

BAT MITIGATION STRATEGY

**at
18 Maple Grove
Fixby
Huddersfield
West Yorkshire
HD2 2FG**

**Client:
Stonehouse & Co Ltd**

**Client Address:
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**JCA Ref:
16421b/AWe**

**Date of Report:
16/08/2021**



Quality Assurance

Version	Desktop Survey Completed:		Site Surveyed:		Report Completed:		Checked:	
	Date	Name	Date	Name	Date	Name	Date	Name
V1	23/10/20	Adam West	12/10/20	Adam West & Francesca Sykes	16/08/21	Adam West	18/08/21	Joe Earnshaw
			18/05/21	Adam West & Francesca Sykes				
			02/06/21	Francesca Sykes & Poppy McDermott				
			16/06/21	Francesca Sykes & Poppy McDermott				
			19/06/21	Francesca Sykes & Joe Earnshaw				

This report has been prepared and provided in accordance with the *British Standard 42020: Biodiversity – Code of practice for planning and development 2018* and the *CIEEM's Code of Professional Conduct*.

Risk Assessment Completed	N/A
Bio-security Procedure Completed	
Lone Worker Procedure Completed	



Summary

A report is required at **18 Maple Grove, Fixby, Huddersfield, West Yorkshire, HD2 2FG** to assess the impacts of the development proposals on bats and provide recommendations for a bat mitigation and enhancement strategy on the site.

The development proposed on this site is the creation of a two-storey extension to the rear (north) of the property and a first-floor extension above the existing garage.

All bat species and their roosts in the UK are protected under UK law. The main item of legislation protecting UK bats is the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. In addition to this, bats and their roosts are also protected in England and Wales under the Wildlife and Countryside Act 1981 and The Countryside and Rights of Way Act 2000.

A previous Bat Survey & Report and Bat Emergence and Re-Entry Survey Report was produced by JCA Ltd in 2021; key findings included:

- Bat droppings, identified in the field as pipistrelle *Pipistrellus* sp. droppings, were found within the loft of the house.
- A common pipistrelle *Pipistrellus pipistrellus* maternity roost located within the cavity wall of the south gable of the building and accessed through a gap behind the soffit at the apex of the roof,
- A common pipistrelle day roost located within the cavity wall of the north gable of the building and accessed through a gap behind the soffit at the apex of the roof.

Based on the current bat activity on and adjacent to the site, it is determined that, in the absence of further mitigation, the development proposals would result in negative impacts to bats on the site and the surrounding area. However, with the inclusion of suitable mitigation, enhancement and the subsequent monitoring of bat usage of the site it is anticipated that the ecological value of the site for bats will be improved.

Even though there are confirmed bat roosts within the building on site, suitable mitigation is possible which negates the need for work to be carried out under a **Natural England European Protected Species (EPS) licence**.

To prevent impacts to the local bat population, the common pipistrelle roosts will be retained post-development. The maternity roost within the southern gable wall will be unaffected by the development. A cavity will be created within the northern gable wall of the proposed extension with external access incorporated for bats to roost here. The works will be timed to take place between October 1st and April 30th when the maternity colony is disbanded, and bats are absent from the building.



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1. Introduction

1.1 Purpose of the Report

- 1.1.1 A report is required at **18 Maple Grove, Fixby** to assess the impacts of the development proposals on bats and provide recommendations for a bat mitigation and ecological enhancement strategy on the site.

1.2 Scope of the Report

- 1.2.1 This report is compiled in accordance with the Bat Conservation Trust's (BCT) '*Bat Surveys - Good Practice Guidelines*' (Collins, 2016), the Joint Nature Conservation Committee's (JNCC) '*Bat Workers Manual*' (3rd Edition) (Mitchell-Jones & McLeish, 2004) and Natural England's '*Bat Mitigation Guidelines*' (Mitchell-Jones, 2004).
- 1.2.2 The recommendations contained within this report are considered to be valid for a period of 18 months. After this period, an update to the report and re-assessment of the site may be required in order to inform ecological constraints to any developments proposed, and/or to accompany a planning submission. If the proposed development changes significantly or land use alter substantially, updates may be required in advance of the expiry period of the report.

1.3 Details of Proposed Development

- 1.3.1 The development proposed on this site is the creation of a two-storey extension to the rear (north) of the property and a first-floor extension above the existing garage.

1.4 Site Description

- 1.4.1 **18 Maple Grove, Fixby** is situated approximately 3km north of Huddersfield town centre, at grid reference: SE 14267 20071.
- 1.4.2 The site consists of a single, two-storey residential building and gardens to the front and rear.
- 1.4.3 The site is surrounded predominantly by residential development, with a large tract of woodland present to the north and east of the site.



