



THE
ENVIRONMENT
PARTNERSHIP



SYMMETRY PARK MERSEYSIDE

WIDNES

RESERVED MATTERS 3 BAT FAVOURABLE CONSERVATION STATUS MITIGATION STRATEGY

TEP
Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Tel: 01925 844004
Email: tep@tep.uk.com
www.tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

Document Title	Reserved Matters 3 Bat Favourable Conservation Status Mitigation Strategy
Prepared for	Tritax Symmetry Ltd
Prepared by	TEP - Warrington
Document Ref	7367.043

Author	John Crowder
Date	February 2024
Checked	Lindsey Roberts
Approved	Anne Pritchard

[illegible]

CONTENTS	PAGE
1.0 Introduction	1
2.0 Site Context.....	2
3.0 Survey Information	3
4.0 Legislative Context	5
5.0 Objectives	7
6.0 Pre-commencement Surveys	8
7.0 Mitigation and Compensation	9
8.0 Favourable Conservation Status	13

FIGURES	PAGE
Figure 1. Site location in the context of the wider landscape and RM3 application boundary highlighted in purple.....	2
Figure 2. Tree T15 with roost feature located at 4.0m circled. Taken viewing west.	3
Figure 3. Close up of tree T15 soprano pipistrelle day roost re-entry point.....	3

APPENDICES

- APPENDIX A: GLTA and Aerial Survey Methodology
APPENDIX B: GLTA and Aerial Survey Results

DRAWINGS

- Drawing G7367.069 - Bat Tree Location Plan
Drawing G7367.083 - Bat and Bird Box Plan - Installation Areas

1.0 Introduction

- 1.1 The Environment Partnership (TEP) were commissioned by Tritax Symmetry Ltd., in November 2018, to complete a range of ecological works on land south of the M62, Widnes known as 'Symmetry Park Merseyside' (hereafter referred to as 'the site').
- 1.2 The proposals for the site divide between approximately 25.45ha for industrial and logistics development and 25.39ha proposed for use as a Country Park.
- 1.3 A suite of ecological surveys and reports were completed in 2018-2020 to inform the Environmental Impact Assessment (EIA), including mitigation recommendations, for a hybrid planning application for the site (Application Ref: 20/00494/HYB). Several reserved matters applications have since been progressed for areas within the site, to detail phases of development and facilitate site clearance works.
- 1.4 A number of trees in the north of the site illustrated on the Bat Tree Location Plan Drawing G7367.069 require removal (excluding trees T38 and T39 which are to be retained) to facilitate the development proposals detailed within the Reserved Matters 3 (RM3) application area located in the north-west of the site.
- 1.5 Updated surveys of the trees located in the north-west of the site that were identified for removal within the RM3 application were undertaken in November and December 2023.
- 1.6 This Favourable Conservation Status (FCS) Mitigation Strategy provides details on the updated surveys undertaken on trees now impacted by the RM3 application. Furthermore, the FCS Mitigation Strategy provides avoidance, mitigation and compensation measures that will require implementation as part of the RM3 application to ensure impacts on bats associated with the removal of fourteen trees assessed as having potential bat roost habitat suitability, are appropriately mitigated, and compensated for.
- 1.7 This FCS Mitigation Strategy does not detail information regarding surveys associated with retained trees and woodland blocks within the south of the RM3 application area, as these have been compiled within reports associated with the EIA (TEP Bat Survey Technical Report Ref: 7367.011, October 2020) and the Reserved Matters 2 application (TEP Symmetry Park Merseyside, Unit 2 Reserved Matters 2 - Biodiversity Mitigation Strategy Report Ref: 7367.036, March 2023).

2.0 Site Context

- 2.1 The site is located in Widnes, Prescot (approximate central grid reference SJ4750 8930) and lies immediately south of the M62 motorway and east of Junction 6 of the M57 motorway. The site is also bounded to the east by Fox's Bank Lane and to the south by the A5080 (Cronton Road).
- 2.2 Land within the masterplan boundary illustrated by the blue line in Figure 1, is currently being developed as part of separate reserved matters planning applications. The RM3 application boundary is illustrated in Figure 1 by the red line boundaries. Trees now requiring removal are located in a small block of woodland in the north-east of the area highlighted in purple (Figure 1), within the RM3 application boundary. Trees within the RM3 application boundary in the east (Figure 1) will be retained within proposals, where not already removed as part of previous reserved matters applications.
- 2.3 The wider landscape includes urban residential and industrial development associated with the wider Knowsley area to the north and west. The site has connectivity to rural habitats to the south and east, which are dominated by arable land with some areas of scrub, woodland, scattered trees, ponds and connecting boundary features including hedgerows and ditches.
- 2.4 Arable habitat, semi-natural broad-leaved woodland, plantation broad-leaved woodland, scrub/tree regeneration over grassland are dominant habitats within the site. A variety of habitats including marshy grassland, swamp, scrub, reed, and bare ground are also present. The topography of the site is undulating in places.

