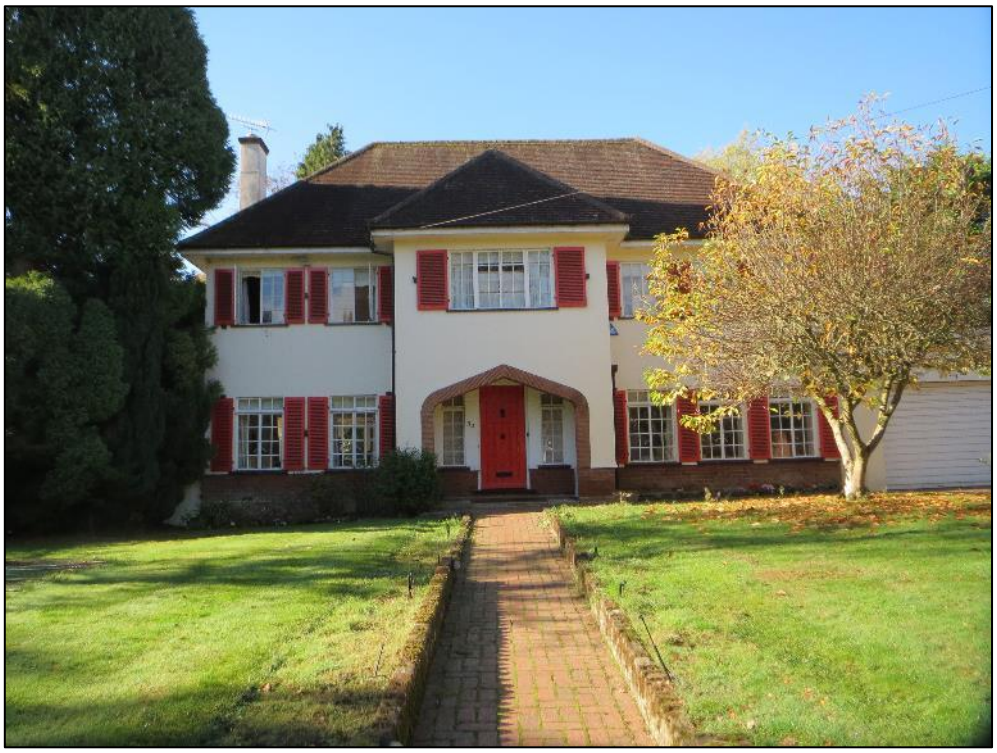
PHASE 1 ECOLOGY SURVEY

32 LINKSWAY,

NORTHWOOD, GREATER LONDON



Commissioned by: **Dholak Estates Ltd**

Report Number: ASW/DEL/105/25/2022
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EXECUTIVE SUMMARY

1. The main protected species potential present within the application site at 32 Linksway, as identified during this ecological investigation, was for: breeding birds, bats and badgers.

2. Nesting bird habitat is present within the development footprint, both in the rear and front gardens. Such bird breeding habitat in trees, shrubs, bushes and hedges as would be expected at any similar site.

3. Breeding birds will therefore only be an issue if any active nests are present within any features to be removed or felled during the works within the proposed development footprint.

4. There is a bat roost present at the southern end of the loft at the house at this property. Pipistrelle (*Pipistrellus* spp.) bat evidence was found, with at least 80 droppings present in the roof void.

5. The bat roost present at the house is considered to be still active and it is likely that this is a daytime roost for the species present. Further investigation will be required on the bats present here, so that this will contribute to any future Bat EPS Mitigation Licence needed from Natural England, before any possible demolition works or soft stripping can commence, if that option is chosen by the client that is.

6. It may need to be checked by eDNA testing if all bat droppings are from pipistrelle bats only and that no other bat species have been present in the loft. Although a further bat survey will clearly be needed next year that should shed further light on the bat species present.

7. No badger (*Meles meles*) setts were found at the property but badger scrapes were present in the rear garden, where badgers had foraged at the grass lawn.

8. There is no reptile potential within the application site, as there are no areas of tall grass, tall herbs or bramble scrub present in the gardens.

9. There is no great crested newt (*Triturus cristatus*) potential present in the survey area at this property due to a lack of tall vegetation and suitable waterbodies at this property.

10. Various key recommendations are set out later in this report, including a follow-up bat emergence survey at the correct time of the tear and relevant best practice guidance being followed at all times by contractors. By following these recommendations, the impact on wildlife will be minimised and all legal obligations will be adhered to by the client.

1. INTRODUCTION

- A Phase 1 Ecology Survey at 32 Linksway, Northwood, Greater London, was undertaken during October 2018, for the client: Dholak Estates Ltd.

- This ecological survey had been requested in regards to potential redevelopment options for this property in the future.

- The main method used for this ecology survey, as well as the full results and the final recommendations can be found within this report.

- Both this survey and the report were undertaken and compiled by Mr Andrew S. Waller, Consultant Ecologist, ASW Ecology.

- Mr Andrew S. Waller MSc BSc (Hons) MCIEEM - has been a Consultant Ecologist since 1997, and has very extensive experience/knowledge of protected wildlife species/issues including bats, for which he is fully licensed to survey throughout England by Natural England for consultancy purposes (Bat Class 2 Licence Registration Number: 2015-15703-CLS-CLS). He also has Natural England survey licences for great crested newts and barn owls. He has been studying wildlife in general for 37 years and bats for 25 years. He is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

2. METHODOLOGY

2.1 Phase 1 Ecology Survey method

- A daytime based Phase 1 Ecology Survey was undertaken at 32 Linksway, on 19/10/2018, by a qualified and experienced Consultant Ecologist and an assistant.

- The method used for assessing habitat types followed that outlined by the Nature Conservancy Council Phase 1 survey methodology (JNCC, 1993). Please see Section 3.9 for the habitats listed from the site and the relevant codes given to these.

- Weather conditions were very good and visibility was excellent on the single survey visit. During this visit, the application site was walked and assessed in detail for its suitability for various protected wildlife species and habitats.

- The focus on habitats and protected species potential included on bats, badgers, reptiles, amphibians and breeding birds in particular.

- The buildings and trees on site were assessed for bat roost potential, in particular, as part of this wider survey, with the loft of the house searched for bats and any bat evidence.

- Site photographs were taken as for reference, and are included at the end of this detailed survey report in Appendix 1.

2.2 Survey constraints

- The only constraint to this daytime based assessment was the timing of this study, where it was only possible to survey during the Autumn months, for example, due to the commissioning of this study.

- However, given the actual survey results and the managed habitat features present, this is seen as a minor constraint only, since it is not possible to survey any site all year round.

- As always though, without taking into account any further active surveying or monitoring, this study can only provide a “snapshot” of the potential presence of protected wildlife species at the site during the time of the survey visit.

3. SURVEY RESULTS

3.1 Birds

- No active bird nests were found at the application site at 32 Linksway. Although, there was the potential for concealed bird nests to be present, especially old nests from earlier in the Spring, when birds are nesting.

- Bird species seen or heard at the application site or closeby during the two visits included robin, jay, magpie and carrion crow.

- It is highly unlikely though that any rare or notable breeding species could be nesting at this site.

- The application site does have breeding bird potential as would be expected, within the large rear garden, such as trees, bushes, shrubs and hedges, which provide suitable nesting bird habitat structure.

- More information on this can be found in the Recommendations section of this report.

3.2 Bats

3.2.1 Assessment of buildings – 19/10/2018 – 32 Linksway

Building description:	• House: This is a detached, large, two storey house, with pitched roof and chimney. Roof and ridge tiles are present as are soffit boxes • Summerhouse: Small structure in rear garden, with pitched roof, is open plan inside, has roof and ridge tiles • Sheds (x3): Wooden sheds in the front and rear gardens, with flat roofs
External bat survey	• House: Crevices noted under some roof tiles and ridge tiles. The soffit boxes are sealed with no obvious gaps noted • Summerhouse: Odd crevice noted only • Sheds (x3): No crevices noted
Internal bat survey	• House: The loft has two compartments in total, with the largest having been boarded out completely. The largest room has the water tank and has full access. There is a small second compartment, which is unconverted. This small compartment could not be entered fully as there is a weak floor present. Tight boarding and webs

	present in this small compartment, but bats have clearly accessed somehow into this southern end of the loft • Summerhouse: No interest for wildlife and too illuminated by natural daylight • Sheds (x3): Webs inside and no wildlife interest
Bat evidence present	• House: 80+ pipistrelle bat droppings found at the south end of the roof void, where there is a compartment with a door. The droppings are mainly located near the door and in the centre. From past few years and may include some small juvenile bat droppings too • Summerhouse: None • Sheds (x3): None
Other wildlife evidence present	• House: Five old wasp nests in the loft and dead wasps too • Summerhouse: None • Sheds (x3): None
Overall bat roost grading for the buildings	• House: **CONFIRMED BAT ROOST** • Summerhouse: **LOW** • Sheds (x3): **NIL**

3.3 Badger

- There were no badger setts present at the application site, during the period of the survey visits.

- Badgers are though visiting the rear garden, as part of their movements through local gardens, as badger scrapes were found in this garden eg on lawn and at wooded end of garden. They were also seen as recently as on 18/10/2018 by the current tenants.

- Although there was no other badger evidence found at the property, it is known that badgers are visiting local gardens along Linksway, from surveys at other sites along this road.

- However, it is unlikely that local badgers would be impacted from the proposed development at this property, especially if best practice guidance is followed at all times.

3.4 Reptiles

- There is no reptile potential present in the managed gardens at this property, with no tall grassland and no tall herbs present.

- There is also no bramble scrub present for foraging or sheltering reptile species.

- Both slow-worm (*Anguis fragilis*) and grass snake (*Natrix natrix*) are known to be present at the nearby Ruislip Woods complex but with no known records at this property.

- Based though on the survey results, reptiles should not be an issue in relation to the development proposal here.

3.5 Great crested newts

- There is no great crested newt potential present in these managed gardens, with no tall grassland and no tall herbs present. There is also no bramble scrub present for foraging or sheltering newts.

- There are no suitable ponds or ditches present at the property so this protected amphibian species cannot breed here.

- There is a small concrete rectangle pond at the front lawn but this has no potential for newts, as it is stocked with fish and has sides where newts cannot climb out. It is therefore too steep sided to be viable for amphibians.

