

Trees at East Lancashire Paper Mill Island, Radcliffe, M26 2GU

BAT ACTIVITY SURVEYS

December 2021

[ERAP (Consultant Ecologists) Ltd ref: 2021-283]

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Document Control

Survey Type:	Surveyors ¹	Survey Date(s)
Bat activity surveys	Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM & John Harrison-Bryant	3 rd September 2021 15 th September 2021
Reporting	Personnel	Date
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Signature(s)		
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Report issued to	Great Places Housing Group	
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¹ Licence reference number		
Bats		
John Harrison-Bryant Natural England Class Survey Licence (bats, Level 2) Registration Number 2015-10251-CLS-CLS		

SUMMARY

- i. This report presents the results of the bat activity surveys carried out at the two trees identified as having moderate potential for use by roosting bats at the East Lancashire Paper Mill Island, Radcliffe, M26 2GU.
- ii. The survey and assessment was requested in relation to a planning application to develop the site to housing.
- iii. All features suitable for use by roosting bats were inspected by a licensed bat surveyor prior to the commencement of the bat emergence surveys. No bats or evidence of roosting bats was detected.
- iv. No bat emergence or re-entry was detected during the surveys. The presence of roosting bats at the trees is reasonably discounted.
- v. Common pipistrelle were observed at the site during the bat activity surveys. Anabat recording detectors recorded common pipistrelle and *Myotis* species calls.
- vi. The removal of the trees can proceed under the Reasonable Avoidance Measures method statement presented at **Section 4.2**.
- vii. An updated daylight bat survey and assessment is recommended at the site if no tree removal works have commenced at the site by May 2022 (i.e. the next bat activity survey season).

1.0 INTRODUCTION

1.1 Background and Rationale

- 1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Great Places Housing Group to undertake the bat activity surveys at the trees identified as being of moderate suitability for use by roosting bats at the East Lancashire Paper Mill Island, Radcliffe, M26 2GU (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the location of the trees is SD 79016 07430.
- 1.1.2 The bat activity surveys were requested in connection with a planning application to develop the site to housing.
- 1.1.3 The results of a preliminary roost assessment of the buildings and trees at the site undertaken in April 2021 are presented at *East Lancashire Paper Mill Island Site, Radcliffe, Bat Survey Report* (The Environment Partnership, 2021), hereafter referred to as the 'preliminary roost assessment'.
- 1.1.4 In accordance with the preliminary roost assessment, two trees (Tree 1 and Tree 4) were identified as having moderate suitability for use by roosting bats. The location of the trees is presented at the appended **Figure 1**.

1.2 Scope of Works

- 1.2.1 The scope of ecological works undertaken in September 2021 comprised:
 - a. A desktop study for known ecological information at the site and the local area relating to bat species;
 - b. A daylight inspection by a licensed surveyor of all features suitable for use by roosting bats;
 - c. Bat activity surveys at Trees 1 and 4;
 - d. The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and
 - e. The identification of any further surveys or precautionary actions that may be required prior to the commencement of any construction activities.

2.0 METHOD OF SURVEY

2.1 Desktop Study

- 2.1.1 The following sources of information and ecological records were consulted:
 - a. MAGiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites; and
 - b. *East Lancashire Paper Mill Island Site, Radcliffe, Bat Survey Report* (The Environment Partnership, 2021).

2.2 Bat Species

Daylight Inspection of Trees 1 and 4

Survey Personnel

- 2.2.1 Each feature suitable for use by roosting bats at Trees 1 and 4 was inspected by John Harrison-Bryant, Natural England Class Survey Licence (bats, Level 2) Registration Number 2015-10251-CLS-CLS, prior to the commencement of the bat activity surveys on 3rd September 2021 and 15th September 2021.

2.2.2 The surveyor's qualifications and experience meet the criteria as defined in the *Technical Guidance Series Competencies for Species Survey: Bats* (CIEEM, 2013).