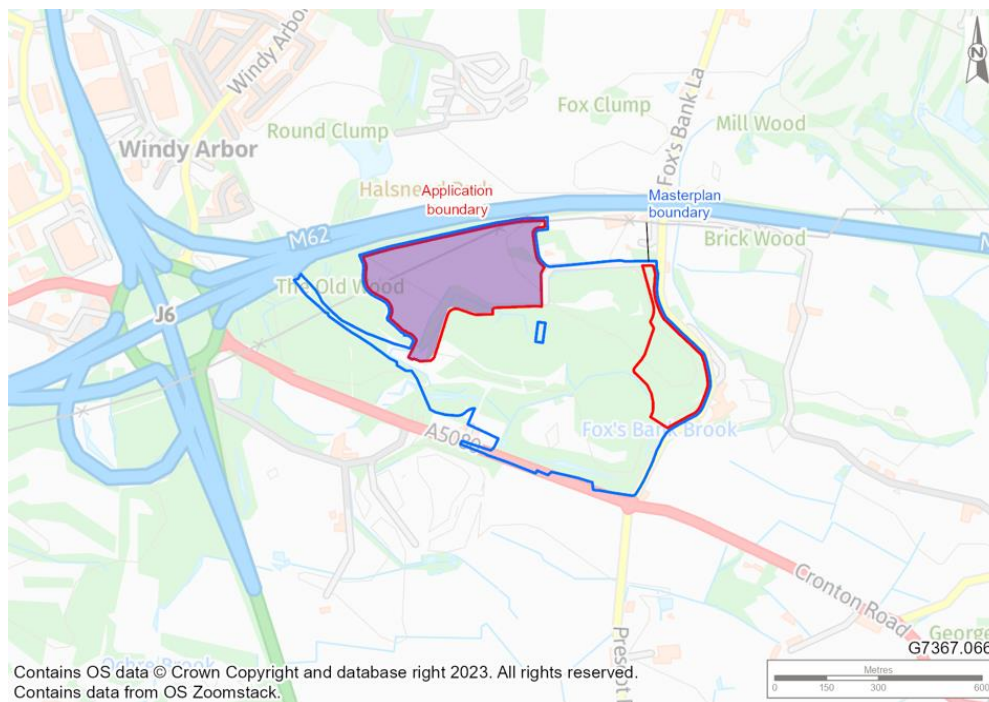


Figure 1. Site location in the context of the wider landscape and RM3 application boundary highlighted in purple.

3.0 Survey Information

Previous Survey Information

- 3.1 Full details of initial bat surveys undertaken are included in the TEP Bat Survey Technical Report (Ref: 7367.011, October 2020).
- 3.2 Following ground level tree assessment, tree T16 was identified as having low bat roost suitability and trees T13 (high bat roost suitability), T14 (moderate suitability), T15 (moderate suitability) and T17 (high bat roost suitability) were subject to nocturnal roost surveys in 2020 as these had been identified for removal.
- 3.3 During nocturnal roost surveys undertaken in 2020, a day roost of soprano pipistrelle *Pipistrellus pygmaeus* bat (2nr) was confirmed in tree T15. The bats were observed entering a branch cavity created where decay has set into a transverse-snap located on the eastern aspect of T15 at approximately 4.0m (Figure 2 and Figure 3).



Figure 2. Tree T15 with roost feature located at 4.0m circled. Taken viewing west.



Figure 3. Close up of tree T15 soprano pipistrelle day roost re-entry point.

2023 Survey Information

- 3.4 A Ground Level Tree Assessment (GLTA) survey of trees and a small area of woodland in the north-west of the site identified for likely removal under the RM3 application proposals, was undertaken in November 2023 following the Bat Conservation Trust (BCT) Good Practice Guidelines (Collins, 2023). Full details of the GLTA survey method are provided at Appendix A.
- 3.5 The locations of trees identified as having potential bat roost habitat suitability and requiring removal under the RM3 application proposals, are provided on the Bat Tree Location Plan Drawing G7367.069, with the exception of trees T38 and T39 which have now been confirmed as being retained.

- 3.6 Full details of the GLTA survey results are provided at Appendix B. During the GLTA survey, trees that were likely to be impacted within the RM3 application proposals were assessed as follows:
- Tree T13, T14, T15, T17, T30, T33, T34 and T39 - PRF-M (trees with potential roost features (PRFs) suitable to support multiple bats and may also therefore be used by a maternity colony for roosting, or because they have a bat box installed on them).
 - Trees T16, T31, T32, T35, T36, T37 and T38 - PRF-I (trees with PRFs suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats).
- 3.7 Following the GLTA a PRF Inspection Survey (aerial inspection via means of ropes) of the eight trees assessed as having PRF-M was undertaken in December 2023. Full details of the PRF Inspection Survey results are provided alongside the GLTA results in Appendix B. In addition, the four bat boxes (two x Schwegler 1FD and two x Schwegler 2F boxes) which had been installed on trees T30, T33, T34 and T39 in this area were also subject to an inspection, with boxes on T30, T33 and T34 requiring relocation. Bat droppings were found in bat boxes on trees T33, T34 and T39.
- 3.8 The updated categorisation of trees following the aerial inspection is as follows:
- Tree T13 - None
 - Tree T14 - PRF-M
 - Tree T15 - PRF-M
 - Tree T17 - PRF-M
 - Tree T30 - PRF-M (bat box - no droppings)
 - Tree T33 - PRF-M (bat box - droppings recorded)
 - Tree T34 - PRF-M (bat box - droppings recorded)
 - Tree T39 - PRF-M (bat box - droppings recorded)
- 3.9 None of the trees were assessed as having hibernation suitability to support roosting bats.

