats.

The application site itself has very limited ecological value, but the River Alt and Lime Tree Woods are located within 284m and 21m respectively to the Northeast. The watercourse and woodland habitat are separated from the *Salix* tree and development plot by the busy Field Lane. The A506 and M57 motorway corridors are located within 63 metres to the north. The plot is subject to moderate levels of noise and light pollution from vehicles.

There are no locally important habitats on the site. The closest LNR at Croxeth Park is over 2km distance to the southeast. There is one small Birch tree on the proposed development site within the red line boundary. There is a mature *Salix caprea* outside the red line boundary which is not within the client's ownership. The *Salix caprea* is to be retained and is not part of the development. The tree and its RPA will be protected per Bs 5837:2012 Trees in Relation to Design, Demolition and Construction. The tree's overhanging branches are a development constraint. There are no current proposals or consent to undertake any tree surgery works on the *Salix* tree located outside the red line boundary.

No signs of Bats including droppings or urine staining were recorded within any visible parts of the *Salix* tree or development site during the habitat and bat roost assessment. The survey started at 7pm on a warm evening and a Titley Scientific Anabat Bat detector was used to detect any squeaking or echolocation from potential roosting Bats. No activity or echolocation was noted on the Anabat Bat detector positioned close to the tree trunk. The proposed site is currently not in use and is in the process of being purchased by the client subject to an approved planning consent. The proposed site is overgrown with Brambles, and one small Birch tree is growing. Prior to this time period, the site was used as part of the garden of Lynton and was in constant use. The *Salix* tree (outside red line boundary) and site is subject to high levels of disturbance from vehicular traffic. During the daytime the site boundaries are busy and noisy. The site is also adjacent to a busy transport corridor- A506 Valley Road which leads to the M57 motorway. Lime Tree Woods and the River Alt are located on the opposite side of Field Lane.

The site is urban and predominantly overgrown with Brambles with fragments of boundary hedging including Privet and conifers.

No emergence Bat surveys were recommended of the mature *Salix caprea* per BCT 4th Edition guidance because it is located outside the red line boundary. The *Salix* is not in the client's ownership and is not subject to removal as part of the proposed development. The tree and its root protection area will be protected in accordance with Bs 5837:2012 Trees in Relation to Design, Demolition and Construction during any proposed construction. The site was assessed as having negligible bat roosting and foraging potential due to its small size and location adjacent to a busy road lit with street lighting columns. No further ecology surveys or mitigation are recommended. If construction works do not commence within a year of this survey, the surveys must be repeated.

1. Introduction

1.1. Purpose of the report

The report is written by Shea O' Neill CMLI MCIEEM for RBC Ltd. The Preliminary Roost Assessment was carried out by Shea O' Neill CMLI MCIEEM of the tree and proposed development site adjacent to the rear of Lynton, Field Lane, Field Lane Estate, Knowsley on the 27th July 2025. The survey was completed to provide ecology survey information for a planning application proposing the construction of a four bed dwelling.

1.2. Aims and Objectives of the Survey and Assessment;

- To identify any potential bat roosting features;
- To ascertain if bats currently use, or have used, the Salix tree or proposed development site for roosting purposes;
- To ascertain the likely importance of the Salix tree or proposed site for roosting or foraging bats; and,
- To recommend any further actions required resulting from the survey findings.

The aim of the survey was to determine the actual or potential presence of roosting or foraging bats in the tree (outside red line boundary) and proposed site (inside the red line boundary) and the need for further survey or mitigation. Bat activity has not previously been recorded in the area but the surrounding habitat, close to Lime Tree woods and River Alt, may be good for foraging bats.

1.3. Survey details and experience of Surveyor

Surveys were undertaken according to the Chartered institute and Ecology and Environmental Management (CIEEM) Code of Professional Conduct, CIEEM Guidelines for Ecological Assessment and British Standard BS 42020:2013 Code of Practice for Planning and Development, and in compliance with all relevant English and international legislation. The BRP assessment of the tree, Salix caprea, was undertaken per the BCT 4th Edition Guidelines.

Shea is a Chartered Landscape Architect (CMLI) and Ecologist (MCIEEM) with more than 25 years of experience in ecological consultancy, including the planning and preparation of protected species surveys including Bats.

1.4. Reason for survey

Development proposals for the construction of a four bed dwelling have been prepared by the Architect. Plans for the site could include the construction of the building for residential use and landscaping works to include a car park and garden area to the rear of the infill site.

1.5. Site Location

The site is located on Field Lane, Knowsley. The proposed overgrown site and adjacent residential house where the tree is located are in an urban residential area on the edge of the Field Lane Estate. Both the site and tree are located off Field Lane and are surrounded by residential housing. Mature trees are present within Lime Tree wood opposite.

The adjacent site includes a pre-1960's detached house Lynton (outside red line boundary), which is occupied, with gardens to the front and rear, mature trees, and areas of hard landscaping. This building is not included within the red line boundary of the planning application and is not within the client's ownership. The tree to be assessed is located in a garden area adjacent to the boundary fence.

The habitat in proximity to the proposed site includes an adjacent house, gardens, mature trees within Lime Tree Wood, and well-lit roads including the A506 Valley Road and the M57.

Habitat within 500m includes a golf course, housing and busy roads, areas of woodlands, hedgerows and waterbodies.

Woodlands and watercourses potentially provide good quality habitat and foraging opportunities for bats and are present locally. However, the area to the north and east in general is fragmented by busy well-lit roads including the M57 motorway. The disturbance from noise, traffic, and other human activity reduces potential for the Salix tree to be used by Bats for roosting purposes.

The site excluding the Salix caprea tree (outside red line boundary) and immediate surrounding area provide potential low-quality foraging, commuting, and roosting opportunities for bats. There is higher quality and less disturbed habitat to the east in the environs of Lime Tree Woods and River Alt corridor.

1.6. Site location- Field Lane Knowsley

Figure 1 Aerial photograph of proposed site and tree outside red line boundary in Lynton (dwelling) Garden area.

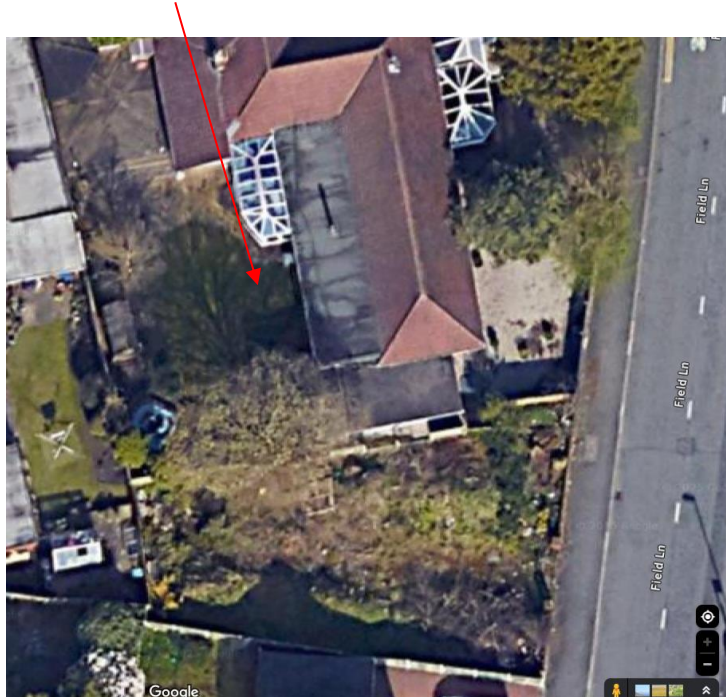


Figure 2 Extract from DEFRA MAGIC Maps showing location of Lime Tree Woods to the East. The site is shown by the blue dot.