2.2.3 Each feature was examined using (where suitable) ladders, a high-powered torch and a video borescope. The following signs of roosting bats were searched for:

Bats, bat droppings (in, around or below the feature), odours emanating from the feature, audible squeaking at dusk, staining below the feature, and the presence of smoothed surfaces within the feature, indicative of regular passage by small mammals.

2.2.4 A list of equipment used is detailed at **Table 2.1**, below:

Table 2.1: Survey Equipment used during Daylight Bat Survey

Ladders
LED Lenser P14 torch
Canon Ixus digital camera
8x20 binoculars
Ridgid Micro Inspection Camera Borescope CA-100

Presence / Absence Surveys: Dusk Emergence Surveys

2.2.5 Two dusk emergence surveys were conducted at Trees 1 and 4 in September 2021.

2.2.6 Two surveyors, experienced in conducting bat surveys, were positioned at suitable locations to maximise the coverage of the trees to determine any emergence from the trees by roosting bats. Heterodyne detectors were used to determine any bat detected to species or group (*Myotis* species often cannot be reliably separated to species via their echolocation calls, for example). Recording bat detector units were used to record and analyse echolocation calls after the survey using AnalookW and Analook Insight bat call analysis software.

2.2.7 The dusk emergence surveys commenced at least 15 minutes before sunset, and continued for at least 1.5 hours after sunset.

2.2.8 Surveyor positions are annotated on **Figure 1**. Any bat emergence or re-entry activity was recorded. All surveys were conducted under suitable conditions. The dates of the surveys, surveyors and equipment used and weather conditions present are presented at **Table 2.2**, below.

Table 2.2: Dusk Emergence Survey Dates, Weather Conditions and Surveyors

Date	3 rd September 2021	15 th September 2021
Sunset	20:01	19:26
Start time	19:45	19:10
End time	21:31	21:00
Wind	Light air (Beaufort scale 1)	Calm (Beaufort scale 0)
Precipitation	Dry	Dry
Air temperatures	15°C	15°C
Survey Position	Surveyor and Detector	Surveyor and Detector
1	Amy Sharples Batbox III & Anabat Express	Amy Sharples Anabat Scout
2	John Harrison-Bryant Anabat Walkabout	John Harrison-Bryant Anabat Walkabout

2.3 Survey and Reporting Limitations

2.3.1 Due to health and safety considerations both survey repetitions undertaken at the site were dusk emergence surveys rather than one dusk emergence survey and one dawn re-entry survey per the guidelines. Also, due to the timings of the surveys at the end of the bat activity survey season it was considered necessary to reduce the gap between the two activity surveys from 14 days to 12 days as the

weather conditions were forecast to be unsuitable for bat activity surveys and it was considered more appropriate to reduce the gap between the surveys rather than undertake the second survey after mid-September.

- 2.3.2 Prior to the commencement of the dusk emergence surveys all features suitable for use by roosting bats were inspected by a licensed bat surveyor, therefore it is considered that the survey limitations are not significant and the scope of surveys undertaken at the site are appropriate to determine the status of roosting bats at the site.

2.4 Evaluation Methods

- 2.4.1 Government advice on wildlife, as set out in the *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, 2021) and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species Regulations 2017*, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.
- 2.4.2 The presence of any Priority Species, as listed under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species. The presence of habitats and/or species listed by the Greater Manchester Biodiversity Action Plans has been taken into account in the evaluation of the site.

3.0 SURVEY RESULTS

3.1 Desktop Study

Granted European Protected Species Applications

- 3.1.1 The granted European Protected Species application record was checked via MAGiC map for a 2 kilometre radius from the site.
- 3.1.2 Two records of European Protected Species applications are reported:
1. Common pipistrelle (*Pipistrellus pipistrellus*) European Protected Species Mitigation (EPSM) licence dated 2015, 200 metres north of the site; and
 2. Common pipistrelle EPSM licence dated 2010, 785 metres south of the site.