4.0 Legislative Context

Conservation of Habitats and Species Regulations 2017

- 4.1 The Conservation of Habitats and Species Regulations 2017¹ (2017 Regulations) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into domestic law.
- 4.2 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019² (2019 Regulations) amends the 2017 Regulations to make them operable following the withdrawal of the United Kingdom from the European Union (EU).
- 4.3 All bat species and their breeding sites or resting places are protected under Regulation 43 of the 2017 Regulations, which makes it illegal to:
- Deliberately capture, injure, or kill any bats;
 - Deliberately disturb bats in their roosts; and
 - Damage or destroy a breeding site or resting place of any bat species.
- 4.4 Disturbance is defined in the 2017 Regulations as an activity which is likely to impair a species' ability to survive, to breed or reproduce, to rear or nurture young or, in the case of bats hibernating or migratory species, to hibernate, migrate or which may affect significantly the local distribution or abundance; of the species.
- 4.5 A bat's resting place is known as a roost site. Bats tend to be faithful to roost sites, but their biology is such that different roost site characteristics are preferred at different times of the year by different species for different functions, a bat roost is considered to be afforded protection even when it is not occupied.
- 4.6 The 2017 Regulations (Regulation 55) enables a relevant licensing body to grant a licence for certain activities that may affect animal or plant species protected by the above provisions. The purpose must conform to one of those listed under Regulation 55(2). For most development related activities, the purpose normally relates to Regulation 55(2)(e) 'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment' – commonly known as the IROPI test. Regulation 55(9) introduces two further tests that the licensing body must consider:
- There is no satisfactory alternative; and
 - The favourable conservation status of the species concerned will be maintained and/or enhanced.

1 Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) <https://www.legislation.gov.uk/uksi/2017/1012/>

2 Conservation of Habitats and Species Regulations 2019 (SI 2019/579) <https://www.legislation.gov.uk/uksi/2019/579/>

- 4.7 Under Regulation 9(1) of the 2017 Regulations (as amended), competent authorities “must exercise their functions which are relevant to nature conservation... so as to secure compliance with the requirements of the Directives”. Regulation 9(3) requires a competent authority, in exercising any of its function, to “have regard to the requirements of the Directives so far as they be affected by the exercise of those functions.” Local planning authorities must therefore consider the above three ‘tests’ when determining if planning permission should be granted for developments likely to cause an offence under the Regulations.

Wildlife and Countryside Act 1981

- 4.8 The Wildlife and Countryside Act 1981 (as amended)³ (WCA) is a major legal instrument for wildlife protection in the UK. The obligations of the Bern Convention (the protection of wild plant and animal species and their natural habitats) are transposed into law for England and Wales⁴ by the WCA. The legal requirement for the protection of migratory species listed by the Bonn Convention is also provided by the WCA³.
- 4.9 All bat species are listed under Schedule 5 of the WCA and receive protection which makes it illegal (with certain exceptions) to:
- Intentionally kill, injure, or take bats;
 - Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by bats; and
 - Intentionally or recklessly disturb bats while they occupy a place used for shelter or protection.
- 4.10 The Environment Act (EA) 2021 amends the licensing regime under Section 16 of the WCA 1981 to enable licences to be granted (in England only) for reasons of overriding public interest. This new purpose will enable those involved in development activities to apply for a derogation under the WCA for species domestically protected under Schedule 5 of the WCA 1981.
- 4.11 The amendments introduced by the EA 2021 at Section 16(3) requires that licensed may only be granted (in England) where:
- there is no other satisfactory solution, and
 - the grant of the licence is not detrimental to the survival of any population of the species of animal or plant to which the licence relates.
- 4.12 The measures detailed in this method statement will ensure that no works are implemented on site in any way that would constitute an offence under the 2017 Regulations. In the event a bat roost is identified in any of the trees at any stage of works, the measures set out in this method statement will ensure that the FCS of the species in question is maintained.

³ Wildlife and Countryside Act 1981 c. 69 <https://www.legislation.gov.uk/ukpga/1981/69/>

⁴ In Scotland by the Nature Conservation (Scotland) Act 2004 (as amended) and in Northern Ireland by Wildlife (Northern Ireland) Order 1985 and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.

5.0 Objectives

- 5.1 Twelve trees (T14-T17, T30-T37) on site within the RM3 application area have been assessed as having PRF-I or PRF-M suitability to support roosting bats and will require removal in order to facilitate proposals for this area of the development scheme.
- 5.2 Measures will be implemented to ensure adherence to legislation and ensure that:
- no bats are roosting in trees/ bat boxes at the time of removal;
 - in the event any of the trees are identified to support a roost in the time leading up to removal, a mitigation licence from Natural England to permit the felling of the trees will be obtained and appropriate roost replacement measures will be implemented prior the felling of the trees;
 - a mitigation licence from Natural England will be obtained to facilitate removal of tree T15, recorded as having a day roost of soprano pipistrelle bats confirmed in 2020;
 - a mitigation licence from Natural England will be obtained to facilitate relocation of bat boxes from and felling of trees T33 and T34, as bat droppings were recorded during checks in the bat boxes, installed on these trees, during aerial surveys in December 2023;
 - connectivity between T15, T33 and T34 and any other tree with a confirmed bat roost and adjacent trees will be maintained until such time that trees with confirmed bat roosts have been felled and appropriate mitigation and compensation actions have been undertaken; and
 - roost habitat for bats is provided within the site to compensate for loss of roosting resources and to provide enhancements to roosting resources available within the locality.
- 5.3 The measures set out in this method statement will therefore ensure the Favourable Conservation Status of those bats utilising the site is maintained.

6.0 Pre-commencement Surveys Prior to Construction

- 6.1 There are no intended capture or exclusion works to be implemented as part of this method statement.
- 6.2 For trees T14, T15, T17, T33 and T34 that were confirmed as having PRF-M roost habitat suitability (for T33 and T34, this is only because of the bat boxes installed on them), then three PRF Inspection Surveys will be required between May and September to establish presence/ likely absence of bat roosting. Two of the PRF Inspection Survey visits must be between May and August. The visits must be spaced a minimum of three weeks apart.
- 6.3 If the surveyor confirms that a maternity roost of bats is found during the summer PRF Inspection Surveys then it will be necessary to switch to presence/ likely absence surveys (nocturnal emergence surveys) to establish roost status, species, and number of bats. For presence/ likely absence surveys three nocturnal emergence surveys between May and September will be undertaken. Two of the visits must be between May and August and visits must be spaced a minimum of three weeks apart.