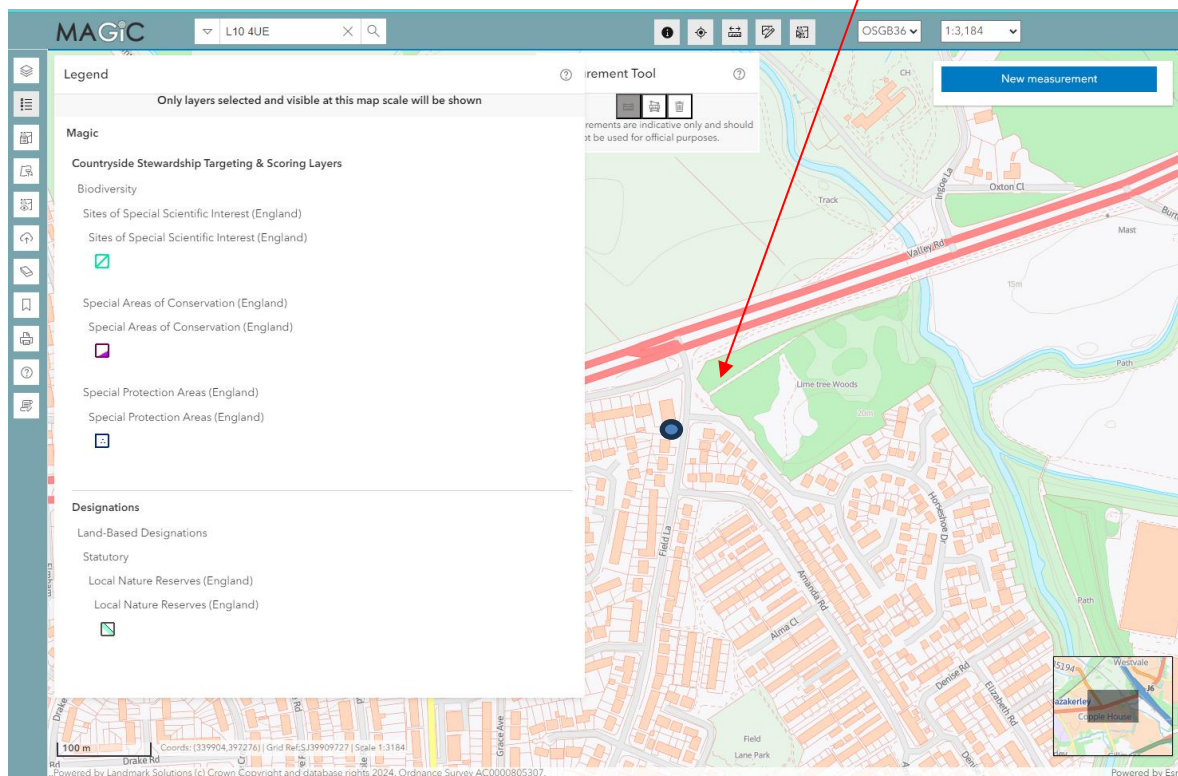


Figure 3 Extract from DEFRA MAGIC Maps showing location of closest LNR Croxeth Park.

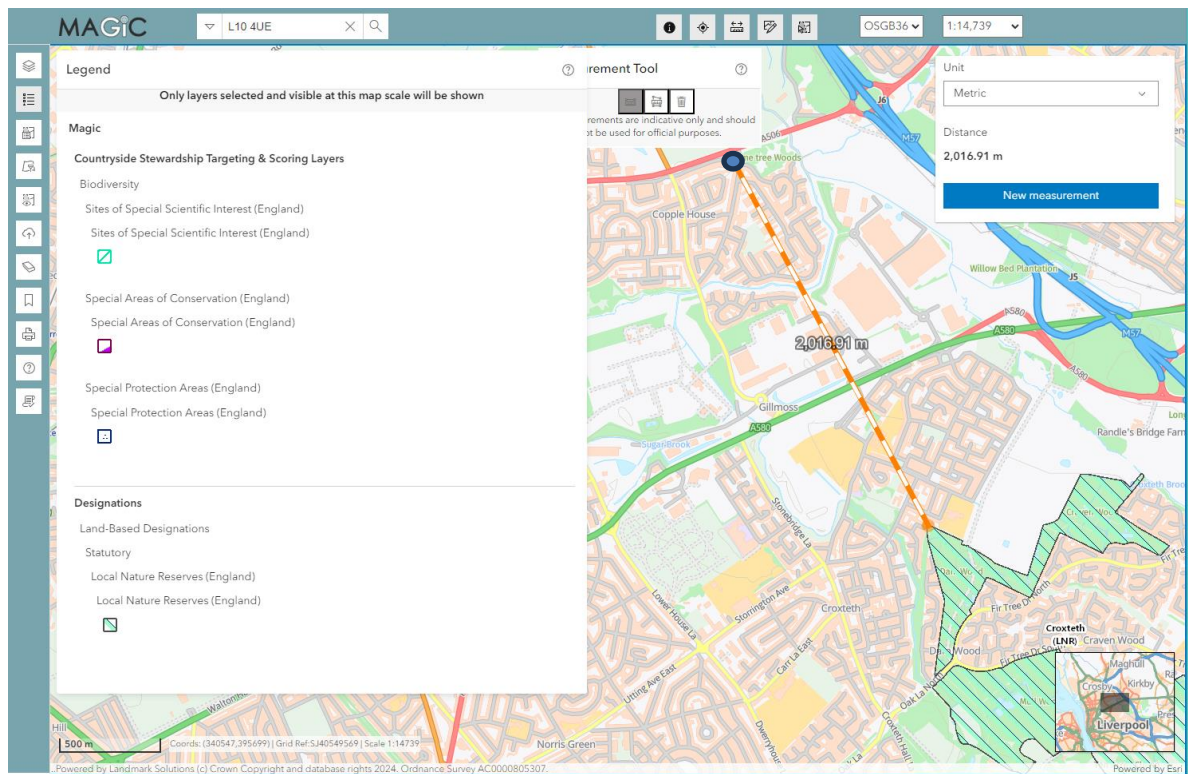


Figure 4- Red Line Site Boundary.