- Great crested newts are known to be present at the nearby Ruislip Woods complex but with no known records at this property.

- Based on the survey results, great crested newts should not be an issue in relation to the development proposal here.

3.6 Hedgehogs

- Hedgehogs (*Erinaceus europaeus*) may be present in the wider area but there were no field signs such as droppings to suggest they have visited this property. Potential foraging habitat and sheltering opportunities are present in the rear garden though as would be expected in many similar gardens.

- Hedgehogs are a Priority Species in England within the UK Biodiversity Action Plan.

- Therefore, it is still vital that hedgehogs are not impacted during the proposed development related works. This should include no uncovered hole during the works and the restoration of any habitat lost by new habitat creation.

3.7 Hazel dormice

- Hazel dormice (*Muscardinus avellanarius*) would not be expected at the property as there would likely be no connectivity at all to the nearest population of this species.

- Also, the existing garden habitats are not very suitable for this protected mammal species, although there is a small section of wooded habitat at the end of the rear garden.

- No hazel dormice are known to be present at the nearby Ruislip Woods complex.

3.8 Invasive plant species

- Rhododendron and cherry laurel are present within the application site, including at the rear garden.

- Snowberry, another invasive plant species, is present at the front garden at this property.

3.9 Habitats present

- The main habitat types present within the survey area at this site are the following, with the relevant JNCC habitat codes included:

  (a) Pond – G1 – Ornamental features at front garden.
  (b) Amenity grassland – J1.2 – This feature has low ecological value and is found at the short mown rear lawn plus to a lesser extent at the front garden. Plants growing within and at the boundary of the short grass lawns include grape vine, ornamental plantings, bramble, fig, roses, ivy and rosemary. Trees at the site boundaries plus denser end to the back garden include holly, English oak, conifer spp., yew, ash, hornbeam, leylandii and silver birch. There is a large single English oak tree in the middle of the rear lawn.
  (c) Introduced shrubs – J1.4 – Includes cherry laurel (front and rear gardens) and rhododendron (rear garden) plus snowberry (front garden).
  (d) Hedge – J2.1.2 – Species poor as includes cherry laurel.
  (e) Buildings and associated hardstanding – J3.6 – Includes the main house, three wooden sheds and a summerhouse like structure.

3.10 Desktop study

- The ASW Ecology wildlife database was used for all previous wildlife records for the area around the survey site and nearby eg within a 2km radius, as this has collated records from more than 37 years for the UK. Please note that no formal county biological data search was requested by the client. Magic.gov.uk was also used for any nearby designated sites as was Google for further info on wildlife in the area.

3.10.1 Wildlife EPS Licences

- Nine licences issued within 2km of the application site, for bats and also great crested newts:
- Bat - CPIP: 27/04/2017-31/08/2018. TQ08489069, abutting polygon due west.
- Bat - CPIP: 01/09/2016-31/08/2021. TQ08389081, abutting polygon due west.
- Bat - SPIP: 01/02/2013-30/09/2014. TQ08039045, less than 650m WSW at the northern boundary of Ruislip Woods NNR.
- Bat - CPIP: 01/07/2017-31/08/2017. TQ09309151, less than 995m NE by Northwood station.
- GCN: 26/04/2013-30/06/2015. TQ08698940. 1.35km due south by Ruislip Common.
- Bat - BLE/CPIP/SPIP: 07/10/2015-24/12/2017. TQ09799198. 1.7km NE in Northwood.
- Bat - SPIP: 18/01/2016-17/01/2021. TQ08209260. 1.85km due north in Northwood.
- Bat - BLE/CPIP: 01/10/2017-30/09/2018. TQ07319240. 2km NW in Batchworth Heath.
- Bat - BLE/CPIP/SPIP: 16/06/2016-15/06/2021. TQ06708991. 2km SW in Harefield.

3.10.2 Wildlife Records

A **Google search** revealed the following references to species present at Ruislip Woods, within 2km of the application site:

- Slow-worm, grass snake, great crested newt, hedgehog, badger, Daubenton's bat, noctule, common pipistrelle
- Also, smooth newt, palmate newt, common frog, common toad, stoat and mink

These are all listed on the London Borough of Hillingdon website for Ruislip Woods, which they own and manage and which northern boundary lies only 300m from the centre of the postcode polygon for this site.

The ASW Ecology database has previous bat records within 1km of the application site for: serotine (2015), soprano pipistrelle (2018) and common pipistrelle (2013, 2015 and 2018).

3.10.3 Statutory Sites

Regarding **statutory designations**, here's what Magic revealed:

- Within Nitrate Vulnerable Zones 2017 for Surface Water.
- Within SSSI Impact Risk Zones (due to Ruislip Woods SSSI).

- **NNRs**:

- Ruislip Woods NNR: 295.48ha area all south of the polygon. Nearest part within 325m.

- **SSSIs**:
  - Ruislip Woods SSSI: same area as Ruislip Woods NNR plus an additional parcel making a total of 307.45ha area, all due south of the polygon. Nearest part also within 325m.
- **LNRs**:
  - Batchworth Heath LNR: 3.97ha area 1.8km NNW.
  - Oxhey Woods LNR: 100.21ha area 2.3km NE.

3.10.4 Non-statutory Sites

For **non-statutory designations**:

- Within Drinking Water Safeguard Zones (Surface Water).
- Within Source Protection Zones merged, Zone 1 Inner & Zone 2 Outer.

3.10.5 Priority Habitats

- Grassland - **Lowland Dry Acid Grassland** - one parcel 650m due south in eastern part of Copse Wood, total area c550ha.

- Woodland:

  Ancient & Semi-Natural Woodland: basically within 325m of the survey polygon = all the Ruislip Woods SSSI footprint plus some more small parcels to the west and to the east further away at Oxhey Woods and Pinner Park Woods.

  Ancient Replanted Woodland: mainly to the west at Bishop's Wood Country Park, to the east at Oxhey Woods, and a tiny bit in Ruislip Woods which at 1.4km SW is the closest parcel.

  Deciduous Woodland: lots of parcels all round the site, most notably south at Ruislip Woods SSSI, plus some abutting the polygon itself.

  Traditional Orchards: 2 parcels: closest = 1.2km SE at Northwood Hills cemetery, 0.25ha area. Also = 1.7km SSE in Northwood Hills, 0.61ha area.

  Woodpasture & Parkland: 2 parcels: closest = 1.1km due south at Ruislip Woods NNR very large but area not mappable. Also, 1.9km due north in Moor Park comprising Moor Park Golf Club and Rickmansworth Golf Club, again big but cannot be mapped.

4. CONCLUSIONS

4.1 Significance of the survey results

- The main protected species potential present within the application site at 32 Linksway, as identified during this ecological investigation, was for: breeding birds, bats and badgers.

- Nesting bird habitat is present within the development footprint, both in the rear and front gardens. Such bird breeding habitat in trees, shrubs, bushes and hedges as would be expected at any similar site.

- Breeding birds will therefore only be an issue if any active nests are present within any features to be removed or felled during the works within the proposed development footprint.

- There is a bat roost present at the southern end of the loft at the house at this property. Pipistrelle bat evidence was found, with at least 80 droppings present in the roof void.

- The bat roost present at the house is considered to be still active and it is likely that this is a daytime roost for the species present. The bat droppings were concentrated near the door in the loft and in the centre of the small unconverted compartment. The droppings were from the past few years most likely and included some very small specimens, which could be from juvenile bats.

- Further investigation will be required on the bats present here, so that this will contribute to any future Bat EPS Mitigation Licence needed from Natural England, before any possible demolition works or soft stripping can commence, if that option is chosen by the client that is.

- No badger setts were found at the property but badger scrapes were present in the rear garden, where badgers had foraged at the grass lawn. This was not a surprise given that badgers are known already from the gardens along Linksway and were seen by the tenants, the night before the actual survey visit.

- There is no reptile potential within the application site, as there are no areas of tall grass, tall herbs or bramble scrub present in the gardens.

- There is no great crested newt potential present in the survey area at this property due to a lack of tall vegetation and suitable waterbodies at this property.

- The ornamental fish pond at the front garden is unsuitable for great crested newts, since it is well stocked with fish and is too steep sided for any amphibians to leave the pond at any time.

- There were no rare or unusual habitats present either at the application site, which was not unexpected, given that the property is composed mainly of buildings, short mown grass lawn, trees, bushes, shrubs and hedges.

- Recommendations can be found in the next chapter of the report in regards to the actions now required by the client.

4.2 Impact assessment

In the absence of any mitigation measures, the following potential impact status identified from the proposed development related works at 32 Linksway are considered to be:

- **Reptiles:** Without any mitigation, there is no risk of reptiles being injured or killed, during the proposed clearance works within the application site. **Potential impact level: Nil**

- **Great crested newts:** Without any mitigation, there is no risk of newts being injured or killed, during the proposed clearance works within the application site. **Potential impact level: Nil**

- **Bats:** Without any mitigation, a bat roost would be significantly impacted by any proposed demolition of the existing house. A pipistrelle bat species would be at risk of being injured or killed by any demolition works, and an active bat roost would be destroyed. However, this risk will be removed by the potential works being done under a Bat EPM Licence and suitable mitigation used at all times. **Potential impact level: High**

- **Badgers:** Without any mitigation, there is no possibility that any badgers could be disturbed by any future development related works at the application site. There is no risk of any badgers tunnels being collapsed or any setts being damaged in any way. **Potential impact level: Nil**

- **Nesting birds:** Without any mitigation, potential nesting bird species could be impacted if any trees, shrubs or bushes are to be removed within the development footprint as part of any future clearance works. Bird nests may be present especially in dense vegetation and could be disturbed or accidentally damaged or destroyed. However, this risk will of course be eliminated by mitigation options such as a breeding bird watching brief and the correct timing of the stated works. **Potential impact level: Moderate/High**

4.3 Summary of the legal protection of relevant wildlife in the UK (Simplified summary only of the legislation – please see other texts for full details)

4.3.1 THE LEGAL PROTECTION OF REPTILES IN ENGLAND AND WALES

In the UK, reptiles are legally protected from intentional killing and injuring, as well as against sale too under the Wildlife and Countryside Act 1981 (as amended). The offences stated may be absolute, intentional, deliberate or reckless (English Nature, 2004).