Trees T15, T33 and T34 Evidence of Roosting Bats

- 6.4 Tree 15 has a confirmed day roost of soprano pipistrelle bats during surveys in 2020. Bat boxes on trees T33 and T34 had confirmed roosts in the form of bat droppings during aerial inspections in December 2023. All of these trees will require a mitigation licence from Natural England to permit felling and relocation of the bat boxes. Updated summer aerials of these trees will confirm current bat roosting status.

In the Event a Bat Roost is Confirmed Present

- 6.5 If bats are confirmed to be roosting in trees T14 and T17, a mitigation licence will be required from Natural England to permit felling of these trees.
- 6.6 The requirement to obtain a mitigation licence will have timing implications for the development scheme whilst the licence application is produced, submitted, and determined.

In the Event a Bat Roost is Confirmed Absent

- 6.7 If, following the last PRF Inspection Survey and/or nocturnal emergence survey, trees are not found to have any evidence of roosting bats, trees will be felled within 24 hours in line with advice provided by the ecologist undertaking the bat surveys. This does not apply to trees T15, and bat boxes on T33 and T34 which will require removal under a mitigation licence.
- 6.8 Tree T30 supports a bat box in which no droppings were recorded during December 2023 surveys. This bat box is therefore being relocated in February 2024 prior to the active bat season and following another check to confirm absence of bats.

7.0 Mitigation and Compensation

Working Methods

- 7.1 Before commencing any work on site, builders and contractors will be inducted by a licensed bat consultant, who will provide a toolbox talk, to make them aware of the possible presence of bats, their legal protection and of working practices to avoid harming bats. A copy of this FCS Mitigation Strategy document will remain available on site at all times, together with details of who to contact should bats be found.
- 7.2 Works must be undertaken during daylight hours only.
- 7.3 Building works associated with the RM3 application may commence prior to the completion of the PRF Inspection Surveys/ and or the presence/ likely absence nocturnal emergence surveys. However, throughout these works 10m protection buffers from the base of all trees that have bat roost habitat suitability must be maintained at all times, until such time that felling of tree T15, or any other trees with confirmed bat roosts as well as relocation of bat boxes (with confirmed roosts) from T33 and T34 has been undertaken. Heras fencing or similar will be used to mark the 10m protection buffers and appropriate signage will be put in place to ensure no entry into the buffer areas. A 10m buffer must also be placed around T39 which supports a bat box with confirmed roost activity throughout the duration of the works.
- 7.4 If for any reason any other works are required within the 10m protection buffers a suitably qualified bat consultant must first be contacted and an approach to the works agreed if possible.
- 7.5 Additionally, until such time that felling of tree T15, or any other trees with confirmed bat roosts as well as relocation of bat boxes (with confirmed roosts) from T33 and T34 has been undertaken, habitat linkage to the wider area must be maintained to allow foraging and commuting. This means no physical barrier to bat commuting can be placed between T15, T33 and T34 and the other ten trees identified on the Bat Tree Location Plan Drawing G7367.069, and trees and woodland located to the east.
- 7.6 Artificial lighting may be required during construction phases and earthworks, for example, where working hours extend beyond daylight hours (particularly during winter) or where security lighting is required. Lighting will only be used where and when necessary and will be appropriate, i.e., at levels that are visible and serve the intended function but that do not light excessive areas or provide light at times beyond the functional requirement. Care will be taken to ensure areas with trees identified as having potential bat roost habitat or confirmed roosts are not subject to light spill during construction phases and earthworks and commuting corridors are maintained in darkness.
- 7.7 During felling of tree T15 or any other trees with confirmed bat roosts as well as relocation of bat boxes (with confirmed roosts) from T33 and T34, contractors will be instructed from ground level by a licensed bat consultant.

- 7.8 The bat boxes, with confirmed bat roost activity on trees T33 and T34 which are to be felled within the RM3 application boundary were installed as compensation roost habitat for other phases of the development scheme and will be relocated to suitable mature trees within woodland north of the A5080 (Cronton Road) in the south of the site, subject to granting of a mitigation licence from Natural England.
- 7.9 In the absence of any additional mitigation licence requirement for the felling of trees where roosting bats have not been confirmed during surveys, the following standard measures will be applied to the felling of all trees with potential bat roost habitat suitability:
- Smaller branches without cavities will be felled and may be removed from site or chipped on site with no further constraints.
 - Branches/ tree sections with PRFs, will have PRFs inspected at height using an endoscope under supervision of a licensed bat consultant. Where PRFs can be fully inspected and the entirety of the cavities can be viewed and bats confirmed as absent and/or no roost evidence is present, these features will be section-felled, whereby the branch/ tree sections are kept whole and lowered to the ground.
 - Where branches/ tree sections with PRFs cannot be fully inspected at height, these will be felled employing a 'soft-felling' technique, whereby the branch is gently lowered to the ground and cushioned on impact.
 - Lowered branches/ tree sections will be inspected on the ground by a licensed bat consultant using an endoscope to confirm bats are absent and left on site overnight in the event that areas within PRFs are not visible, so that should any bats be within the PRFs but not detectable, these can escape.
- 7.10 In the unlikely event that bats are encountered at any time during felling and clearance works, works will cease in that area, or as otherwise advised by the licensed bat consultant. Where possible, the bat will be left in situ and works will be implemented around the bat. Where this is not possible, appropriate action as advised by the licensed bat consultant will be implemented.
- 7.11 No contractor shall be permitted to handle bats.
- 7.12 Nesting birds will also be considered during tree removal works. All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) and it is an offence to intentionally or recklessly, damage or destroy nests. Therefore, any tree or surrounding vegetation clearance undertaken within the nesting bird season (typically March to August inclusive) will be carried out following a nesting bird check by a suitably qualified ecologist, a maximum of 24 hours in advance of clearance works. If nesting birds are found, an appropriate exclusion zone will be set up around any active nests until the young have fledged with regular monitoring checks by an ecologist to advise when it is possible for clearance works to proceed.