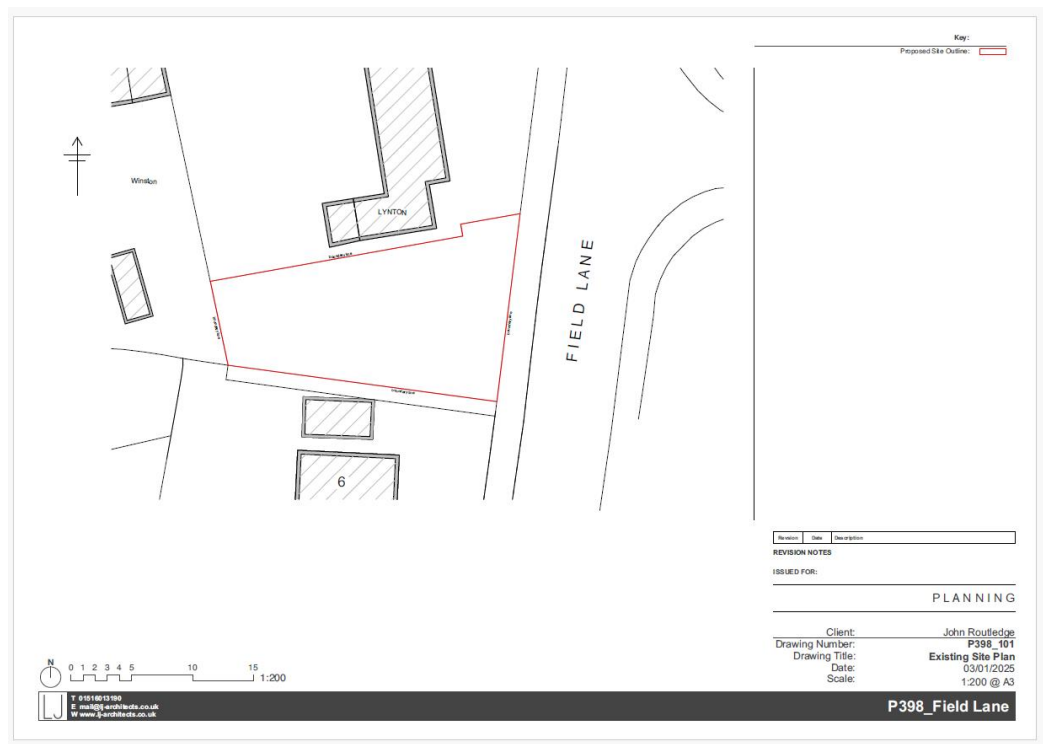
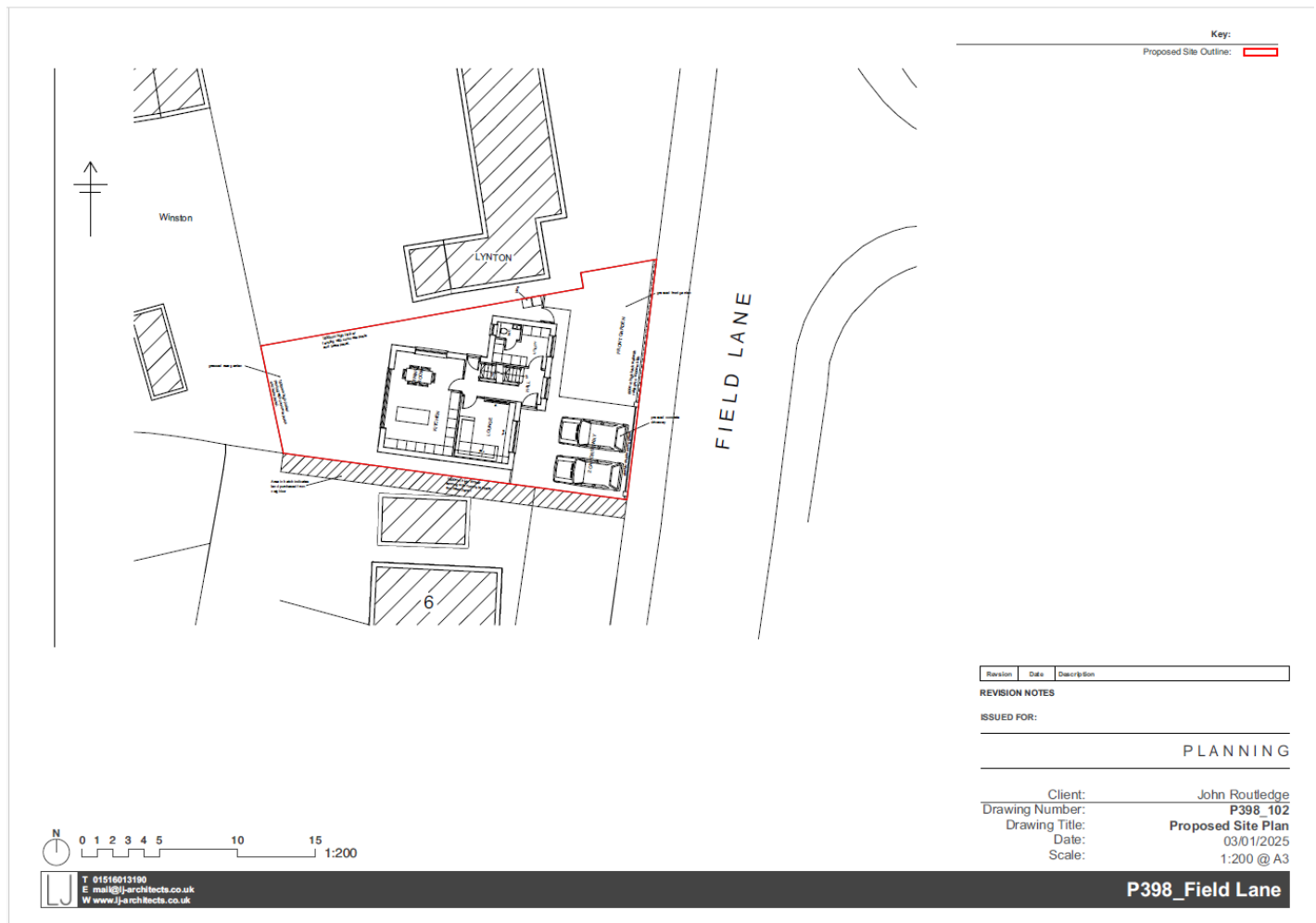


Figure 5- Proposed Layout for one dwelling. Copyright LJ Architects.



2. Methods

2.1. Survey timings and inspection.

The site and tree inspections were completed on the 27th July 2025. Weather conditions during the survey were sunny, warm, and dry, with a temperature of 22°C. The survey was completed at 7pm in the evening when Bats would start to become active in warm temperatures approaching dusk.

Surveying for Bats in Trees.

Bats often use crevices and holes within trees as roosting sites in Summer because they provide a choice of safe, dry places. Trees can provide a range of potential roost sites, e.g.

- Behind loose or flaking bark;
- In cavities and large holes/hollows within the trunk;
- In crevices between branches especially healed wounds from pruning and lopping;
- In tree splits; and,
- Behind Ivy.

Bats are mobile in their habits and can occupy a range of different roosting sites depending on the time of year and the stage of their life cycle. The most obvious use of trees by Bats is between May and August when pregnant females gather in maternity roosts to give birth and raise their young. Although females and young often remain at one roost site all summer, they are sometimes known to move and can change roosting sites if conditions become unsuitable. Although some Bats (e.g. Brown Long Eared) occupy the same roosting sites throughout the year, most summer colonies will have dispersed by the Autumn. Temporary roost sites can then be occupied in the autumn before Bats move again into hibernation roosts for the winter. Hibernation roosts in old trees are often used by single or small numbers of bats and can be very difficult to detect.

Many trees in areas supporting good feeding habitats can be used as temporary night roosts or feeding perches.

Since Bats move roosting sites and can be difficult to detect directly the key identification feature to identify the presence of Bats is droppings or urine staining below holes or larger wounds. Sometimes droppings or staining are found on the outside of tree trunks especially on large and old trees with obvious holes. Otherwise, droppings found in hollow tree trunks can be typical of bats. Other features used to identify the presence of bats include:

- Characteristic odour;
- 'Chittering' by bats, usually in warm summer weather or when bats are active at dusk and are about to leave the roost; and,
- Staining around possible access points on tree trunk or branch junctions.