This means that reasonable steps must always be taken to avoid killing or injuring all reptiles if they are known to be present within the development footprint. A criminal conviction for injuring or killing reptiles could result in large fines being imposed, imprisonment and/or seizure of the equipment involved.

4.3.2 THE LEGAL PROTECTION OF BATS IN ENGLAND AND WALES

Introduction

All species of bats in England and Wales are protected by law. Their legal protection derives from two sources:

- the strict species protection provisions of the EU Habitats Directive as implemented in England and Wales by Part 3 of the Conservation of Habitats and Species Regulations 2010 (the **"2010 Regulations"**); and

- Part 1 of the Wildlife and Countryside Act 1981 (as amended).

Conservation of Habitats and Species Regulations 2010 ("2010 Regulations")

The 2010 Regulations came into force on 1 April 2010. They replace the previously applicable regulations (Conservation (Natural Habitats, &c) Regulations 1994) in relation to England and Wales. The 2010 Regulations are the principal means by which the EU Habitats Directive is transposed in England and Wales.

The Regulations contain a number of Parts but Part 3 sets out the protection to be afforded to "European Protected Species" ("EPS"), which includes all species of British bats. The list also includes other species which are rare on a European scale, such as great crested newts, otters and dormice.

Under Part 3 of the 2010 Regulations both bats themselves and their "breeding sites and resting places" (most commonly their roosts) are protected.

Part 3 provides that it is a criminal offence to do the following (note that this is not an exhaustive list of all offences but rather a list of offences which will be of most relevance to developers):

a. to damage or destroy a breeding site or resting place of a bat (Reg 41(1)(d));

b. to deliberately capture, injure or kill any bat (Reg 41(1)(a));

c. to deliberately disturb bats [note, wherever they are occurring] (Reg 41(1)(b)), in particular:

   i. any disturbance of bats which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young (Reg 41(2)(a)(i)); or

   ii. any disturbance of bats which is likely to impair their ability to hibernate or migrate (Reg 41(2)(a)(ii)); or

   iii. any disturbance of bats which is likely to affect significantly the local distribution or abundance of the species to which they belong (Reg 41(2)(b));

d. to have in one's possession or to control or to transport or to sell or exchange or offer to sell or exchange any live or dead bat or part of a bat which has been taken from the wild; or any part of, or anything derived from, a bat or any part of a bat (Reg 41(3) and (4)); and

e. to attempt any of the above (Reg 116(1)).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of the company may also be prosecuted if the offence has been committed with their consent or connivance, or is attributable to their neglect (Reg 124).

Wildlife and Countryside Act 1981 ("WCA 1981")

The WCA 1981 protects a wide range of animals, plants and habitats in the UK. All British bat species are afforded protection under Part 1 of the WCA 1981, in addition to the protection they have under the 2010 Regulations.

As regards England and Wales the following offences apply to protect bats under the W&CA 1981:

a. to intentionally or recklessly disturb any bat while it is occupying a structure of place which it uses for shelter or protection (s9(4)(b) WCA 1981);

b. to intentionally or recklessly obstruct access to any structure or place which any bat uses for shelter or protection (s9(4)(c) WCA 1981);

c. attempting either of the above (s18(1) WCA 1981).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of that company may also be prosecuted if the offence has been committed with their consent or connivance or is attributable to their neglect (s69(1) WCA 1981).

4.3.3 THE LEGAL PROTECTION OF BIRDS IN ENGLAND AND WALES

All birds have the following legal protection (although there are exceptions for game birds, some waterfowl and designated pest species). This is listed below.

All birds, their eggs and nests are protected by law under the Wildlife and Countryside Act 1981 (as amended). It is an offence to kill, injure or take any wild bird, or to take or destroy their eggs. It is also illegal to take, damage or destroy the nest of any wild bird while it is in use or being built (RSPB, 2001). No provisions can be made for the destruction of occupied bird nests, eggs, or young for development purposes, and no licences are available for this purpose.

Certain rare and/or vulnerable bird species such black redstart, barn owl, red kite, peregrine and hobby are specially protected under Schedule 1, and have the following additional legal protection:

- It is an offence to intentionally (or recklessly, in England and Wales only) disturb any wild bird listed on Schedule 1 whilst it is nest building or is at (or near) a nest with eggs or young; or disturb the dependent young of such a bird.

4.3.4 THE LEGAL PROTECTION OF GREAT CRESTED NEWTS IN ENGLAND AND WALES

Great crested newts have strong legal protection under both British and European legislation. This is briefly summarised below:

Great crested newts are legally protected under provisions within the Wildlife and Countryside Act 1981 (as amended), the Conservation Regulations 2010 and the Countryside and Rights of Way Act 2000. Taken together, it is illegal to:

- **Intentionally or deliberately capture or kill, or intentionally injure great crested newts.**
- **Deliberately disturb great crested newts or intentionally or recklessly disturb them in a place used for shelter or protection.**
- **Damage or destroy a breeding site or resting place.**
- **Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.**
- **Possess a great crested newt, or any part of it, unless acquired lawfully.**
- **Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.**

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate.

4.3.5 THE LEGAL PROTECTION OF BADGERS IN ENGLAND AND WALES

In the UK, the Protection of Badgers Act 1992, is the most relevant to this mammal species. Under this legislation, it is illegal to injure, kill or take any badger or attempt to do so without a special licence. It is also illegal to dig for a badger, and to damage, destroy or obstruct access

to any part of a badger sett, or to allow a dog to enter the sett, or to disturb a badger whilst it is occupying a sett.

Certain offences can be caused by reckless, intentional or wilful behaviour, and the Act should always be read in detail for the exact wording.

Penalties for such offences can be severe, and can include fines of up to £5,000 per offence eg per badger sett or per badger, and/or up to six months imprisonment.

5. RECOMMENDATIONS

5.1 Requirement for a bat emergence survey of the house

- Due to the presence of a bat roost at the existing house, it is recommended that a standard bat emergence survey is undertaken at the application site, in suitable weather conditions.

- Such a follow-up survey would adhere to current best practice for surveying bats by the Bat Conservation Trust (BCT, 2016) where a site such as this warrants a specialist bat survey of at least three night based survey visits by experienced bat surveyors with bat detectors.

- This bat survey should be undertaken between late April to late September, when bats are most active. During late April onwards, weather conditions can be more suitable for such surveying, when hungry bats can emerge earlier than normal from their Spring based roosts.

- Such a survey would focus on how many bats are using the roost present at the house; the type of bat roosts present; and where the main bat access points are. The survey would also focus on any key bat commuting routes at the site as well as any key foraging areas.

- This bat survey visit should use ideally a minimum of two experienced bat surveyors with bat detectors, and begin before sunset and last for approximately 2 hours. Or any dawn survey visit should start 2 hours before sunrise.

- **The bat emergence survey next Spring/Summer will provide key information for any future Bat EPS Mitigation Licence that will need to be applied from Natural England, before any potential demolition can commence.**

- **It may need to be checked by eDNA testing if all bat droppings present in the loft are from pipistrelle bats only and that no other bat species have been present in the loft.**

5.2 Best practice guidelines – breeding birds and development

- As per any development related site, the general advice is that no vegetation eg trees, bushes, shrubs, hedges, bramble scrub or dense ivy cover should be removed during the bird nesting season as all bird nests are fully protected by law, and this includes whilst a nest is being built by the adult birds. This includes both buildings and bird boxes, where nesting birds have been shown to be present.

- If any nests are present within the boundaries of the proposed development footprint during the clearance phase, then these must be left alone until the young birds have fully fledged from the nest and no further breeding attempts are to take place.

- The bird nesting season in the UK, currently runs mainly from late January to September, but sometimes birds can start breeding before or after this period.

- Therefore September/October to January can be the best months for such vegetation clearance works, if this is to occur. Although it is possible for a consultant ecologist to

physically search any trees, hedges, bushes and shrubs at a site to ensure no hidden nests are present beforehand.

5.3 Best practice guidance – badgers and development

- It is recommended that there should be a badger watch brief utilised on site by contractors at all times during any applicable works in the future at 32 Linksway. Even though there are no setts at this property, it is always possible that there could be new badger activity in the area, after this survey visit.

- This should include awareness by contractors of the possible presence of badgers entering the construction zone. Therefore, all holes, ditches and other excavations must be either covered overnight rather than left open. Plus the use of a mammal ladder eg one to two wooden planks, installed inside the hole overnight so any badgers can escape.

5.4 Formal ecological data search requirement

- It is recommended that there should be a formal ecological data search undertaken for this property by the County Biological Records Centre eg GIGL. Such a search will be more advanced than the limited desktop study in this report, with far more records available.

- Such wildlife records may help determine which further protected wildlife species are present in the 2km radius around the site.

5.5 Removal of invasive plant species from the property

- **Cherry laurel** – This invasive plant species should be reduced or removed from the property as per current best practice guidance.

- **Rhododendron** – This invasive plant species should be reduced or removed from the property as per current best practice guidance.

- **Snowberry** – This invasive plant species should be reduced or removed from the property as per current best practice guidance.

- It is recommended that the above non-native shrubs should be replaced with native plantings, which will benefit the local biodiversity at the property. Please see Section 5.7 of this report with suggestions.

5.6 Management of the grass lawns at the property

- It will be very important that the existing grass lawns at the property are continued to be mown very short and on a regular basis by the client.

- This would remove any possibility of reptiles using any unmanaged grassland for shelter or foraging purposes, and is a reasonable step to avoid any possible impact on these species.

- No reptiles are thought to be present at this property but such species could be present at the nearby Copse Wood or the Northwood Golf Course.

- This pro-active approach should continue especially up to the end of the development phase and beyond no doubt as part of the normal grassland management at this site.

5.7 Ecological enhancement options for the development

The following are options for the client to consider in regards to enhancing the biodiversity of the site, post clearance. These are options only though and some of these may change such as bat boxes to be put forward, depending on the results of the recommended bat emergence survey of the house and any future Bat EPS Mitigation Licence application.