Compensation

- 7.13 The loss of T15 and the additional ten trees will result in a reduction of available tree roost habitat, even if no current evidence of roosting is confirmed during the PRF Inspection Surveys and/or the presence/likely absence nocturnal emergence surveys. The loss of this potential roost habitat will be offset by the installation of bat boxes.
- 7.14 Compensation for loss of bat roosting and bird nesting habitat, where trees have been removed or are proposed for removal within the various phases of the development scheme, has been detailed for each planning application. The various locations and specifications of bat and bird boxes already installed or to be relocated within the site are illustrated on the TEP Bat and Bird Box Plan - Installation Areas Drawing G7367.083.
- 7.15 For the RM3 application compensation for loss of potential bat roost habitat is detailed in the Bat and Bird Box Scheme (TEP Report ref: 7367.042). This will be updated, if required, following the completion of the planned PRF Inspection Surveys/ and or the presence/ likely absence nocturnal emergence surveys in 2024.
- 7.16 The boxes will be installed a minimum of 3m above the ground and will be oriented mainly to the south or south-west and directed away from the prevailing north-east wind. Boxes will be positioned to ensure flight-lines to and from boxes are not/will not be obscured by foliage. The bat boxes will be installed under the supervision of a licensed bat consultant and will be fixed to trees in accordance with instructions provided.
- 7.17 Bat boxes will act to replicate the size, height and aspects of tree roost habitat lost and will be situated near features to provide suitable flight-lines such as woodland edge habitat, glades or linear scrub and will have an entrance close to appropriate habitat. Bat boxes provided as compensation for roost habitat loss within the site, will include a variety of designs to support a variety of species and roost types. Bat boxes will be positioned in areas where conditions such as temperature and humidity will be maintained by surrounding vegetation structure e.g., on trees sheltered by surrounding tree or scrub cover.
- 7.18 Most bat species prefer to fly in dark areas straight into vegetation. All replacement roost habitat will be positioned away from sources of external lighting or where light spillage may influence use of a bat box.
- 7.19 If bat box types detailed within the various Bat and Bird Box Plans associated with the development scheme cannot be resourced for installation, the project ecologist will confirm alternative boxes that are of a suitable and comparable specification to those previously recommended.

Reporting

- 7.20 Following the PRF Inspection Surveys/ and or the presence/ likely absence nocturnal emergence surveys and tree felling work, an updated report will be submitted.

- 7.21 A mitigation licence will be obtained from Natural England to permit the felling of T15, and relocation of bat boxes with confirmed roosts on T33 and T34 and any additional trees with confirmed roosts discovered during PRF Inspection Surveys/ and or the presence/ likely absence nocturnal emergence surveys. A licence report will be submitted to Natural England on completion of the licensable works.

8.0 Favourable Conservation Status

8.1 The conservation status of a species is defined in the Habitats Directive as favourable when:

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

8.2 Taking into account the measures detailed in this FCS Mitigation Strategy, there will be no detriment to the FCS of bat species at the site as a result of the RM3 application proposals. Measures detailed in this FCS Mitigation Strategy will ensure:

- roosting bats will not be disturbed by works;
- there will be no net loss of potential tree roost habitat;
- there will be no foraging or commuting habitat fragmentation; and
- no bats will be injured or killed.

APPENDIX A: GLTA and Aerial Survey Methodology

Ground Level Tree Assessment for Bat Roost Habitat Suitability

- 8.3 A Ground Level Tree Assessment (GLTA) survey of trees and a small area of woodland in the north-west of the site identified for removal under the RM3 application proposals, was undertaken by a TEP licensed bat consultant on 24th November 2023.
- 8.4 The GLTA included a detailed inspection of the exterior of the trees from ground-level, using high power binoculars, for any evidence of use by bats and any potential roost features (PRFs) which may provide suitable roosting habitat.
- 8.5 Most tree roosts are created by one or a combination of the following features:
- Old woodpecker holes;
 - Splits in trunk, bough, or large branches;
 - Rot holes in trunk, bough, or large branches;
 - Holes formed by two boughs or branches growing in contact;
 - Loose or lifting bark; or
 - Underneath a covering of dense latticed creeper, usually ivy *Hedera helix*.
- 8.6 Based on the PRF characteristics, trees were categorised for their roost habitat suitability in accordance with the Bat Conservation Trust (BCT) Good Practice Guidelines (Collins, 2023)⁵. The criteria for roost habitat suitability categorisation are summarised in Table A1.

Table A1. Guidelines for categorising the potential roost habitat suitability of PRFs on trees for bats.