Any survey should include a desk-top survey for any existing records of Bats close to the tree or woodland habitat being inspected and an assessment of the quality of the habitat surrounding the tree or woodland. Since many types of trees or varying sizes can support bats, one of the best indicators of the possible presence of bats in a mature tree is the presence of a good feeding habitat for bats nearby.

Judgement of potential for Bat roosts in Trees per BCT Guidance 4th Edition.

The following table was used to both assess potential and to aid decisions about recommendations for example for further surveys of the tree outside the red line boundary.

Level of Potential	Criteria
High	Trees with obvious staining around entry points indicating use; woodlands with many trees which are suitable roosts; trees with many suitable roosting opportunities including old trees; old trees with many roosting opportunities close to water courses/ponds/lakes or other favoured feeding sites.
Moderate	Trees with splits, cracks, loose bark, ivy, woodpecker holes or other features which could be used for roosting; trees with roosting opportunities close to water courses/ponds/lakes or other favoured feeding sites.
Low	Young trees with loose bark, conifer plantations, tree isolated from suitable habitat in the wider landscape (e.g. within open fields unlinked by hedgerows).
Negligible	Scrub, saplings and young /immature trees with no potential as roosts; individual coniferous trees and trees in good condition with no splits, cracks or features which could be used by bats.

	*Bat activity recorded from the borough around survey site
Low Potential	• Few Features suitable for use as bat roosts. • Bat roosts known from similar structures within Knowsley. *Surrounding landscape supports few features for foraging, commuting and possibly roosting bats. *Bat activity recorded from the wider area
Negligible Potential	• No habitat features on site likely to be used by roosting bats

* Additional factor used in combination with those listed above.

Adapted from BCT Bat Survey Guidelines

The BCT Bat Survey Guidelines 2023 4th Edition recommends that if trees are assessed as having low, moderate, or high potential to support bats, Bat emergence and/or Bat re-entry surveys should be carried out. This is recommended when trees are subject to removal or severe lopping to facilitate development.

The surveys were carried out in line with the recommended methods contained in The Bat Conservation Trust Bat Survey Good Practice Guidelines 4th Edition Sept 2023.

2.2. Desk study

A preliminary desk study of the site using DEFRA MAGIC Maps was undertaken, prior to the preliminary roost assessment of the tree and proposed site.

The development has a small footprint within an infill former garden site and impacts beyond the site boundary are unlikely. A site-specific investigation was considered more suitable.

2.3. Habitat assessment

The habitat on site and in the surrounding area was assessed using Ordnance Survey mapping, and aerial photography. Habitat features on site, and those in the surrounding area were assessed for their suitability for use by bats during the site visit.

2.4. Building inspection

A systematic search of the exterior of the tree was made to identify potential or actual bat access points and roosting places, and to locate any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and or squeaking noises. Bat specimens and droppings are the most reliable type of evidence; the other types are not always the result of bat activity. Sometimes bats leave no visible sign of their presence on the outside of a tree (even when they do wet weather can wash evidence away.)

The search included (where present) the exterior ground beneath potential access points, branch junctions and around the trunk and branches. Gaps in branches including the wound areas from previous pruning were searched (where present). All evidence of use by bats, or features with the potential to be used by bats was recorded and photographed.

A systematic search of the outside of the tree with binoculars was undertaken to identify potential or actual bat access points and roosting places, and to locate evidence of bats. Bat specimens (live or dead) and droppings are the most reliable type of evidence. Other evidence can include urine splashes, fur-oil staining, feeding remains, squeaking noises, bat fly (Nycteribiid) pupal cases or odour.

Areas inspected include;

On the tree:

- Branch junctions;
- Trunk;
- Cracks and crevices, where present.

The areas listed above were inspected (where present), any additional areas with potential for use for roosting were also inspected.

2.5. Equipment

The equipment listed below was available for use during the surveys and was used where required.

Battery operated 1,000,000 candlepower torch. Digital camera with zoom. 8x25 close focusing binoculars, ladders, bat handling gloves and DNA sampling tubes.

2.6. Survey limitations

None. All accessible areas of the tree and site were inspected in detail. The survey was completed in warm weather in July, when bats are fully active, and external signs of use, such as droppings, are more likely to be evident, if present.

3. Results

3.1. External inspection

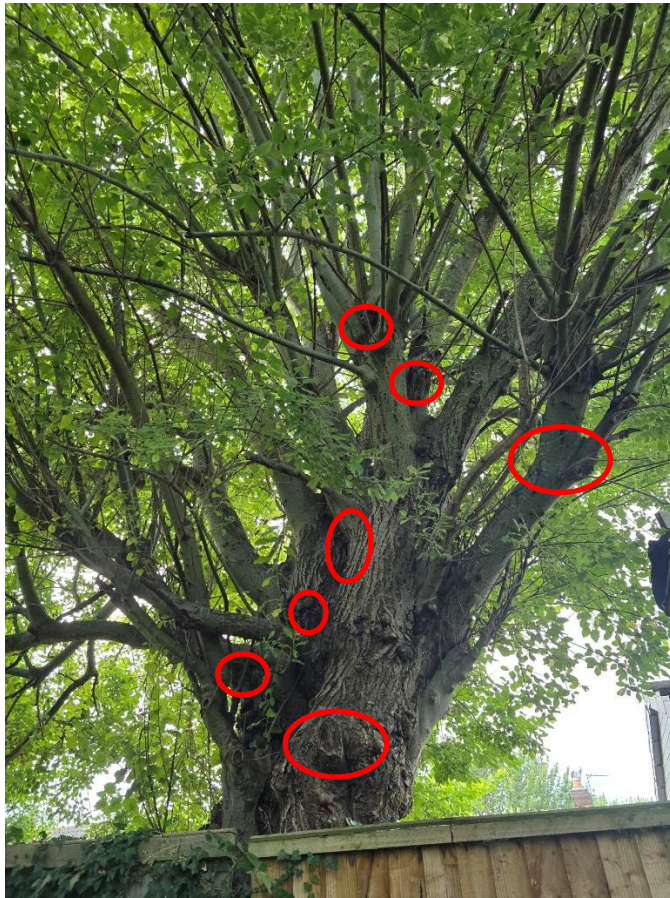
Photograph 1: The western side of the mature *Salix caprea*. Moderate Bat roost features BRF with small cracks and crevices within callouses on trunk were visible. The tree is outside the red line boundary adjacent to the timber boundary fence.