5.7.1 Wildlife friendly planting

- It would also be advantageous if wildlife friendly planting can be introduced to the new landscaping scheme, by the use of night scented plants, which will attract insects which bats prey on. Native plants should always be chosen ideally, since these species will have the most benefits to wildlife. But the occasional hybrid or exotic would be fine.

- Suitable border plant species can include corn flower, field poppies, mallow, evening primrose, ox-eye daisy, primrose and yarrow.

- Herbs can also be very good for insects and include borage, coriander, fennel, lavender, rosemary and thyme.

- Trees, shrubs and climbers suitable for insects, so to benefit bats, include dog rose, elder, gorse, guilder rose, field maple, hawthorn, blackthorn, hazel, honeysuckle, ivy and jasmine.

- Such plantings will of course benefit the invertebrate populations at the site as well as nesting birds, in regards to new trees and shrubs. Further information can be provided on the above if needed.

5.7.2 Bats and lighting

- It will also be important that there is no new light pollution at the new development scheme and that dark corridors are maintained here for bats. This will mean that bats can continue to use the site despite any new landscaping scheme.

- Lighting can call a vacuum effect at greenspaces, where such artificial light will pull flying insects at night away from areas where bats feed. So adjacent darker areas have less insects for bats to survive on and that affects the life cycles of the insect species.

- Where lighting may be added in the future, if applicable, this this should be bat friendly and adhere to best practice on this aspect. Low pressure sodium lights are better to use than high pressure ones in regards to the impact on bats.

- In regards to the future and current lighting, it would be beneficial for both insect populations and for bats, if any lighting is switched off at the new development scheme well before midnight.

- Light spillage should also be curtailed, as hoods can be used and light should focus on where it is needed. Screening by vegetation can also be used to mitigate the effects of any new lighting.

5.7.3 Bird nesting boxes

- Bird boxes can be installed at the new development scheme in the future and suitable bird box models can be found below.

- This would be a genuine ecological enhancement for this urban site, where not many trees have any suitable cavities for hole nesting birds.

- The 1B Schwegler Nest Box would be a good model to have installed at the site, since a range of birds are present at the site and likely to be in the surrounding area including local gardens. This model would benefit blue and great tits especially.

- At least several nest boxes should be installed at the site and as widely spaced apart as possible. This is appropriate for the size of the site as nest boxes should not be located too close together.

- The NHBS is a good ecological equipment supplier and this nest box model can be purchased from them. The web link for this bat box is:

  http://www.nhbs.com/1b-schwegler-nest-box

- In general, bird boxes should be spaced widely apart, away from bird feeders, quite high up a tree or building (ideally at least three metres up from ground level but higher in urban areas really), facing North to South-east only and away from cats.

- Further nest box models are also available for house sparrows, starlings, wrens and robins.

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(12) RSPB (2001) Wild Birds and the Law. RSPB, Sandy. UK.

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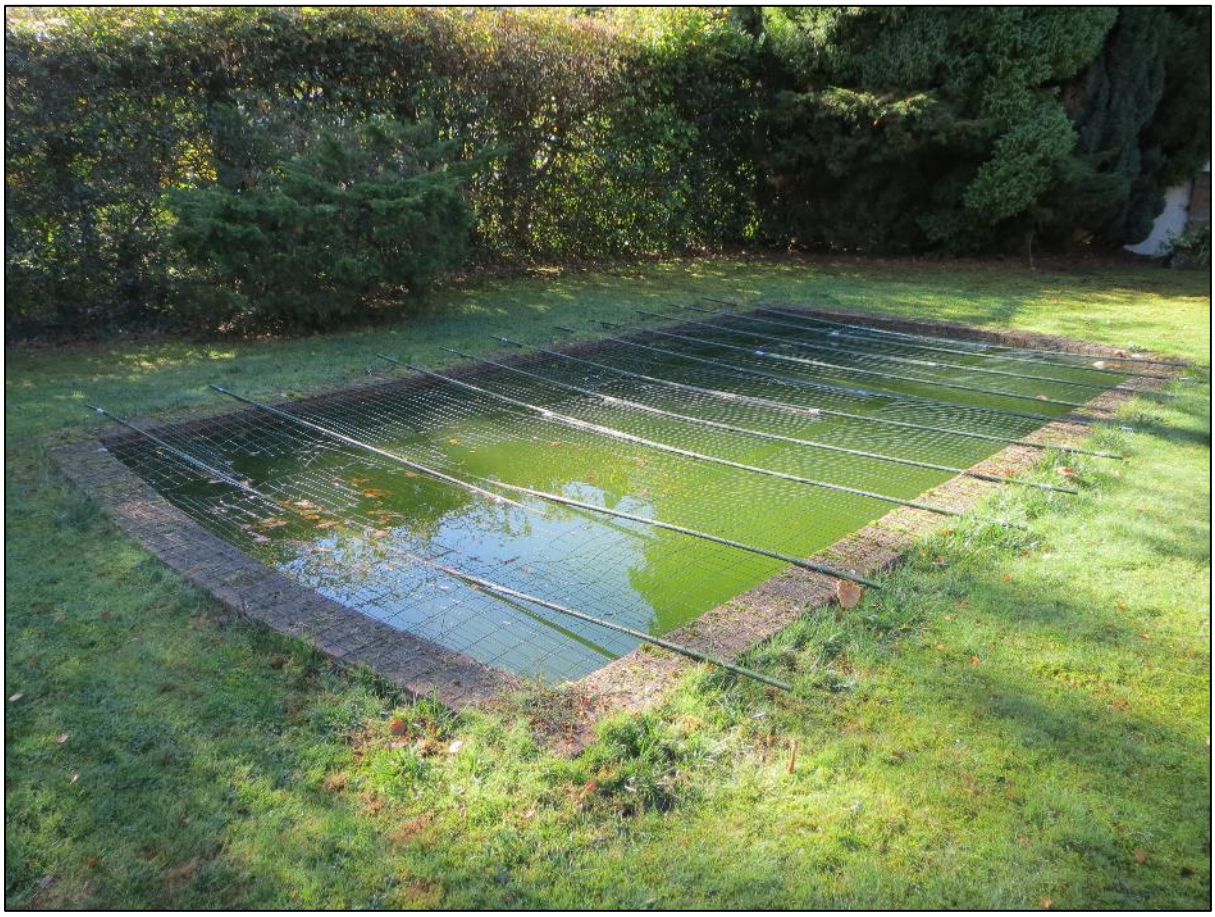
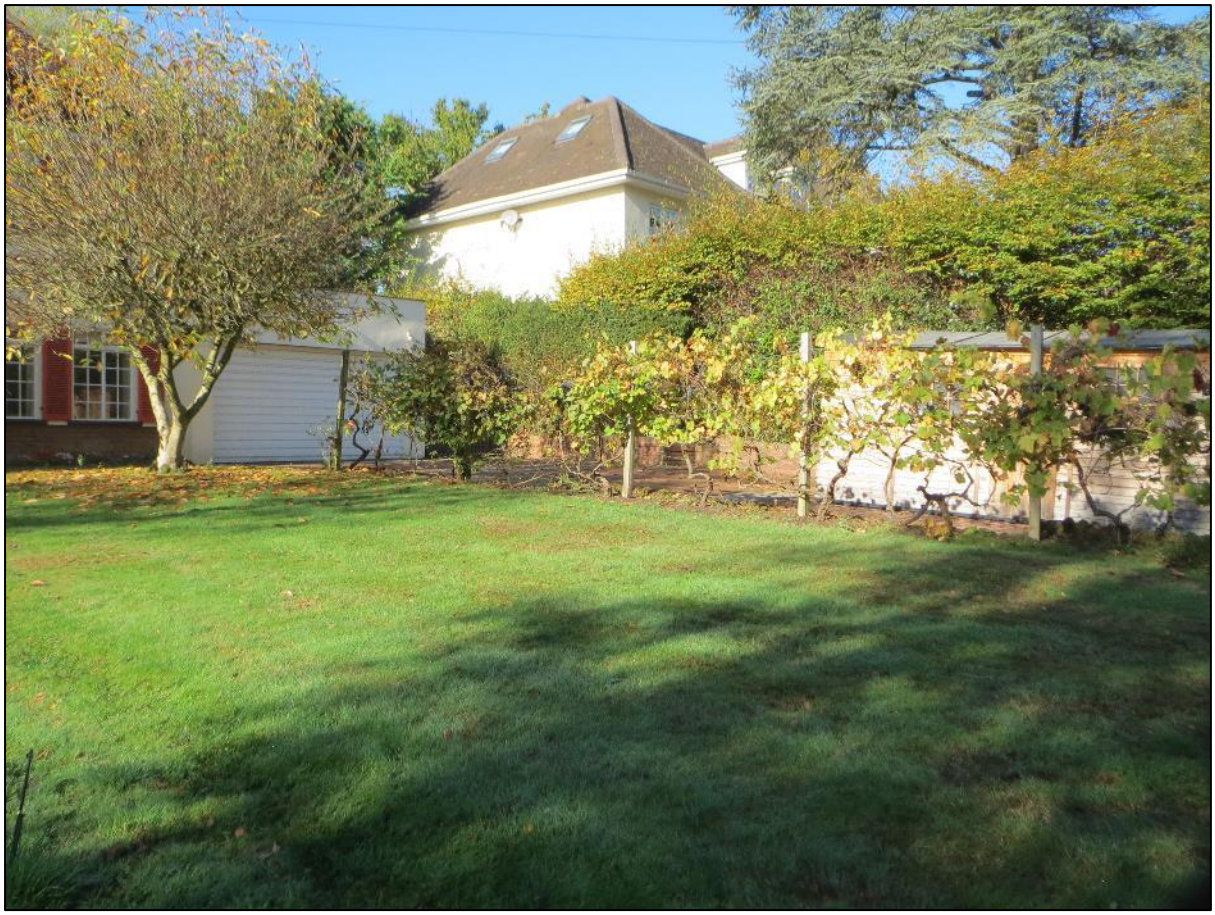
APPENDIX 1