Tree Habitat Categorisation	Tree Characteristics	Further Survey Requirements
None	Typically, small, or young trees or trees in good health and condition which have not developed any potential roost features associated with damage, decay, or disease. No PRFs are present.	No survey requirements.
PRF-I (PRF is only suitable for individual bats either due to size or lack of suitable surrounding habitat)	A tree of sufficient size and age to contain PRFs but in good health and condition viewed from ground level and not likely to contain PRFs, or PRFs observed with only very limited roosting opportunities suitable for use by individual bats opportunistically or very small numbers, but which is not suitable to be used on a regular basis or by larger numbers of bats.	No further surveys required. Appropriate compensation required for each PRF-I, prior to impacts. Supervision of works and a precautionary inspection (aerial inspection either by ropes, ladder or MEWP) of the PRFs to be completed by a bat licensed consultant prior to pruning or felling.

⁵ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists Good Practice Guidelines (4th edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6

Tree Habitat Categorisation	Tree Characteristics	Further Survey Requirements
PRF-M <i>(PRF is suitable for multiple bats and may therefore be used by a maternity colony)</i>	Trees with one of more features such as woodpecker holes, sheltered rot holes, vertical or horizontal cracks in stems or branches, other hollows, or cavities, partially detached platey bark, partially detached or overlapping mature ivy (>50mm stem diameters) or other suitable cavity or cavity forming features, that could be used by larger numbers of bats or support a roost of high conservation status (i.e., maternity or hibernation use). Typically, larger, or more mature trees with established PRFs due to damage, decay, or disease, that are suitable for use by bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.	Three PRF Inspection Surveys (aerial inspection either by ropes, ladder or MEWP) of the PRF-M features to be undertaken within May – September, spaced three weeks apart. Where access is not possible for aerial inspection either by ropes, ladder or MEWP, or features are too extensive to survey thoroughly, three dusk emergence surveys will be carried out, supported with night vision camera aids, undertaken within May – September, spaced three weeks apart.
PRF-I Confirmed/ PRF-M Confirmed	Can include trees with PRF-I suitability to PRF-M suitability where evidence of bat roosting has been confirmed i.e., bats present, abundant/ fresh droppings.	For smaller roosts/where disturbance of bats will not occur, three PRF Inspection Surveys (aerial inspections) of the PRFs to be undertaken within May – September, spaced three weeks apart. Where access is not possible for aerial inspection either by ladder or MEWP, if features are too extensive to survey thoroughly, or where roosts are of a size or structure that PRF Inspection Surveys would cause bats to be disturbed/difficult to fully survey; three dusk emergence surveys must be carried out, supported with night vision camera aids, within May – September, spaced three weeks apart.

- 8.7 If PRFs were obscured by the angle of view, elevation, or vegetation, but were likely to be present due to the age, size and apparent health of the tree, a precautionary approach was taken, and trees were categorised as having PRF-M potential bat roost habitat suitability.
- 8.8 Considering the density of trees within woodland areas, it was not considered appropriate to individually identify trees within the RM3 application boundary determined as None in terms of potential bat roost habitat suitability. Data is presented only for those trees assessed to have PRF-I or PRF-M potential bat roost habitat suitability located within areas identified as requiring removal to facilitate development proposals.

Survey Constraints

- 8.9 Optimal conditions for identifying tree PRFs are when trees are not in leaf. According to the BCT 2023 Guidelines, the recommended survey window for GLTA is between December and March (inclusive). Poor light and dense foliage (including ivy *Hedera helix* cover) can cause PRFs to be missed from ground-level vantage points. The GLTA survey was undertaken outside of the optimal period, in November when trees were in partial leaf. This limitation was overcome during the GLTA, as where PRFs were obscured by the angle of view, elevation, or vegetation, but were likely to be present due to the age, size and apparent health of the tree, a precautionary approach was taken, and trees were categorised as having PRF-M potential bat roost habitat suitability.

PRF Inspection Survey for Bat Roost Habitat Suitability

- 8.10 A PRF Inspection Survey was undertaken of trees identified as PRF-M by a suitability licensed bat ecologist on 15th December 2023.
- 8.11 The features were inspected for bats and evidence of bats such as droppings and urine stains. The features were also assessed for suitability to support roosting bats such as depth of feature and climatic conditions within the features.
- 8.12 Following the inspection each feature was assigned either PRF-I and PRF-M. For those trees that have a number of features then the highest level feature, PRF-M was used to assess the overall category of the tree.

Survey Constraints

- 8.13 No survey constraints were encountered during the aerial inspections.

APPENDIX B: GLTA and Aerial Survey Results

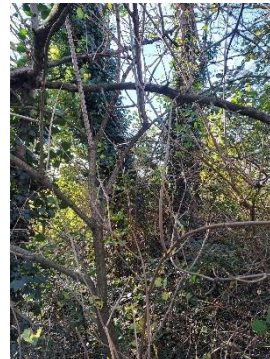
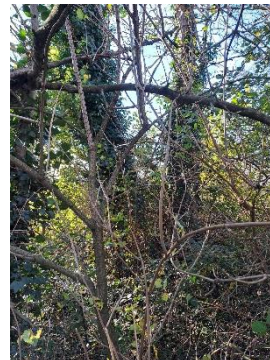
Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
13	SJ47386 89562	3m	<i>Pinus sylvestris</i>	Semi-mature Scot's pine, approximately 10.0m in height, located in semi-natural woodland to the north of the arable field, DBH approximately 0.50m.	Scarring along trunk	The tree has damage on the north-east aspect with scarring along the trunk from a possible lightning strike.		PRF-M (downgraded to NONE following PRF Inspection Survey)
14	SJ47361 89557	3m	<i>Acer pseudoplatanus</i>	Semi-mature tree at the western edge of a small block of semi-natural woodland and adjacent to an arable field, approximately 9.0m in height, DBH approximately 0.40m. Sucker growth from the bottom of the tree increases foliage cover around PRF. Bird box installed on tree.	Tear-out	Tear-out within main stem located at approximately 1.0-3.5m and south-west facing. Cavity appears like it may extend upwards.		PRF-M (No evidence of roosting bats. Remains PRF-M following PRF Inspection Survey)

Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
15	SJ47336 89582	3m	<i>Quercus robur</i>	Large, mature oak, approximately 10.0m in height, located in semi-improved neutral grassland horse paddock west of a small block of semi-natural broad-leaved woodland adjacent to arable field, DBH approximately 2.0-2.5m, PRFs a result of damage.	Transverse-snap Hazard-beam Tear-out Weld	Branch cavity created where decay has set into the transverse-snap located at approximately 4.0m and east facing. Hazard beam feature created from snapped branch located at approximately 7.0m and east facing. Branch cavity created where decay has set into a tear-out feature located at approximately 6.0m and north facing. A weld feature is also present in the canopy between two main branches.		PRF-M (No evidence of roosting bats. Remains PRF-M following PRF Inspection Survey) (Confirmed roost in 2020)

Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
16	SJ47352 89586	3m	<i>Quercus robur</i>	Large, mature oak with 'Marus Sox' plaque, approximately 11.0m in height, located in semi-improved neutral grassland horse paddock west of a small block of semi-natural broad-leaved woodland adjacent to arable field, DBH approximately 1.5m, PRFs a result of damage but decay has yet to set in and create features suitable for use by more than individual bats. Dense foliage around canopy and tree is of a size and age where PRFs may be present but little with roost suitability viewed from ground-level inspection.	Wound Transverse-snap	Branch cavity possibly created from tear out where a branch has snapped, located at approximately 4.0m and south facing. Damage appears superficial with decay yet to set in. Branch has snapped, located at approximately 4.0m and south facing. Damage appears superficial with decay yet to set in. Wound located at approximately 7.0m and east facing, though wound appears healed with no cavity created.		PRF-I
17	SJ47341 89560	3m	<i>Acer pseudoplatanus</i>	Mature tree at the western edge of small block of semi-natural woodland, approximately 12.0m in height, DBH approximately 0.40m, tree has multiple stems though only one stem has some decay with a possible cavity behind the rotten heart wood.	Wound/Tear-out	Tear-out/wound within main stem located at approximately 6.0m and north-west facing. The wound may provide a large cavity if decay has set in, and the stem has become hollow behind. The heartwood has shrunk back from the bark and may also provide ram's-horn roost feature.		PRF-M (No evidence of roosting bats. Remains PRF-M following PRF Inspection Survey)

Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
30	SJ 47347 89549	3m	<i>Acer pseudoplatanus</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m. Bat box 5m south facing.	Bat box	Bat box approximately 5m south facing.		PRF-M (No evidence of roosting bats. Remains PRF-M following PRF Inspection Survey)
31	SJ 47351 89553	3m	<i>Acer pseudoplatanus</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m.	Possibility of foliage obscured PRFs, though unlikely as tree appeared in good condition	Light cover of ivy and foliage obscuring view from 1.0-10.0m.		PRF-I

Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
32	SJ 47352 89547	3m	<i>Pine sp.</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m.	Possibility of foliage obscured PRFs, though unlikely as tree appeared in good condition	Light cover of ivy and foliage obscuring view from 1.0-10.0m.		PRF-I
33	SJ 47361 89549	3m	<i>Pine sp.</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m. Bat box 5m south facing.	Bat box	Bat box approximately 5m south facing.		PRF-M Bat droppings found in bat box - Confirmed Roost

Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
34	SJ 47375 89540	3m	<i>Acer pseudoplatanus</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m. Bat box 5m south facing.	Bat box	Bat box approximately 5m south facing.		PRF-M Bat droppings found in bat box - Confirmed Roost
35	SJ 47379 89554	3m	<i>Pine sp.</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m.	Possibility of foliage obscured PRFs, though unlikely as tree appeared in good condition	Light cover of ivy and foliage obscuring view from 1.0-10.0m.		PRF-I

Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
36	SJ 47376 89549	3m	<i>Pine sp.</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m.	Possibility of foliage obscured PRFs, though unlikely as tree appeared in good condition	Light cover of ivy and foliage obscuring view from 1.0-10.0m.		PRF-I
37	SJ 47416 89537	3m	<i>Unknown</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m.	Possibility of foliage obscured PRFs, though unlikely as tree appeared in good condition	Light cover of ivy and foliage obscuring view from 1.0-10.0m.	No picture	PRF-I
38 (retained)	SJ 47433 89521	3m	<i>Unknown</i>	Semi-mature tree within thin strip of semi-natural woodland. Approximately 10m in height, DBH approximately 1.0m.	Possibility of foliage obscured PRFs, though unlikely as tree appeared in good condition	Light cover of ivy and foliage obscuring view from 1.0-10.0m.		PRF-I

Tree Ref.	Grid Ref./What Three Words and Accuracy		Tree Species	Tree Description <i>e.g., age, condition, height, DBH, location</i>	Nature of PRF	PRF Description <i>i.e., type, height, and aspect</i>	Photo	Roost Habitat Suitability
39 (retained)	SJ 47437 89511	3m	<i>Acer pseudoplatanus</i>	Semi-mature tree on edge of field. Tree is approximately 10.0m in height, DBH approximately 1m, a single knot hole present.	Knot Hole Bat Box	Knot hole at 3m east facing.		PRF-M Bat droppings found in bat box - Confirmed Roost