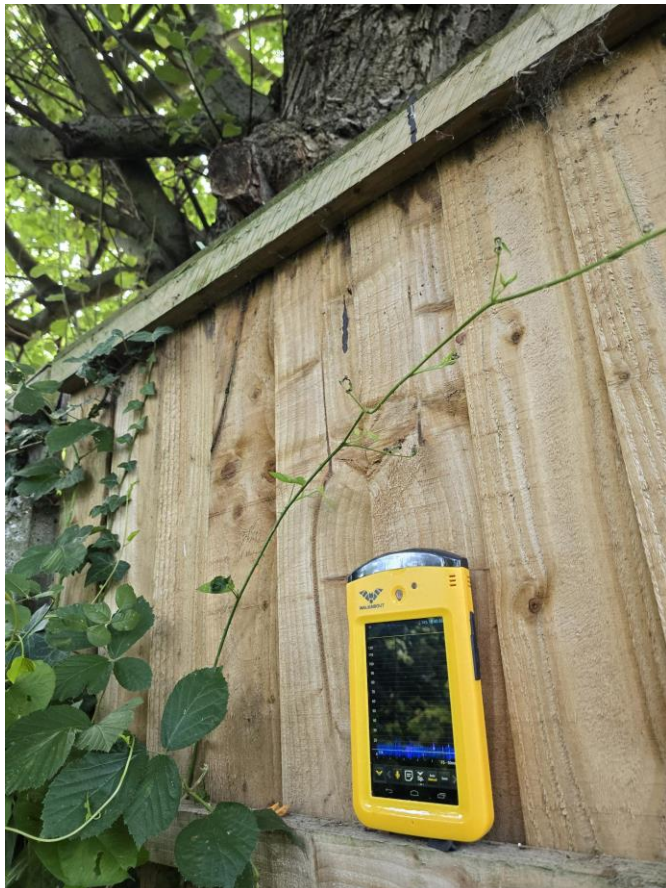
Photograph 2: The side elevation. Bat Roost Features in cracks.



Photograph 3: The side elevation. Bat Roost Features in cracks.



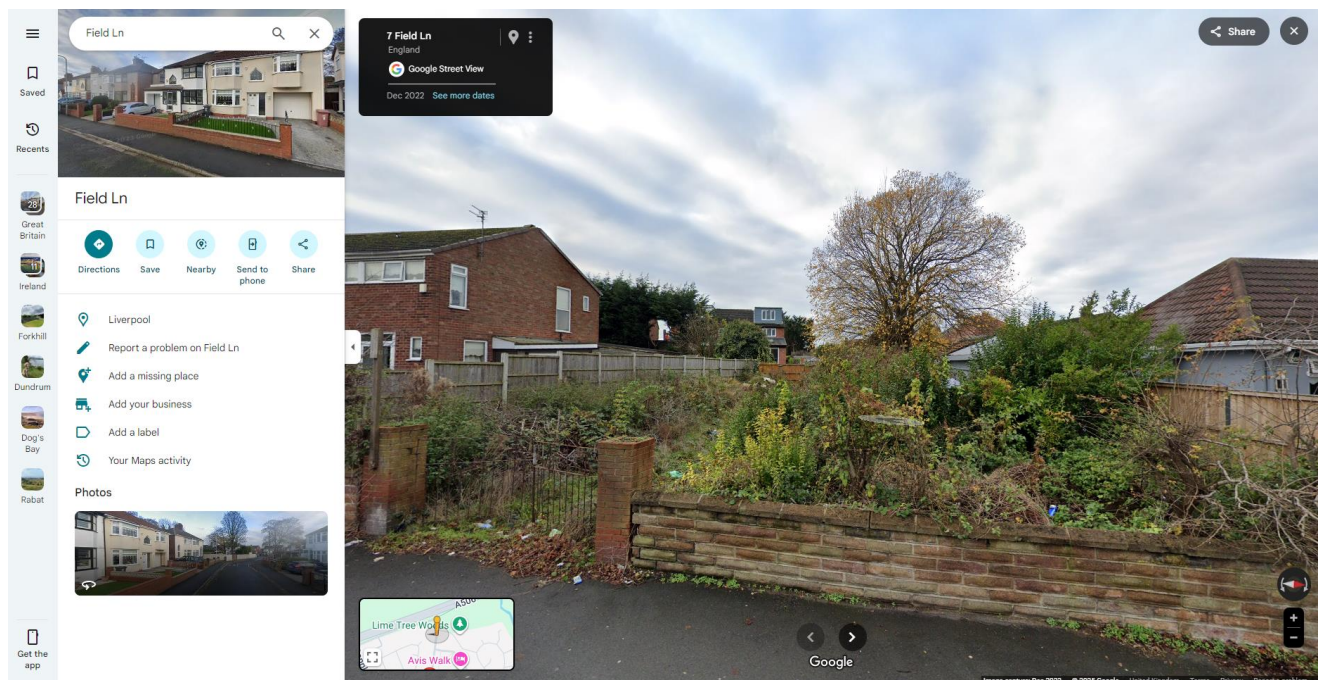
Photograph 4: Titley Scientific Anabat Bat Detector records no echolocation of Bats in close proximity to Salix at 7pm.



The tree *Salix caprea* is mature and healthy. It is in fair condition in respect of its age. *Salix caprea* are fast growing and short lived. It is maintained with signs of previous pruning to reduce its crown size. The tree was not hollow and had no large holes or signs of decay.

There are several small features externally which have potential to be used by roosting bats, but there was no evidence of use by bats or presence during the inspection. There were no signs of bat droppings or staining on walls or below bat roost potential features. The tree is not within the red line boundary and is not subject to development. The tree will be retained and protected per BS 5837:2012 Trees in Relation to Design, Demolition and Construction. There are no approvals for lopping the large overhanging branches which will be within the rear garden and not close to the proposed dwelling footprint.

Photograph 5: The proposed site is not overgrown with brambles in December 2022. There are no trees on site. There are remnants of boundary Privet hedges.



Photograph 6: The proposed site is overgrown with brambles in July 2025.



Photograph 7: There is one small Birch tree present with a dbh below 20cm. Due to its small size there were no BRF's present. BRP negligible/none. Tree recommended for removal.



Photograph 8: There are fragments of overgrown Privet hedgerows with a dbh below 10cm. Due to its small size there were no BRF's present. BRP negligible/none. Hedge recommended to be retained and pruned.



3.2. **Trees**

There was one small Birch tree, (refer to photograph 6) within the red line boundary. There was one mature *Salix caprea* adjacent to the site boundary fence and within the garden of Lynton. The *Salix* tree is outside the red line boundary. The *Salix* tree outside the red line boundary is to be retained. The small Birch tree inside the red line boundary is to be removed. The trees were inspected from ground level using binoculars. Species include fragments of Holly, Elder and Privet hedges with other ornamental shrubs species also present on the boundaries.

None of the hedges or one small tree inside the red line boundary have features present which are suitable for use by roosting bats. The bramble is not suitable as a roosting habitat for Bats. There may be limited foraging available over the overgrown site but disturbance levels due to headlights from vehicles travelling on Field Lane are high, reducing habitat suitability.

3.3. Indications of use

No indications of use by bats were present during the inspection of the Birch inside red line boundary or Salix outside red line boundary. Both trees were subject to external examination.

3.4. Level of suitability

The Birch tree to be removed (inside red line boundary) has **negligible suitability** for use by roosting bats and no BRF's present. The Salix to be retained (outside red line boundary) has **moderate (BRP) suitability** for use by roosting bats. The Salix tree is suitable for nesting birds. The proposed site is overgrown with Brambles which has negligible suitability for roosting Bats. Suitable bat roosting opportunities inside the site were not noted during the inspection. The site has suitability for nesting birds within the scrub. Limited suitable roosting opportunities in the Salix tree outside the site were noted during the inspection and BRF's assessed as moderate. There was no evidence of any bat dropping or staining. The disturbance from the adjacent highway and lack of suitable habitat inside the site has reduced BRP to **Negligible BRP for roosting Bats.**

4. Evaluation of Site

The proposed site is set on the edge of an urban area which, in general, provides potentially good quality habitat, for foraging, commuting and roosting bats. Bats are likely to be present locally especially in proximity to Lime Tree Woods with foraging opportunities along the Alt watercourse corridor. However, the foraging corridor is severed within 60m to the north by the A506 and M57 transport corridor.