2. Background

2.1 Bat Scoping and Activity Surveys

- 2.1.1 A Bat Survey & Report was carried out by JCA Ltd in October 2020 (JCA, 2020). The scoping survey carried out on 12/10/20 identified a number of features on the site suitable for roosting bats including holes within the soffit box and gaps between the soffits and the walls of the house. Internally, bat droppings identified in the field as pipistrelle *Pipistrellus* sp. droppings, were found within the loft of the building. As the building was assessed as high potential for roosting bats, a further three activity surveys were recommended.
- 2.1.2 During the subsequent activity surveys a peak count of 20 common pipistrelle *Pipistrellus pipistrellus* bats were observed utilising the building. Common pipistrelles were observed emerging from and re-entering the building at two locations on the north and south aspects. All roost access points were beneath soffits where the soffits do not sit flush against the house wall.
- 2.1.3 A peak count of 19 bats were observed entering beneath the soffit on the south aspect during the dawn survey on 02/06/21. A peak count of one common pipistrelle was observed emerging from the soffit on the north aspect during the dusk emergence survey on 18/05/21 and one common pipistrelle entering the soffit on the north aspect during the dawn re-entry survey 02/06/21. Roost locations can be viewed within **Appendix 1**.
- 2.1.4 During a second internal inspection on 19/06/21, during which two surveyors inspected the entire loft space for over one hour, no bats were observed within the loft space. Bat social chatter was heard from within the cavity walls on the southern side of the property.



3. Impact Assessment

3.1 Roost status

- 3.1.1 It was concluded that the common pipistrelle bat roost within the cavity of the south gable wall comprises a common pipistrelle maternity roost. Maternity roosts frequently fragment to occupy several areas of a building or several separate buildings nearby simultaneously, known as satellite roosts (Feyerabend and Simon, 2000). In addition to this, given that a single common pipistrelle was seen utilising a roost feature on the northern gable wall during two of the three emergence/re-entry surveys, it is anticipated that the roost in this location is a day roost utilised by a single male or non-breeding female.

3.2 Potential Impacts of the Proposed Development

- 3.2.1 The development proposed on this site is the creation of a two-storey extension to the rear (north) of the property and a first-floor extension above the existing garage on the east elevation.
- 3.2.2 As the common pipistrelle maternity roost is located within the cavity wall on the southern elevation and this wall does not form part of the development proposals, there is no potential for damage to the physical structure of this roost. However, as construction on the eastern elevation is close to this roost, if work is carried out during roosting bat season, this may result in disturbance to roosting bats including lactating females and their young. As the roosts are being retained on site, no impacts to common pipistrelle populations on site or in the local area are anticipated.
- 3.2.3 As the common pipistrelle day roost is located within the cavity wall on the northern elevation and this wall does form part of the development proposals, the potential exists for disturbance to roosting bats, injury or death of roosting bats if work is carried out during roosting bat season. The loss of a bat roost would result from the proposed works without appropriate mitigation.
- 3.2.4 As the proposed works involve increasing the roof area over the extended portions of the building, the internal loft space will increase in size correspondingly. Bats are known, through the presence of their droppings, to utilise the loft space of the house. Accessing this space is a feature of the roosting behaviour of the bats on site, the loft itself is not considered to be the site of an active roost based on two internal inspections. The size of the proposed increase in loft space is relatively modest and is considered unlikely to significantly alter the climatic conditions within such that it becomes intolerable for bats. The loft is currently accessed by a small number of gaps between the roof and the tops of the inner skin of the north and south gable walls. The loss of these gaps would prevent access from the roost to the loft's interior and may



be detrimental to the suitability of the roosts present.

- 3.2.5 As bats are known to alter their emergence times in response to lighting of their roost entrances, typically emerging later than otherwise be the case, any lighting installed as part of the development would impact bats if installed inappropriately.



4. Recommendations

4.1 Licencing Requirements

- 4.1.1 As the common pipistrelle maternity roost in the cavity of the southern gable wall will be physically unaltered by the proposed works, only the common pipistrelle day roost in the cavity of the northern gable wall will be impacted by the development.
- 4.1.2 By timing works within the period of the year when bats are likely absent from the roost and providing an equivalent accessible roosting feature within the north gable wall of the new extension, and applying the principal of proportionality, it is considered unnecessary to apply for a Natural England European Protected Species (EPS) licence.