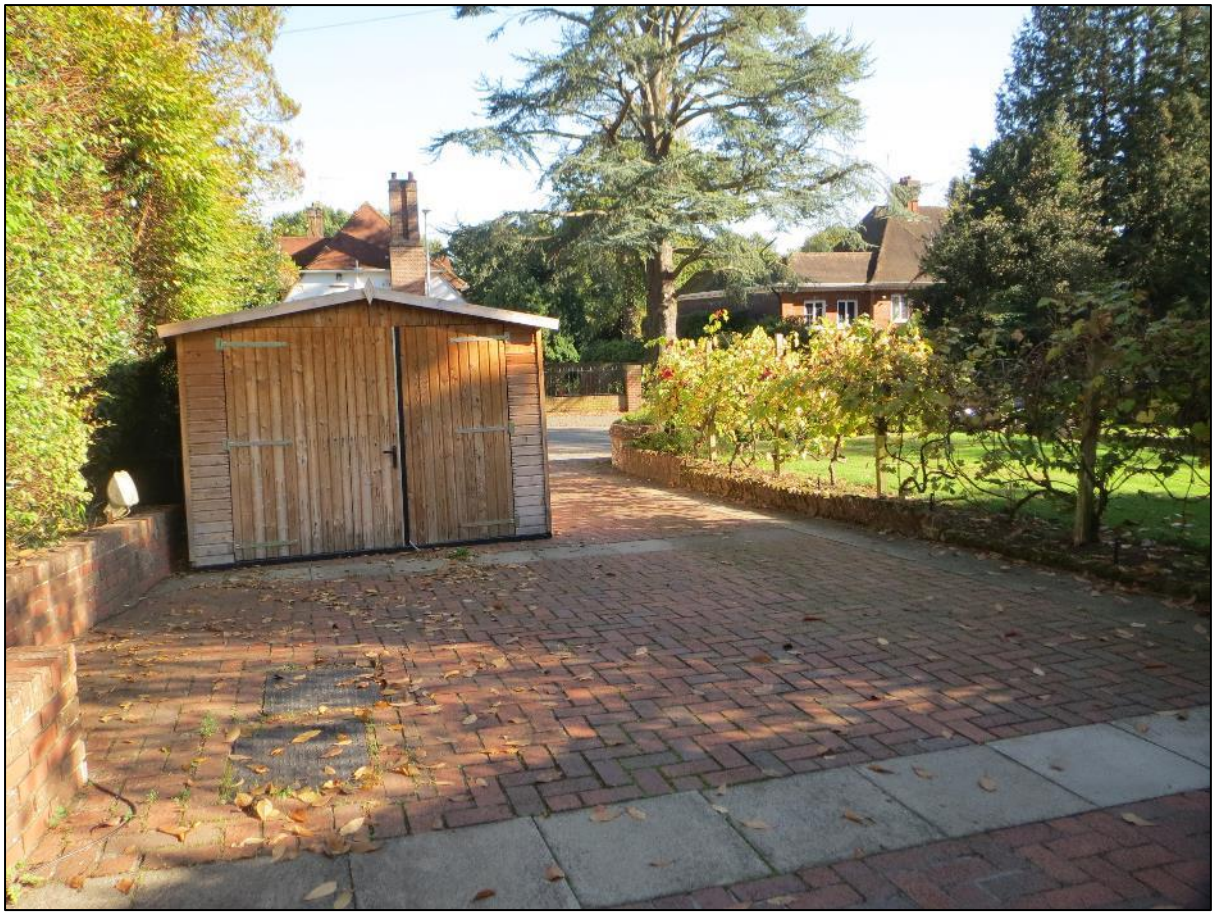
PHOTOGRAPHS A-R



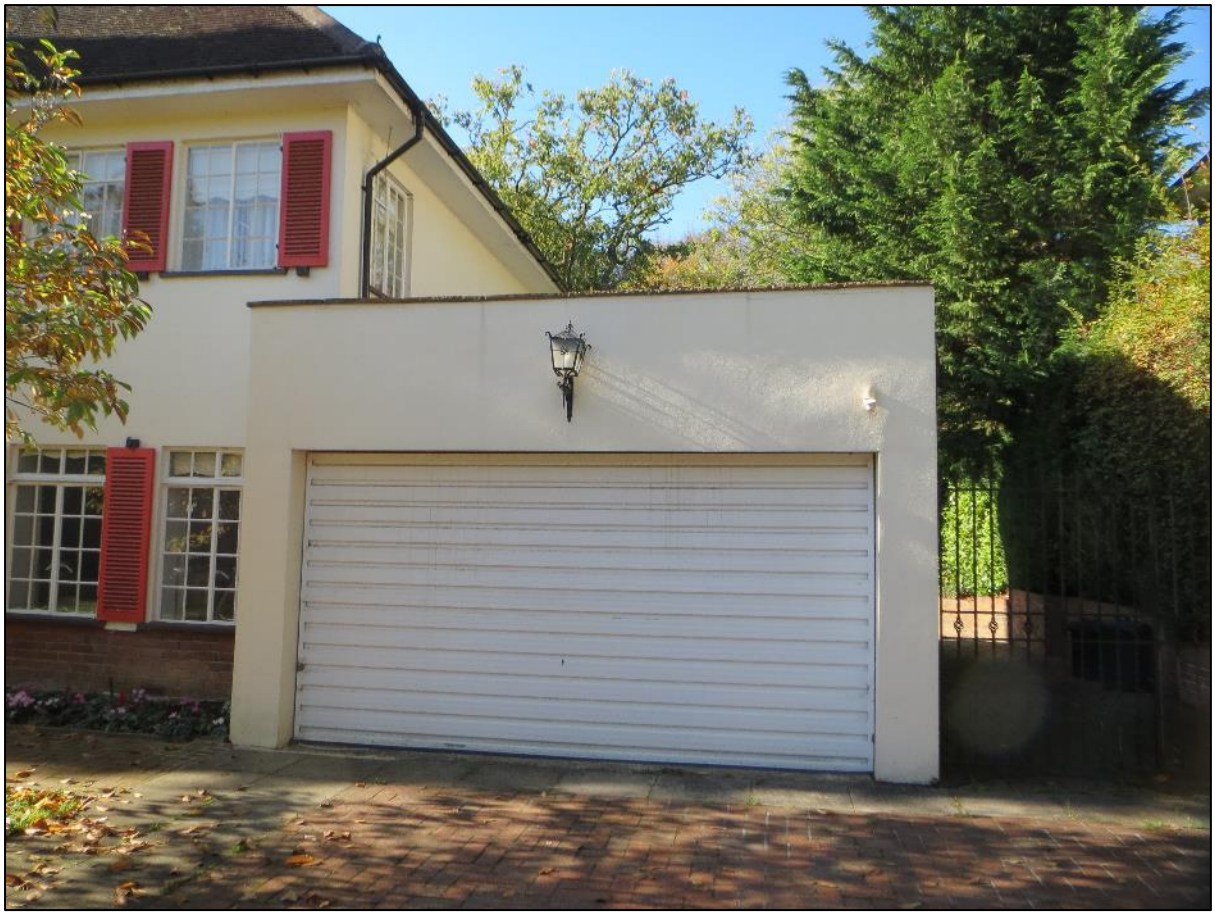
Photograph A
Ornamental pond with no great crested newt potential



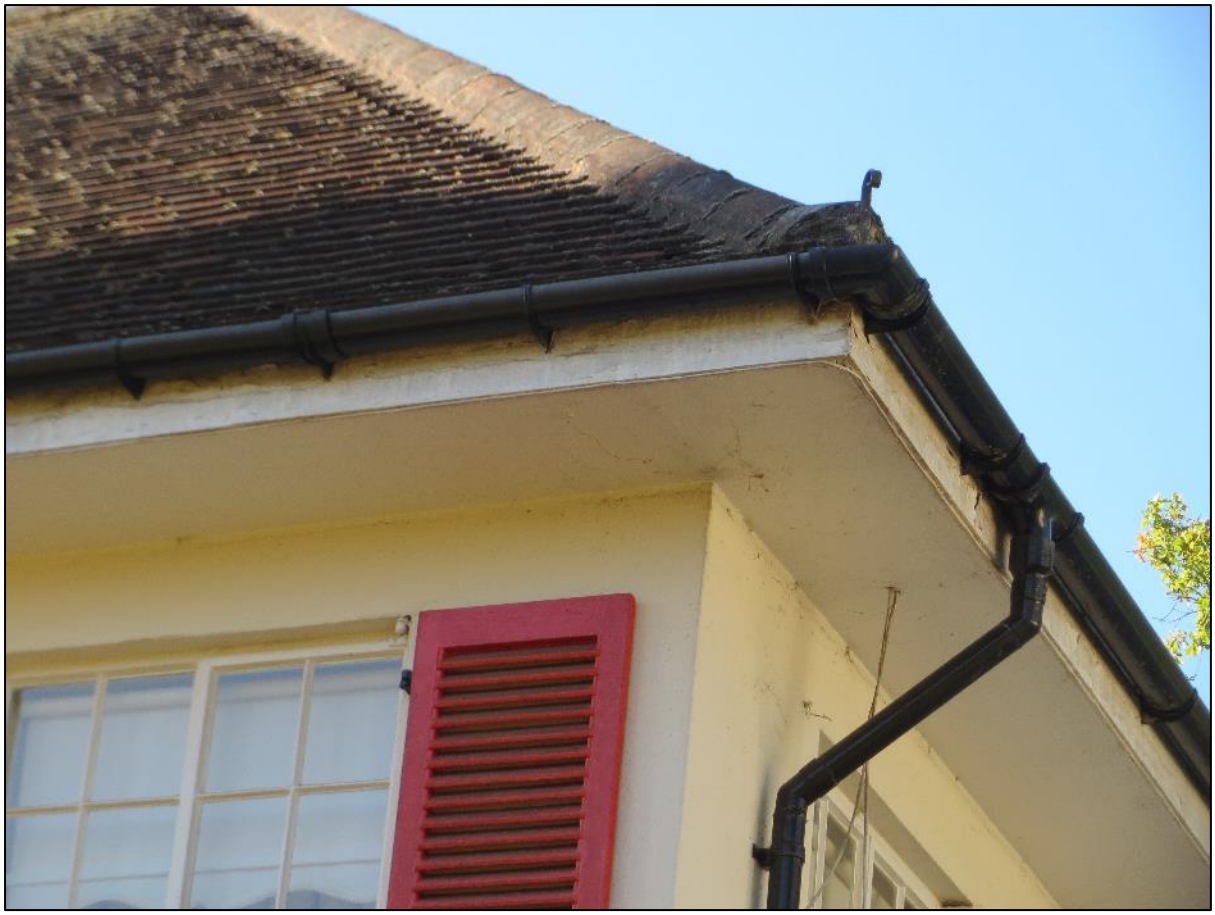
Photograph B
Short grass lawn with low ecological value