Mature trees, areas of open grassland, and large waterbodies locally provide foraging opportunities for bats. However, the local area is fragmented by light and noise disturbance from the M57 motorway corridor and A506 Valley Road which will act as barriers to bat movements.

Trees immediately adjacent to good quality habitat are more likely to be used by roosting bats than those further away. The area in general is fragmented by well-lit roads (M57 and A506), traffic, noise, and other human activity. Fragmentation is likely to reduce the number of species present locally, and the number of individual bats.

The mature Salix (outside red line boundary) is maintained by tree pruning, and in fair condition. There are several BRF's features externally, which are suitable, or have potential to be used by roosting bats. The immature Birch (inside red line boundary) is less than 20dbh and in good condition with no crevices or flaking bark. There are no BRF's features externally, which are suitable, or have potential to be used by roosting bats on the Birch tree. There was no evidence of use by Bats during the inspection.

The lack of any indications of use of the mature Salix tree, such as bat droppings or feeding remains, reduces the likelihood of a significant roost being present. If bats were present inside the trunk crevices, even in lower numbers, some evidence of use would be likely to persist. Any bat dropping would have been visible because the previous weeks had been dry and warm. Taking into account the urban habitat surrounding the site, and the features present, the Salix tree is unlikely to be used by roosting bats due to disturbance. It was assessed as **Moderate (BRP) suitability** for bat use because of limited crevices (BRF's) being present. The BRP potential has been reduced because of the disturbance during the day and night-time by traffic.

The Salix tree was in generally good condition with limited features suitable for use by roosting bats. The Salix tree is to be retained and is outside the red line boundary.

4.1. Legal and planning context- Legal protection offered to Bats.

All species of Bats found in the UK receive a high level of legal protection under the terms of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations, 2019. In summary, it is an offense –

- To kill, injure or take any wild Bat;
- To damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection (known as a roost). Since bats are mobile in their habits and can use different places for shelter depending on the time of year this is taken to mean all identified bat roosts, whether bats are present in the roost or not; and,
- To disturb any wild bat while it is occupying a structure or place used for protection.

It is possible to obtain licenses for activities affecting bats that would otherwise be in breach of the law. In the case of development works (including building demolition) a license can be issued under the terms of Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

Status of Bats in England

There are 17 species of bat found in England –

Species	Distribution	Population Trend	Rarity
Daubentons' Bat	Widespread	Stable	Frequent
Natterer's Bat	Widespread	Stable	Scarce
Whiskered Bat	Widespread	Stable	Scarce
Common Pipistrelle	Widespread	Stable	Common
Soprano Pipistrelle	Widespread	Stable	Common
Nathusius Pipistrelle	Restricted	Declining	Rare
Leislars Bat	Widespread	Stable	Frequent
Brown long-eared bat	Widespread	Stable	Frequent
Alcathoe bat	Restricted	Unknown	Rare
Barbastelle	Restricted	Declining	Rare
Bechsteins bat	Restricted	Declining	Rare
Brandts bat	Widespread	Declining	Frequent
Greater Horseshoe	Restricted	Stable	Rare
Grey long-eared bat	Restricted	Unknown	Rare
Lesser Horseshoe	Restricted	Declining	Rare
Noctule	Widespread	Stable	Frequent
Serotine	Restricted	Declining	Rare

In addition, there are occasional vagrants and rare visitors.

Bat populations have historically undergone severe declines throughout the UK and all Bats are considered vulnerable (*BCT, 2013, Mitchell-Jones, 2004*) although there is some recent

evidence (since the 1990s), that over the whole of the UK and Ireland some bat species populations are increasing or stable.

Species reported to be increasing, or at least stable, include Common pipistrelle *pipistrellus pipistrellus*, Daubenton's bat *Myotis daubentonii* and Natterer's bat *Myotis nattereri*. Stable populations include soprano pipistrelle *Pistrellus pygmaeus*, brown long-eared bat *Plecotus auritus* and whiskered bat *Myotis mystacinus*. There is insufficient survey data to estimate the population trend for Leisler's bat *Nyctalus leisleri* or Nathusius' pipistrelle *Pipistrellus nathusii*.

Recent population increases, however, are not yet considered sufficient to counter the previous severe declines in populations (BCT, 2013).

Of the above species by far the most common are Common Pipistrelle Bats and Soprano Pipistrelle Bats. These species are highly adaptable and are the most frequent species encountered in dwellings and other buildings, including in urban and suburban areas. They are small bats and are generally crevice dwelling, and can occupy very small, inaccessible cracks and crevices which can make them difficult to detect.

Maternity (nursery) roosts of these species (the most important type of roost encountered) tend to be in buildings that are warm and stable. Maternity tree roosts of Pipistrelles are (almost) unknown.

Other bat species frequently encountered in this area include Brown Long-Eared Bats, Noctule bats and Daubentons bats.

Myotis species can be difficult to separate into species and may therefore be under- recorded.

All species of bats in the UK and their roosts are legally protected by UK and European legislation. The UK the legal protection is summarised as follows:

You will be committing a criminal offence if you:

1. Deliberately* capture, injure or kill a bat
2. Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
3. Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
4. Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
5. Intentionally or recklessly obstruct access to a bat roost even if bats are not present at the time

*In a court, 'deliberately' will probably be interpreted as someone who, although not intending to capture/injure or kill a bat, performed the relevant action, being sufficiently informed and aware of the consequence his/her action would most likely have.

If bats were roosting in the building, the proposed works would likely impact bats or bat roosts.

5. Impact assessment

The development proposals have been prepared for the construction of the dwelling and landscaping works to include a parking area.

The mature Salix outside the red line boundary has features which have moderate suitability, or, are likely to have moderate potential (BRP) to be used by roosting bats. The Salix tree is to be retained. Birch tree within the site boundary has no features suitable for use by roosting bats and is to be removed. There are currently high levels of disturbance from vehicular traffic with artificial lighting in use on the adjacent highway.

It is recommended that no Bat emergence surveys are completed of the Salix tree within the Bat active season because the Salix tree is outside the red line boundary and not subject to removal. The potential moderate BRP and BRF's can be retained. It is recommended that no Bat emergence surveys are completed within the Bat active season because the Birch tree is assessed as BRP negligible with no suitable BRF's. It is subject to removal as part of the pre-clearance works. The bramble habitat onsite has negligible potential as a roost site and limited foraging opportunities due to light disturbance. The proposed construction work is unlikely to impact on bats or bat roosts; and, once completed is unlikely to provide any increase in levels of disturbance for bats locally.

6. Required actions

The Salix tree outside the red line boundary has **moderate suitability** for use by roosting bats. No signs of use by bats were found externally during the inspection and further survey work is not required because the Salix tree is to be retained. One emergence survey is not recommended because the tree is not subject to major development impacts.

Birch tree inside the red line boundary has **negligible suitability** for use by roosting bats. No signs of use by bats were found externally during the inspection and further survey work is not required. One emergence survey is not recommended because the tree is subject to development impacts but does not have suitable BRF's for roosting Bats. Removal of the birch tree is recommended to clear the site for development.