Preliminary Roost Assessment

- 3.1.3 A preliminary roost assessment was undertaken at the site in April 2021.
- 3.1.4 Trees 1 and 4 were assessed to be of moderate suitability for use by roosting bats. The preliminary roost assessment states:

Tree 1:

Potential roost feature (PRF) 1: Small cavity with approximately 5 cm wide entrance hole on eastern aspect at 2m height. Hole extends a short way down branch. Potential for use by individual bats.

PRF2: Upward facing branch cavity with approximately 5cm wide entrance hole on western aspect at 2.5 m height. The cavity may extend down the branch but is likely to allow rainwater to enter. Potential for use by individual bats.

PRF3: Trunk cavity at approximately 3m height on northern aspect. May open into larger cavity within trunk but needs further inspection. Potential to support individual or small number of bats.

Moderate (precautionary classification based on PRF3; all other PRFs considered Low).

Tree 4:

Semi-mature willow tree with curved trunk. PRF: Multiple small cavities present on all aspects of the tree. Some cavities are superficial but higher features could not be checked from ground-level. Potential to support individual or small number of bats.'

3.2 Inspection of Features Suitable for Use by Roosting Bats

- 3.2.1 All features identified as suitable for use by roosting bats at Trees 1 and 4 during the preliminary roost assessment were inspected prior to the start of both dusk emergence surveys.
- 3.2.2 No bats or evidence of roosting bats was found during the inspections.

3.3 Dusk Emergence Surveys

- 3.3.1 A map showing surveyor positions is appended at **Figure 1**, and raw data are appended at **Tables 7.1** and **7.2**.

3rd September 2021

- 3.3.2 No bat emergence or re-entry was detected at Trees 1 and 4 during the dusk emergence survey.
- 3.3.3 Common pipistrelle were recorded between 20:11 and 21:11, with the first bat detected was recorded 10 minutes after sunset. The Anabat recordings show three *Myotis* species were detected at 20:50, 20:51 and 21:04, with the first call recorded 49 minutes after sunset. No other species were recorded.

15th September 2021

- 3.3.4 No bat emergence or re-entry was detected at Trees 1 and 4 during the dusk emergence survey.
- 3.3.5 Common pipistrelle were recorded between 19:49 and 20:26, with the first bat detected 23 minutes after sunset. No other species were recorded.
- 3.3.6 The presence of roosting bats at the two trees is reasonably discounted.

4.0 RECOMMENDATIONS

4.1 Introduction

- 4.1.1 The following recommendations are made in the preliminary roost assessment:

'A bat box scheme is recommended to maintain opportunities for roosting bats within the site.

Planting of linear features within the completed development is also recommended to mitigate for the loss of any foraging and commuting habitat.

New lighting should be designed in line with the Institution of Lighting Professionals Guidance Note 08/18 Bats and Artificial Lighting in the UK. A Sensitive Lighting Strategy should also be produced to avoid impacts of lighting on nocturnal species, primarily bats.

- 4.1.2 The following recommendations are designed to complement the recommendations presented above.

- 4.1.3 These recommendations aim to ensure that the proposals are implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice. The recommendations are appropriate and proportionate to the proposals.

4.2 Bat Species

Survey Validity

- 4.2.1 The results of the bat activity survey will remain valid until the start of the 2022 bat activity survey season (May to mid-September inclusive). If no tree removal works have commenced at the site before May 2022 an updated bat survey and assessment will be required.
- 4.2.2 Due to the accessible nature of the identified features it is recommended that, in this instance, a licenced daylight bat survey utilising an endoscope is appropriate to update the 2021 survey findings.