Photograph C
Wooden shed and paving with no ecological interest

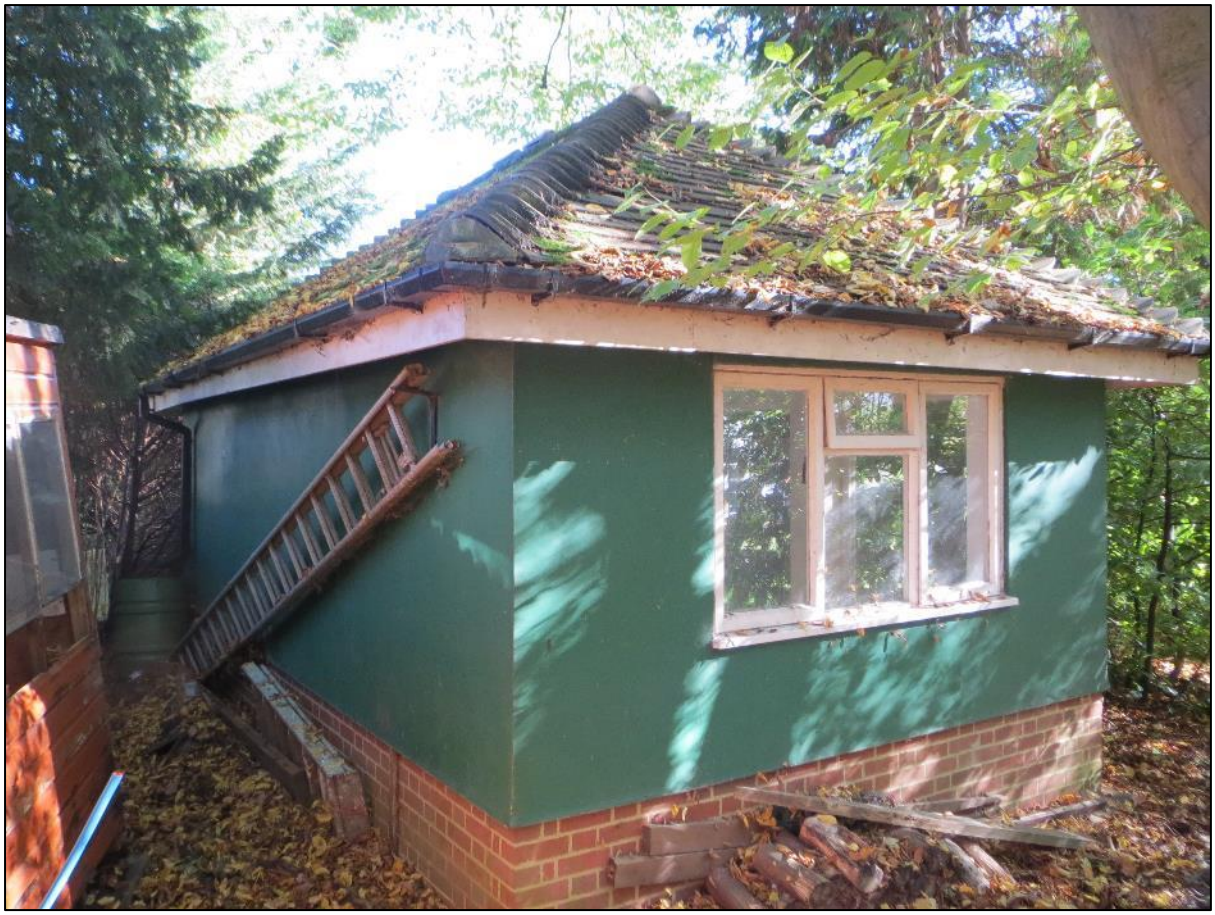


Photograph D
The attached garage had no bat roost potential

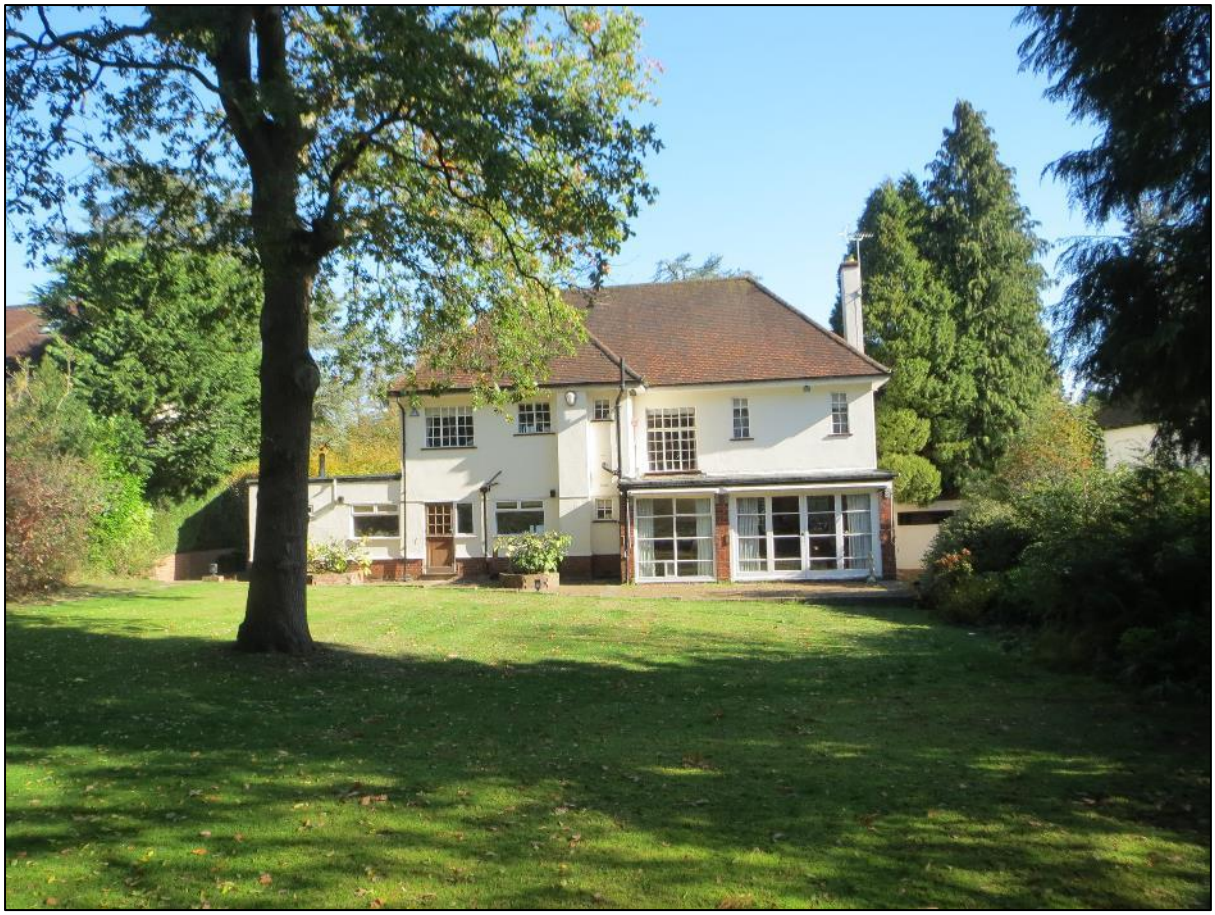


Photograph E
The soffit boxes were well sealed around the house

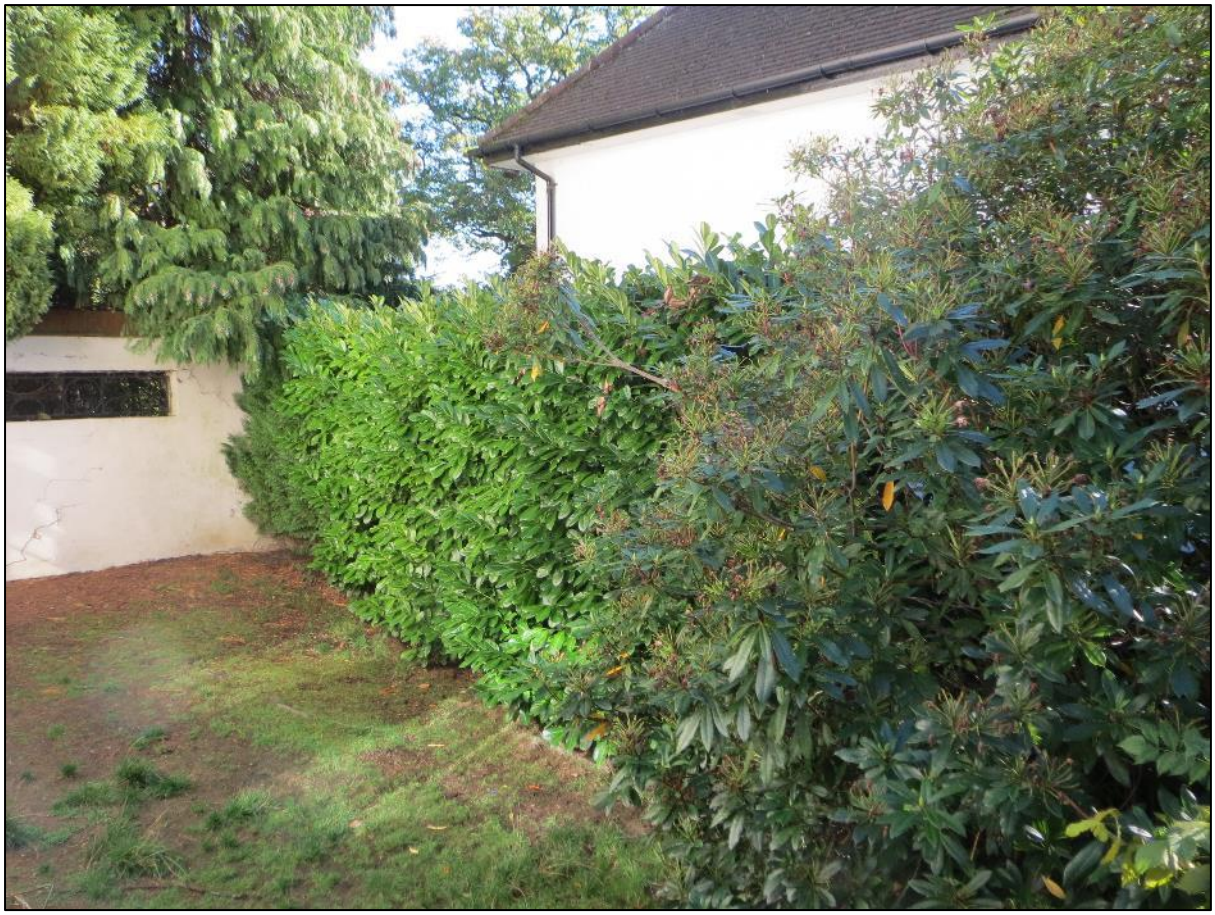
Photograph F
The denser end of the rear garden has a number of trees present and also had some badger scrapes present