There are no ecological constraints to the planned development. The presence of roosting Bats were not recorded.

The proposed development will not affect any nearby sites LNR designated for their ecological value. The proposed development will not cause harm to specially protected or priority species Bats but will not affect any important or priority habitats designated LNR or SSSI.

Any vegetation clearance should take place outside of the optimum period for bird nesting (March to August inclusive).

Impacts on habitats.

The development proposal involves the clearance of the proposed site with associated car parking and access. Birch tree and Bramble scrub inside the red line are to be removed. Hedgerows are to be retained and lopped where possible. The BRP of the Birch was assessed as negligible. The Salix tree is outside the red line boundary and is to be retained and protected in accordance with BS 5837(2012) Trees in Relation to Design, Demolition and Construction. This will result in negligible direct and permanent habitat losses on the LNR (Croxteth Park) nearby. There are no SPA, SAC or SSSI within 10km.

Impacts on important species

The proposed development will not have significant effects on protected species Bats within the red-line boundary.

Bats can, and do, turn up in unexpected places. If Bats are found at any time during the course of any work on the site, work must stop and advice sought from a suitably qualified person (Ecologist) about how

best to proceed. There are no trees or scrub on site proposed for removal that have suitable BRF's. the bRP was assessed as negligible.

Potential harm to nesting Birds can be avoided by carrying out any vegetation clearance of amenity shrubs necessary to facilitate the scheme outside of the optimum period for Bird nesting (March to August inclusive).

Protection of wildlife (general)

The following recommendations will help to avoid harm to wildlife in general -

Initial invasive clearance work should be sensitively timed.

Landscape Planting

It is recommended that any landscape planting, (if possible) within the site is composed of suitable native species known to be attractive to local wildlife such as trees which support blossom and fruit which will attract insects. Some suitable species are presented in the table below –

Common Name	Scientific Name
Blackthorn	<i>Prunus</i>
Hazel	<i>Corylus avellana</i>
Hawthorn	<i>Crataegus monogyna</i>
Bird Cherry	<i>Prunus padus</i>
Elder	<i>Sambucus nigra</i>
Rowan	<i>Sorbus aucuparia</i>
Guelder Rose	<i>Viburnum opulus</i>
Alder	<i>Alnus sp</i>

Any understorey and ground cover planting design should be prepared to optimise the attraction of invertebrates such as feeding Bumblebees and Butterflies. Where it is possible, the use of native species should be maximised. Planting schemes that include flowering native species can maximise opportunities for feeding invertebrates and for the attraction of foraging bats and birds.

To secure the successful establishment and aftercare of the new landscape planting and habitat creation, it is recommended there is a commitment to a 10% Biodiversity Net Gain which is assessed in a separate document.

Enhancing Habitats for Nesting Birds

To create additional opportunities for nesting birds at the site in the long-term it is recommended that two nest boxes are installed on a suitable tree/s. Varying designs of nest boxes suitable for a range of species associated with residential development near grassland, such as Tree and House Sparrow (Priority Species) and Blue Tits, are recommended. The boxes should be positioned avoiding areas such as directly above any windows or doors and on a suitable tree.

RSPB advice states that boxes should ideally be sited facing North to East, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest.

At the outset, there is to be careful and controlled removal of all debris within the development footprint such as branches, metal, plastic, logs and all stacked materials such as bricks.

In the very unlikely event that any Amphibians, Hedgehogs or small Mammals are found, they are to be carefully captured using gloved hands and placed at the base of shrubs and trees just outside the site boundaries in a suitable non- highway location. In the very unlikely event that any Smooth Newts are found, they are to be carefully captured using gloved hands and placed at the base of shrubs and trees just outside the site boundaries in a suitable non- highway location. If, Bats are found, all works are to be stopped and a suitably qualified Ecologist consulted on the next steps.

All new fences are not to be completely sealed at their bases. Close-boarded fences with concrete bases, or any fences that meet with the ground, are barriers to animal movement. Where possible, there is to be a 5 – 10cm gap between the fence base and the ground (greater in some locations and less in others is not a problem). This is so that the Site is permeable to wildlife, such as Hedgehog.

Lighting. Outdoor lighting is typically a deterrent to nocturnal wildlife, particularly bats. Where any outdoor lights (including street lighting) are required these are to be kept directional and focused to avoid unnecessary light spill.

New Planting. Where it is possible to incorporate landscape planting into the scheme then this should favour the introduction of species that have value for local wildlife. New shrubs and trees should be planted in mixed-species clusters, which provide greater value than single-species planting.

7. References

Department for Communities and Local Government (2012). National Planning Policy Framework.

Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines. (4th ed.) The Bat Conservation Trust, London.

Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature.

Mitchell-Jones, A.J. & McLeish, A.P. (2004). The Bat Workers Manual. (3rd ed.) JNCC

8. Appendix 1 – Photographs





9. Appendix 2 – Qualifications of the two Ecologists



ADAPT ENVIRONMENT
LANDSCAPE ARCHITECTS & PLANNERS

We are Adapt Environment, a consultancy of Landscape Architects, Ecologists and Planners working together to connect people and place through landscape. Partnered with experienced contractor, Contract Ground Services (CGS), we also design and construct high quality gardens and outdoor spaces for home- owners, nursing homes and schools. We are fully insured and chartered members of the Landscape Institute (LI) and Chartered Institute of Ecology and Environmental Management (CIEEM).

Our origins lie in landscape architecture, and this strengthens all the services we offer. For us, landscape is where memories are made and life enjoyed, especially during ongoing lockdowns.

Whether the project is a barn conversion, private garden or a solar/wind renewable energy project, we focus on the needs and hopes of the people affected. By leading with the landscape, and by putting people first, we create better connected, healthier and happier places.

I am Shea O' Neill, Adapt Environment's Director of Planning and Regeneration. As a Landscape Architect and Ecologist with over twenty five years of experience in both the private and public sectors, I have been honing the company's Planning

offer over the past few years to deliver our wide range of Landscape and Ecology services. I have extensive experience of landscape and visual impact assessment and strategic landscape scale studies. I have led LVIA's for numerous infrastructure and onshore wind and solar projects and our team have been involved in supporting a number of these through Public Inquiries.

I take a positive approach to planning and plan-making, working with the development team to secure consents and delivering implementable development schemes. I am passionate about creating urban and rural regeneration solutions that benefit people and wildlife.

SERVICES WE OFFER:

Ecology:

- Phase 1 and Extended Ecology Surveys;
- Bat Surveys- Potential and Emergent for building subject to development and demolition.
- Protected species surveys including Great Crested Newts, Otters and Birds ;
- Badger surveys and mitigation for construction projects ; and,
- Tree Surveys to BS 5837.

Through survey we can identify the potential ecological constraints to a development. Our design team can provide advice and details on how constraints can be mitigated.

Landscape:

- Landscape design and construction drawings;
- Public Realm;
- Private gardens design and construction; and,
- Landscape Visual Impact Assessment LVIA.

Planning:

- Submission of planning applications;
- Environment Statement preparation ;
- Landscape character assessments;
- Discharge of planning conditions ; and,
- Habitat Regulation Assessments HRA.