Lighting

- 4.2.3 Paragraph 185(c) in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

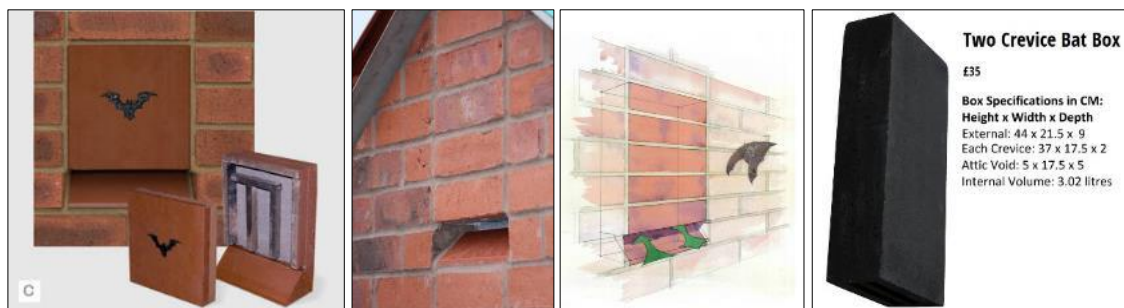
- 4.2.4 Any lighting scheme to be implemented at the site must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over any landscape planting proposed by the development, as lighting overspill may deter use by wildlife such as foraging bats.
- 4.2.5 The lighting scheme will be designed with reference to current guidance, namely:
- Guidance Note 08/18. *Bats and Artificial Lighting in the UK*. Bats and Built Environment series.(Bat Conservation Trust and Institution of Lighting Professionals, 2018); and
 - Bats and lighting: Overview of current evidence and mitigation guidance (Stone, 2014).

Reasonable Avoidance Measures to be Observed During Tree Felling

- 4.2.6 It is recommended that the following measures are adopted during the works proposed to Trees 1 and 4. In accordance with *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*(Collins, J. (ed), 2016) it is essential that the following actions are applied during the felling of these trees:
- The optimal time for tree removal is between September and late February inclusive;
 - The trees will be carefully section-felled. The sectioning must avoid cutting through or close to any cavities (this is likely to involve climbing the tree);
 - Cut sections will be lowered to the ground with the use of ropes;
 - Once on the ground the cavity / feature will be inspected by the licensed bat surveyor and guidance issued; and
 - All felled sections will be left to lie on the ground for 24 hours before removing Ivy and snedding (removing side branches).
- 4.2.7 If at any time during the works a bat is discovered or suspected all contractors must withdraw from the area and ERAP Ltd (01772 750502) or Natural England must be contacted for further guidance.

Enhancing Habitats for Roosting Bats

- 4.2.8 It is recommended that the development incorporates the installation of four bat access panels at the new buildings.
- 4.2.9 The bat access panels should be sited at least four metres above ground level, ideally facing or close to areas of landscape planting or existing linear features. The access panels should not be positioned over windows or doorways where bat droppings may become a nuisance. Once the development layout has been finalised, an ecologist should advise on appropriate positions for the bat access panels. Suitable bat access panels are available from NHBS Ecology (www.nhbs.com) or Wild Care (www.wildcare.co.uk) and are presented at **Insert 1**, below:



Insert 1: Examples of integrated bat access panels and an externally mounted box¹

4.3 Protection of Nesting Birds

- 4.3.1 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are nesting. It is advised that any works that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive.
- 4.3.2 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

5.0 CONCLUSION

- 5.1 No bat emergence or re-entry activity was observed during the bat activity surveys. The presence of roosting bats at two trees is reasonably discounted.
- 5.2 The proposed works at the site can proceed with Reasonable Avoidance Measures for protection of roosting bats and consideration of breeding birds.
- 5.3 If no tree removal works have commenced at the site by May 2022 an updated bat survey and assessment must be undertaken at the site.

¹ Left to right: IBstock Enclosed Bat Box 'c' (left); Habibat Bat Access Panels (centre left and centre right) and Greenwood's Ecohabitat's two crevice bat box (right). Products with a brick face are illustrated, however the Habibat bat access panels can be supplied unfaced to enable the addition of matching material.