Photograph G
The summerhouse like structure had low bat roost potential

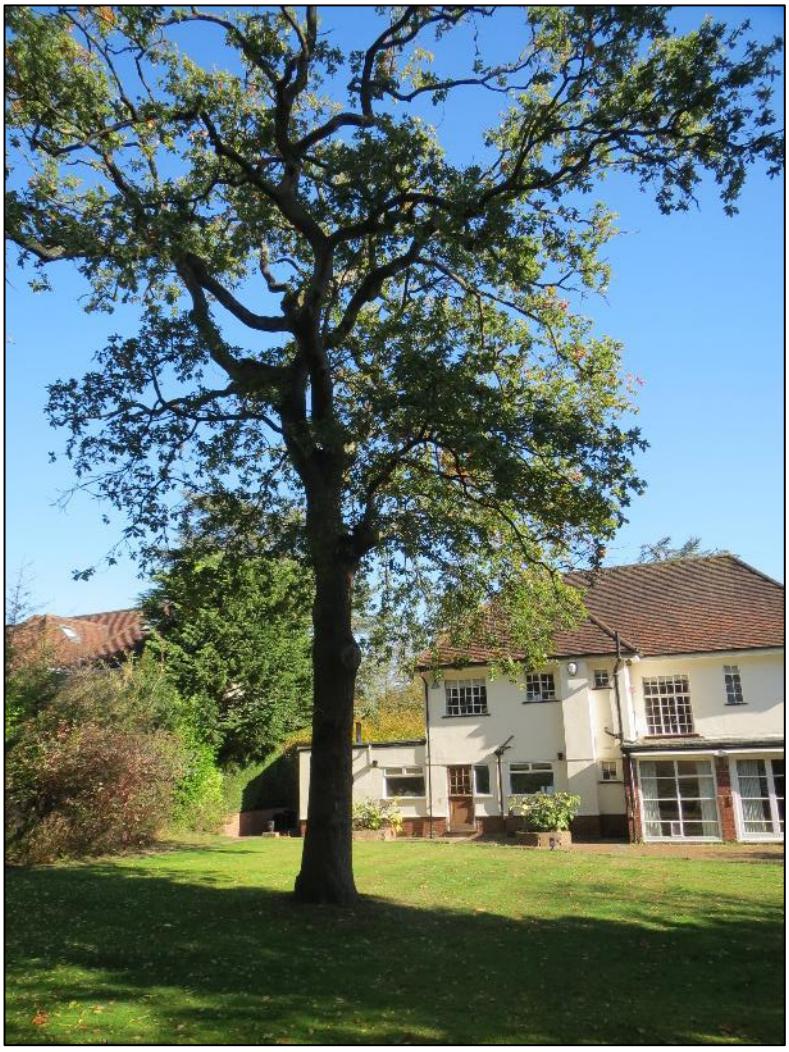


Photograph H
The large rear grass lawn had low ecological value, with no reptile interest as was short mown

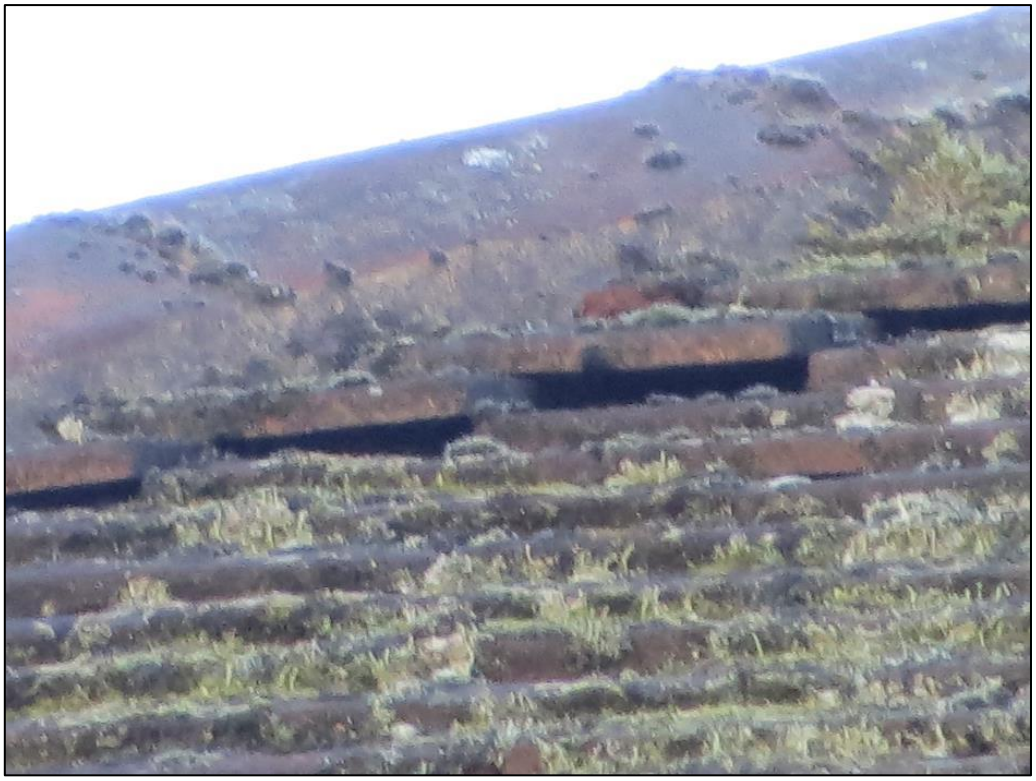


Photograph I
The various shrubs including non-native plantings such as cherry laurel and rhododendron had bird nesting potential

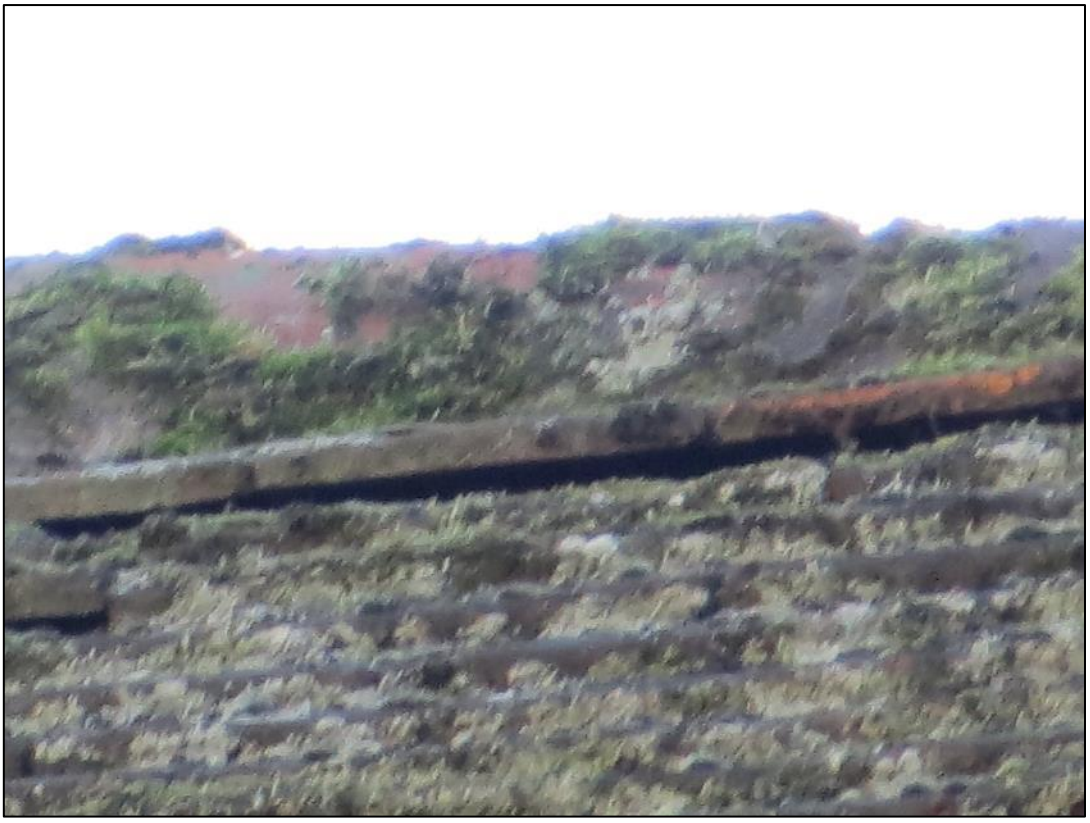
Photograph J
The various trees present including conifers, also had bird nesting potential