Contact **07702 916908** | shea.adaptenvironment@outlook.com
[www:adaptenvironment.com](http://www.adaptenvironment.com)

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Working in collaboration with individuals and teams, Shea has 25 years of experience in managing a diverse range of environmental & heritage projects. Skilled in delivering the Ecology & Landscape Visual Impact Assessment chapters in Environmental Statements, she has a strong knowledge of the planning system. Her proven track record of delivering the Ecological Assessment and Visual Analysis for renewable energy projects in Ireland has enabled successful planning applications for clients. Her specialism is ecological habitat restoration and enhancement within historic landscapes, especially located along coasts and waterways.

Monaincha Wind Farm – Solar PV Extension Planning consent.
Preparation of the Landscape Visual Impact Assessment for this 253ha site on peat substrate in County Tipperary. Planning permission was consented to in April 2021. The Solar PV arrays are proposed for installation on the existing Monaincha Wind Farm in Tipperary to share infrastructure and increase energy production.

Kilrue Solar PV Farm County Meath

Part of the team that prepared the successful planning consent for this 650ha Solar Farm proposal in County Meath. The Landscape Visual Impact Assessment including AVR photomontages were prepared in partnership with Entrust. Planning permission consented March 2023.

The Sheehy's (Roscrea) Loop in Substation & overhead pylons.
Preparation of the LVIA assessment as part of planning permission for infrastructure delivery of three existing consented Solar PV sites near Roscrea in Co Tipperary. Consented and currently being delivered onsite on behalf of Entrust.

Ballyroe Sub Station and Infrastructure

Preparation of the LVIA assessment as part of planning permission for infrastructure delivery of existing consented Solar PV sites near Ballyroe in Co Cork. The site is being managed in an environmental sensitive process because of its proximity to a SAC. Currently being delivered onsite on behalf of Entrust.

Ballyroe Extension Solar PV Farm (O' Brien lands.)

Landscape Visual Assessment of new Solar PV farm on O' Brien lands adjacent to consented Solar PV sites. Currently being delivered onsite on behalf of Entrust.

Single Wind Turbines on agricultural sites

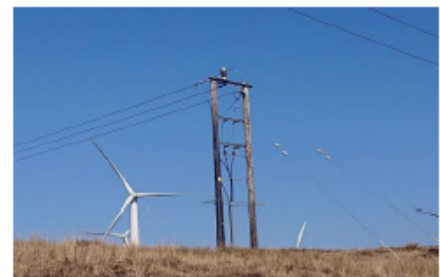
Working on delivering the ecological assessments for planning consent for a further five single wind turbines on agricultural sites in Co Tyrone and Co Londonderry. Six further sites have successful planning consents which are being prepared for implementation.



Monaincha Solar PV Farm Co Tipperary 253ha



Kilrue Solar PV Farm Co Meath 650 ha



Wind Turbines and infrastructure Co Tyrone

Habitat Restoration – West Tyrone.

Environmental restoration of Peat upland habitat in West Tyrone on wind turbine sites. Blocking of drains with grips and seeding of Sphagnum moss in shallow depressions to rewet and regenerate the peat substrate.



Peat and habitat restoration at Wind Turbine site in West Tyrone.

Tourism ECO-Pods-Ancient Woodland Assessment- Co Derry
Successful delivery of the planning consent for tourism ECO-pods adjacent to ancient woodland. Habitat mitigation and creation of off-line ponds and tree planting.

Lancashire Wind Turbine Habitat Restoration

Delivery of habitat restoration as part of the planning permission consent included Ecological Assessment, Tree Survey and Tree Protection Plans, Landscape Layout, Biodiversity Net Gain and Landscape Visual Impact Assessment.



Ancient woodland assessment.

Ecological Assessment for replacement dwellings

These successful planning applications (over 50) for replacement dwellings within rural areas were delivered adjacent to the sensitive habitats of River Foyle & tributaries SAC within the Sperrins AONB in Co Tyrone. Environmental survey and mitigation reports were prepared for the protection of sensitive habitats and Bat surveys.

South Downs National Park Telecommunications Masts.

Preparation of landscape proposals including Ecological Assessment, Tree Reports, BNG and LVIA for these sensitive semi-rural sites in the South Downs National Park. Delivery of successful planning consent including project management of the planning process.



Lancashire Wind Turbine Habitat Restoration

Highfield Farm, Woodcroft Farm and Station Road Masts
Working on delivering the planning consent for a further three telecommunication masts within South Downs National Park.

Eryri National Park SRN 4G Telecommunications Masts
Preparation of landscape proposals including Ecological Assessment, Peat Reports, BNG and LVIA for six sensitive rural sites in the Eryri National Park. Delivery of planning application submission including project management of the planning process.



South Downs National Park 10 number Telecommunications Masts.

Lake District National Park SRN 4G Telecommunications Masts
Preparation of landscape proposals including Ecological Assessment, Peat Reports, BNG and LVIA for seven sensitive rural sites in the National Park. Two successful consents with rebuttal submissions for three non-approvals.

Peak District National Park SRN 4G Telecommunications Masts
Preparation of landscape proposals including Ecological Assessment, Peat Reports, BNG and LVIA for four sensitive rural sites in the National Park.

Principal Ecologist Derek Richardson

Derek holds a BSc Hons degree in Environmental Biology (Ecology) from Oxford Brookes University, an MPhil (plant sciences) degree from the University of Newcastle-upon-Tyne and City and Guilds Level 3 in nature conservation.

He is currently the Principal Ecologist of the Greater Manchester Ecology Unit (GMEU), a post he has held for the past 17 years. He now spends part of the year in Northern Ireland (Omagh) and has begun to undertake private ecological consultancy work in NI, including with Adapt Environment.

Derek was previously an Ecologist with Vale Royal Council in Cheshire, England and with Knowsley Council on Merseyside, England. His first paid work as a professional Ecologist was in 1997, previously to this he was employed as a Coast and Countryside Ranger and as a Lecturer in Nature Conservation.

In his current role with GMEU Derek -

- advises a range of local authorities across North West England on ecology and nature conservation matters,
- is currently working with Defra and Natural England on the development of Local Nature Recovery Strategies and Biodiversity Net Gain in England
- carries out a wide range of ecological surveys and assessments,
- surveys and designates Local Wildlife Sites,
- leads or plays a leading role in a range of strategic nature conservation projects, including the Carbon Landscape Project, a large-scale initiative for restoring lowland wetlands and peatlands www.carbonlandscape.org.uk
- manages a team of eight ecologists and specialists

On peat conservation Derek –

- Led the management and restoration of Flaxmere Moss SSSI in Cheshire, England
- Led the management and restoration of a raised bog at Acomfield Plantation LNR in Knowsley
- Provided expert witness advice at a major public inquiry which led to the cessation of peat removal on part of the Chat Moss complex
- Has provided expert witness advice on the impact on peat of the construction of inland wind farms in upland areas
- Working closely with Natural England and the Lancashire Wildlife Trust, advises Salford, Wigan and Warrington Councils in England on the management and restoration of lowland raised bogs in the Chat Moss complex
- Recently (2020) advised the Environment Agency and Natural England on whether an area of peat substrate in Warrington could be defined as the priority habitat lowland raised bog
- Provides expert advice on peat restoration as part of the grant panel of the Scout Moor Wind Farm Habitat Enhancement Fund

On bats, Derek –

- Assesses more than 200 bat survey reports each year prepared by others and recommends mitigation and compensation measures for bats when necessary
- Advises consultants on the specifications for bat surveys
- Undertakes more than 20 bat surveys per year, under the terms of a bat License held by Ecologist Mandy Elford