6.0 REFERENCES

- Andrews, H (ed), 2013. *Bat Tree Habitat Key, 3rd Edition*. Bridgewater: AEcol Ltd.
- Bat Conservation Trust and Institution of Lighting Professionals, 2018. *Guidance Note 08/18. Bats and Artificial Lighting in the UK. Bats and Built Environment series.*, Warwickshire: ILP.
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7.0 APPENDIX: TABLES AND FIGURES

Table 7.1: Bat Activity Survey 1, 3rd September 2021, Sunset Time 20:01, Start Time 19:45

Survey Position 1: Amy Sharples

Time	Species	Notes
20:11	Unknown	No echolocation. One bat entered the site from the north traveling south. Flight pattern was indicative of a pipistrelle species.
20:12	Common pipistrelle	1 bat flying over the trees from north-east to south-west
20:18	Common pipistrelle	1 bat flying over the trees from south-west to north-east
20:23	Common pipistrelle	1 bat flying from north to west
20:25	Unknown	No echolocation. 1 bat flying over the trees from south-west to north-east.
20:27	Common pipistrelle	1 bat flying over the trees from south-west to north-east
20:29	Common pipistrelle	1 bat flying over the trees from south-west to north-east
20:32	Common pipistrelle	Heard not seen
20:35	Common pipistrelle	Heard not seen
20:36	Common pipistrelle	Heard not seen
20:40 until 21:11	Common pipistrelle	Occasional passes, all heard not seen
The Anabat Express made the following recordings: 24 common pipistrelle recordings between 20:18 and 21:11; and 3 <i>Myotis</i> species recordings between 20:50 and 21:04.		

Survey Position 2: John Harrison-Bryant

Time	Species	Notes
20:11	Unknown	No echolocation. One bat entered the site from the north traveling south. Flight pattern was indicative of a pipistrelle species.
20:12	Common pipistrelle	1 bat flying over the trees from north-east to south-west
20:18	Common pipistrelle	1 bat flying over the trees from south-west to north-east
20:23	Common pipistrelle	1 bat flying from north to west
20:25	Unknown	No echolocation. 1 bat flying over the trees from south-west to north-east
20:27	Common pipistrelle	1 bat flying over the trees from south-west to north-east
20:29	Common pipistrelle	1 bat flying over the trees from south-west to north-east
20:32	Common pipistrelle	Heard not seen
20:35	Common pipistrelle	Heard not seen
20:36	Common pipistrelle	Heard not seen
20:40 until 21:09	Common pipistrelle	Occasional passes, all heard not seen
The Anabat Walkabout made the following recordings: 17 common pipistrelle recordings between 20:11 and 21:09; and 2 <i>Myotis</i> species recordings at 20:50 and 21:04.		

Table 7.2: Bat Activity Survey 2, 15th September 2021, Sunset Time:19:26, Start Time 19:10

Survey Position 1: Amy Sharples

Time	Species	Notes
19:49	Common pipistrelle	1 bat entered the site from the north traveling south
19:55	Unknown	No echolocation. 1 bat flying from west to east
19:59	Common pipistrelle	1 bat entered the site from the north traveling south
20:08	Common pipistrelle	Heard not seen
20:21	Common pipistrelle	Heard not seen
The Anabat Scout made the following recordings: 4 common pipistrelle recordings between 19:54 and 20:21.		

Survey Position 2: John Harrison-Bryant

Time	Species	Notes
19:49	Common pipistrelle	1 bat entered the site from the north traveling south
19:55	Unknown	No echolocation. 1 bat flying from west to east
19:59	Common pipistrelle	1 bat entered the site from the north traveling south
20:08	Common pipistrelle	Heard not seen
20:21	Common pipistrelle	Heard not seen
The Anabat Walkabout made the following recordings: 17 common pipistrelle recordings between 19:53 and 20:26.		