DRAWINGS

Drawing G7367.069 - Bat Tree Location Plan
Drawing G7367.083 - Bat and Bird Box Plan - Installation Areas



KEY

Application boundary

Masterplan boundary

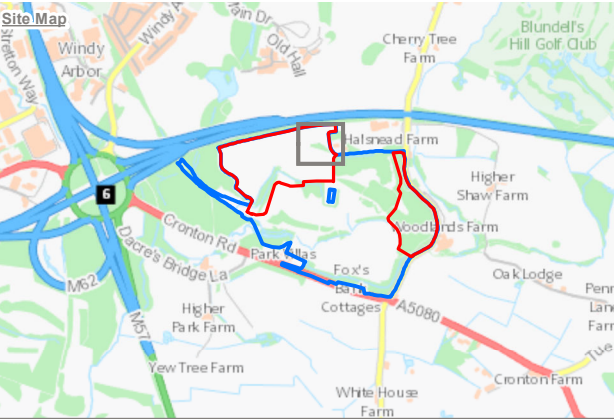
Tree Assessment for Bat Roost Potential

PRF-M (tree with potential roost feature suitable for multiple bats)

PRF-I (tree with potential roost feature suitable for individual/very small numbers of bats)

Note:
The locations of habitats and habitat features are indicative.

 Reproduced by permission of Ordnance Survey on behalf of HMSO.
Contains OS data © Crown Copyright and database right 2023. All rights reserved.
Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community



Rev	Description	Drawn	Approved	Date

 **THE ENVIRONMENT PARTNERSHIP**

401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Symmetry Park, Merseyside

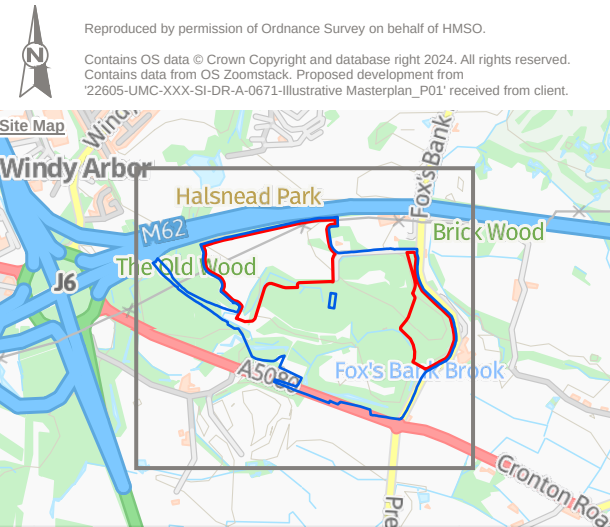
Title
Ground Level Tree Assessment for Potential Bat Roost Habitat
Reserved Matters Application 3

Drawing Number
G7367.069

Drawn	Checked	Approved	Scale	Date
AP	BJ	JC	1:700 @ A3	12/01/2024



- KEY**
- Application boundary
 - Masterplan boundary
- Detailed Application (Phase 1) - G7367.042**
- Bat Boxes**
- Schwegler 1FD Triple Front Panel Bat Box x 2
 - Schwegler 2F Universal Bat Box x 7
- Bird Boxes**
- Barcelona Open Nest Box x 13
 - Bilbao Nest Box 28mm x 3
 - Bilbao Nest Box 32mm x 5
 - Pine Woodpecker Nest Box x 1
- Reserved Matters 1 application - G7367.046A**
- Boxes that require moving**
- Bat Boxes**
- Schwegler 1FD Triple Front Panel Bat Box
 - Schwegler 2F Universal Bat Box
- Bird Boxes**
- Barcelona Open Nest Box
 - Bilbao Nest Box 32mm
- Reserved Matters 2 application - G7367.055A**
- Bat Boxes**
- Schwegler 1FD Triple Front Panel Bat Box x 1
 - Schwegler 2F Universal Bat Box x 8
- Bird Boxes**
- Barcelona Open Nest Box x 9
 - Bilbao Nest Box 28mm x 4
 - Bilbao Nest Box 32mm x 2
 - Pine Woodpecker Nest Box x 1
- Relocated boxes from RM1**
- Bat Boxes**
- Schwegler 1FD Triple Front Panel Bat Box
 - Schwegler 2F Universal Bat Box
- Bird Boxes**
- Barcelona Open Nest Box
 - Bilbao Nest Box 32mm



Rev	Description	Drawn	Approved	Date



THE ENVIRONMENT PARTNERSHIP

401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Symmetry Park, Merseyside

Title
Summary Bat and Bird Box Plan

Drawing Number
G7367.083

Drawn	Checked	Approved	Scale	Date
ET	MK	AP	1:4,500 @ A3	19/01/2024



HEAD OFFICE

Genesis Centre,
Birchwood Science Park,
Warrington
WA3 7BH

Tel: 01925 844004
E-mail: tep@tep.uk.com

**MARKET
HARBOROUGH**

The Reynard Suite,
Bowden Business Village,
Market Harborough,
Leicestershire,
LE16 7SA

Tel: 01858 383120
E-mail: mh@tep.uk.com

GATESHEAD

Office 26, Gateshead
International Business
Centre,
Mulgrave Terrace,
Gateshead
NE8 1AN

Tel: 0191 605 3340
E-mail: gateshead@tep.uk.com

LONDON

8 Trinity Street,
London,
SE1 1DB

Tel: 020 3096 6050
E-mail: london@tep.uk.com

CORNWALL

4 Park Noweth,
Churchtown,
Cury,
Helston
Cornwall
TR12 7BW

Tel: 01326 240081
E-mail: cornwall@tep.uk.com