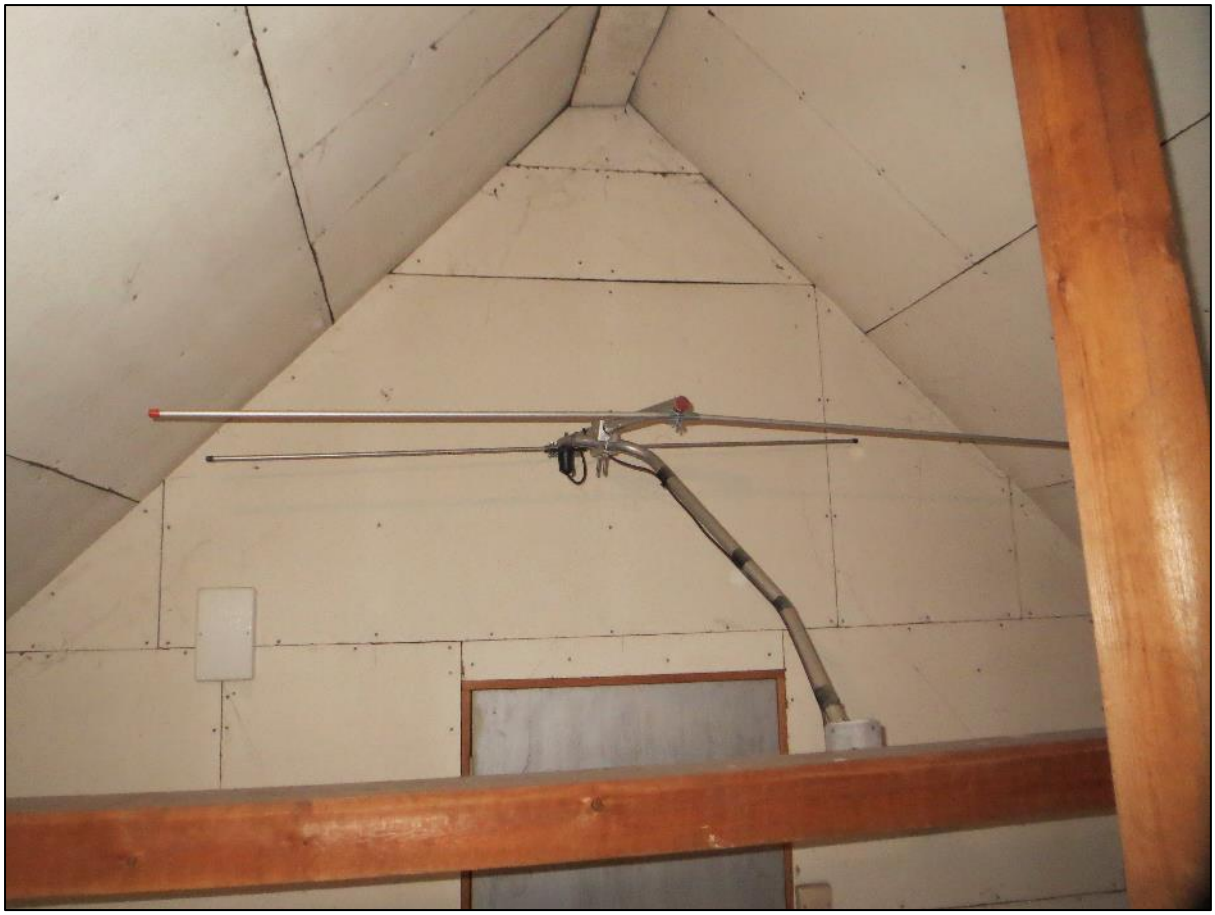
Photograph K
There is a large oak tree present in the rear garden, which has nesting bird potential



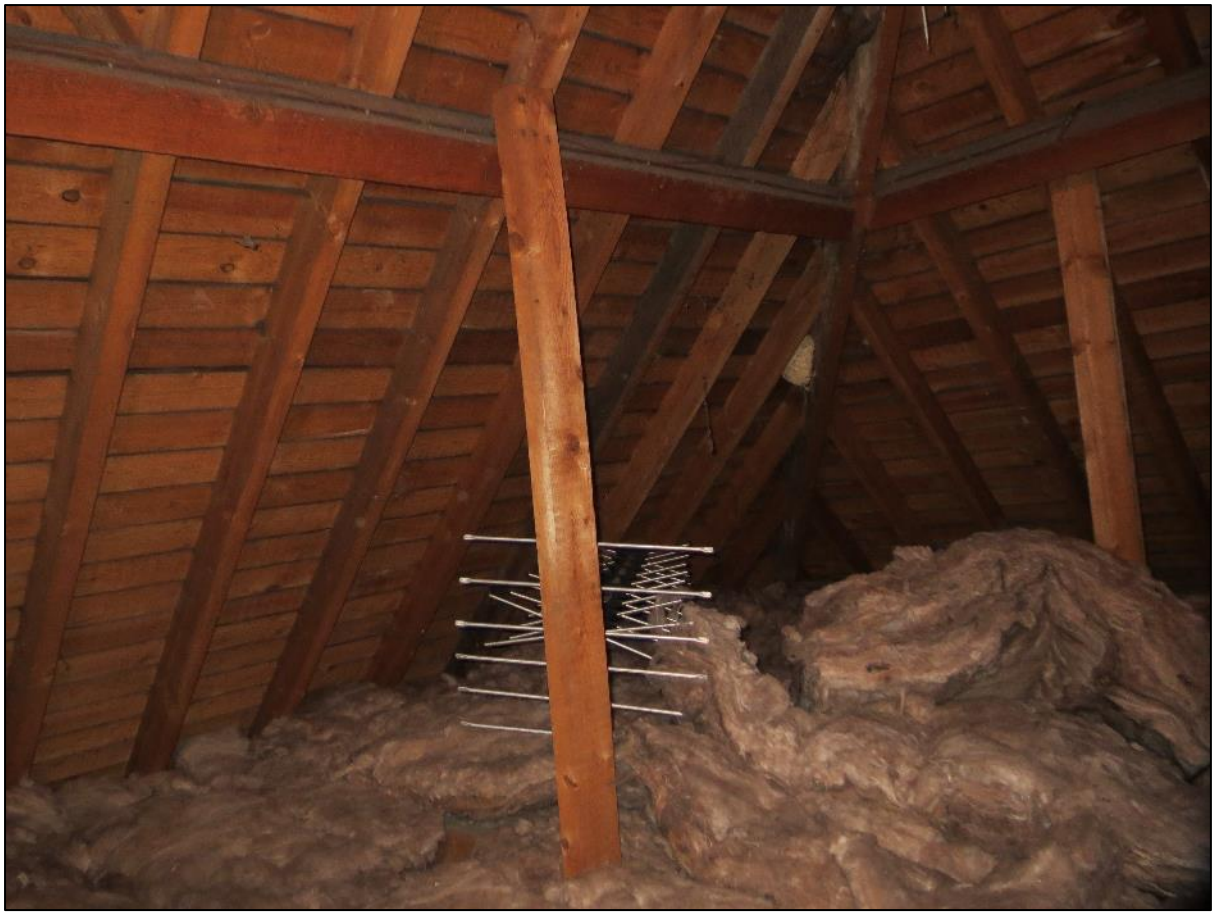
Photograph L
There are crevices under roof tiles at the house, which provide bat roosting potential



Photograph M
Bats may be able to use these roof tile crevices for both roosting and for access into the loft



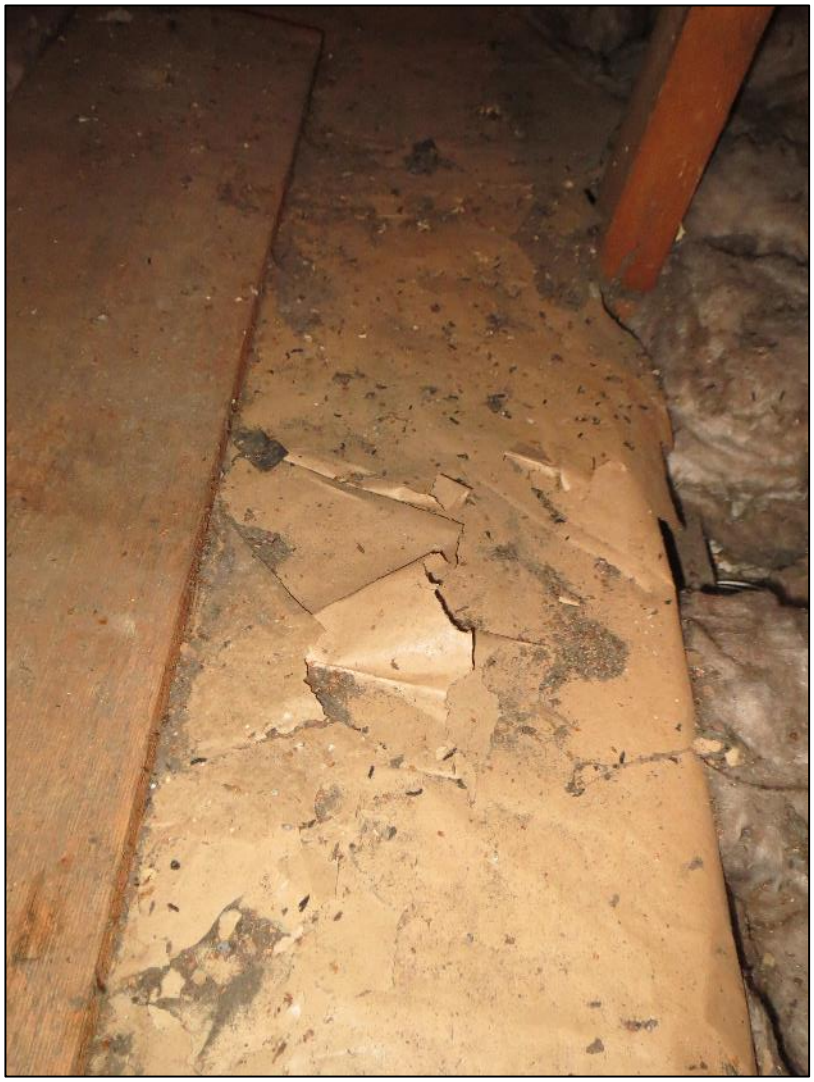
Photograph N
There is a larger loft room in the house with no bat potential



Photograph O
There is though a smaller unconverted loft compartment in the house, which has tight boarding but still has bat roost potential

Photograph P
Pipistrelle bat droppings were found on the floor of this smaller loft compartment at the house

Photograph Q
These bat droppings at the loft at the house, included some smaller droppings, that could have been derived from juvenile pipistrelle bats



Photograph R
The bat droppings were mainly distributed in the centre of the smaller loft compartment and also near the doorway