Table 7.3: Photographs



Photo 1: Tree 1



Photo 2: PRF at Tree 1

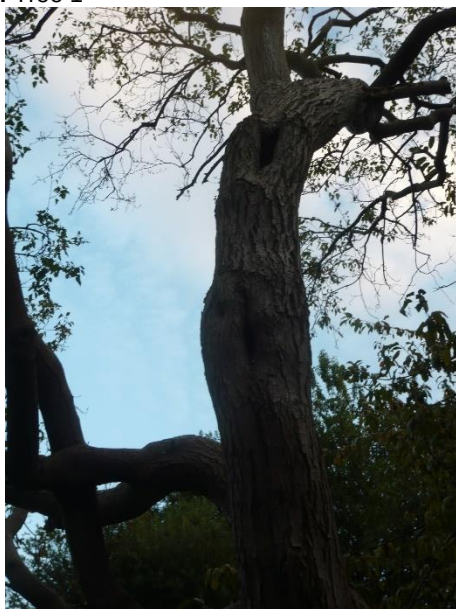


Photo 3: PRF at Tree 1

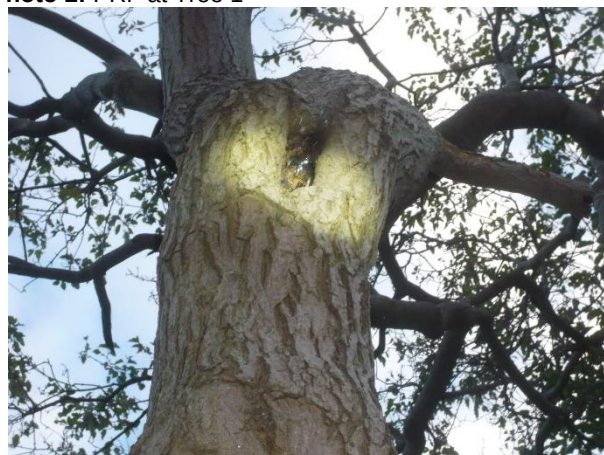


Photo 4: PRF at Tree 1

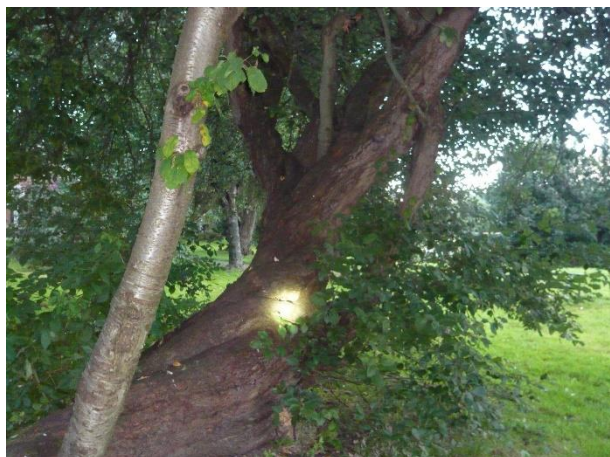


Photo 5: Tree 4



Photo 6: PRF at Tree 4



Photo 7: PRF at Tree 4

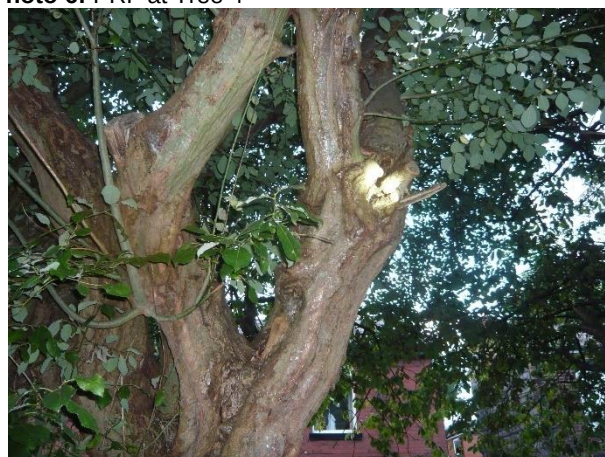


Photo 8: PRF at Tree 4

Figure 1: Plan to Show Location of Trees 1 & 4 and Survey Positions