4.2 Bat Mitigation Strategy

- 4.2.1 To mitigate effects of the development on bats utilising the site and on local bat populations, and to enhance the ecological value of the site to bats, the following measures are to be included within the development:

Retention of Existing Maternity and Day Roosts:

- 4.2.2 The common pipistrelle maternity roost and day roost, located within the cavities of the south and north gable walls of the building, respectively, are to be retained post development of the site, albeit with the relocation of the day roost to the gable wall of the new extension on the north elevation. To avoid disturbance to the roosts during the construction phase, all work will be carried out between 1st October – 31st April inclusive, outside of roosting bat season when the majority of bats will be absent from the building. Any features suitable for roosting bats, including cracks and crevices around the soffits, will be checked with an endoscope by a licenced ecologist immediately prior to work commencing. All work will follow a method statement (**Appendix 2**) to ensure no bats are harmed.
- 4.2.3 The current bat access points and roosts will be maintained on the southern gable post-development, therefore preserving the current roosting opportunities for common pipistrelle and preventing negative impacts to the number of bats utilising the roost.
- 4.2.4 The demolition of the northern gable wall is to take place under the supervision of a suitably licenced ecologist. The internal construction and layout of the cavity is to be recorded and recreated during the construction of the new gable wall. Similarly, the access point used to enter and exit the cavity is to be recorded for re-creation during construction of the extension.



- 4.2.5 Subsequent monitoring of the roosts will be required post-development to ensure the continued use of the roosts for a period of at least three years, this will include an annual emergence/re-entry survey undertaken during maternity season (June – August inclusive). Details of monitoring are provided in **Appendix 3**.

Installation of Additional Bat Roosting Features:

- 4.2.6 In order to enhance the ecological value of the site for roosting bats and in accordance with the NPPF, additional bat roosting habitat will be incorporated into the development. This will consist of one integrated Vivara Pro Build-in WoodStone Bat Box (or similar alternative) to be installed within the fabric of the northern gable wall. The bat box will be positioned at a height of between 4 – 6 m, with clear flight paths to the entrance.

Lighting Design:

- 4.2.7 To prevent impacts to bats foraging and commuting within the site and to bats roosting within the building on site, no lighting is to be directed onto the adjacent woodland. In addition to this, wildlife friendly lighting will be used within the development. The guidance prepared below is in line with the information provided by the Institute of Lighting Professionals (ILP, 2018) and includes:

- Dark buffer zones.
- Screening in the form of vegetation, fences and structures.
- Appropriately designated darkened areas.
- Luminaries absent of UV elements.
- LED luminaries with a sharp cut-off, low intensity and good rendition.
- Peak luminaire wavelength at a minimum of 550nm.
- Downward directional luminaires with upward light ratios of 0%.
- Lower light columns to limit light spill.
- Recessed internal light fixtures.
- Window glazing treatments or automated blind systems.
- External security lights fitted with motion sensor or set to a short timer.



5. Conclusion

- 5.1.1 A common pipistrelle maternity roost and a common pipistrelle day roost are located within the residential building at **18 Maple Grove, Fixby**. High levels of bat commuting activity were also observed in the vicinity of the site.
- 5.1.2 As the common pipistrelle maternity roost is to be unaltered and retained post-development, the common pipistrelle day roost will be recreated in the wall of the extension and a new roosting feature is to be created within the fabric of the gable wall of the extension, significant impacts to bats utilising the site are not anticipated.
- 5.1.3 As an additional bat roosting feature is to be installed in the form of an integrated bat box on the building, and wildlife friendly lighting is to be utilised on the site, it is anticipated that the development proposals will have no long term negative effects on local bat populations. The inclusion of these features and the subsequent monitoring of bat usage of the site is expected to improve the ecological value of the site for bats.



6. References

British Standards (2014). *BS8545: 2014 – Trees: From Nursery to Independence in the Landscape*. British Standards Institute, London.

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*. The Bat Conservation Trust, London

Feyerabend, F., Simon, M. (2000). *Use of roosts and roost switching in a summer colony of 45 kHz phonic type pipistrelle bats (Pipistrellus pipistrellus Schreber, 1774)*. *Myotis*, 38, 51-59.

Institute of Lighting Professionals (2018). *Bats and Artificial Lighting in the UK*. Bats and the Built Environment Series.

JCA Ltd. (2020). *Bat Survey & Report at 18 Maple Grove* [Technical report]. JCA Ltd, Halifax. Report Reference: 16421/AWe.

JCA Ltd. (2021). *Bat Emergence and Re-Entry Survey Report at 18 Maple Grove* [Technical report]. JCALtd, Halifax. Report Reference: 16421a/FS.

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

Mitchell-Jones A. J., McLeish, A.P (2004) *Bat Workers Manual 3rd edition*. Joint Nature Conservation Committee (JNCC).

Websites:

Bat Conservation Trust (BCT). <<http://www.bats.org.uk/>>

Google Maps. <<http://maps.google.co.uk/>>

Natural England. < <http://www.naturalengland.org.uk/>>

Relevant Legislation:

Countryside and Rights of Way Act 2000

<http://www.legislation.gov.uk/ukpga/2000/37/pdfs/ukpga_20000037_en.pdf?view=interweave>

National Planning Policy Framework < <https://www.gov.uk/government/publications/national-planning-policy-framework--2>>

the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

<<https://www.legislation.gov.uk/ukdsi/2019/9780111176573>>

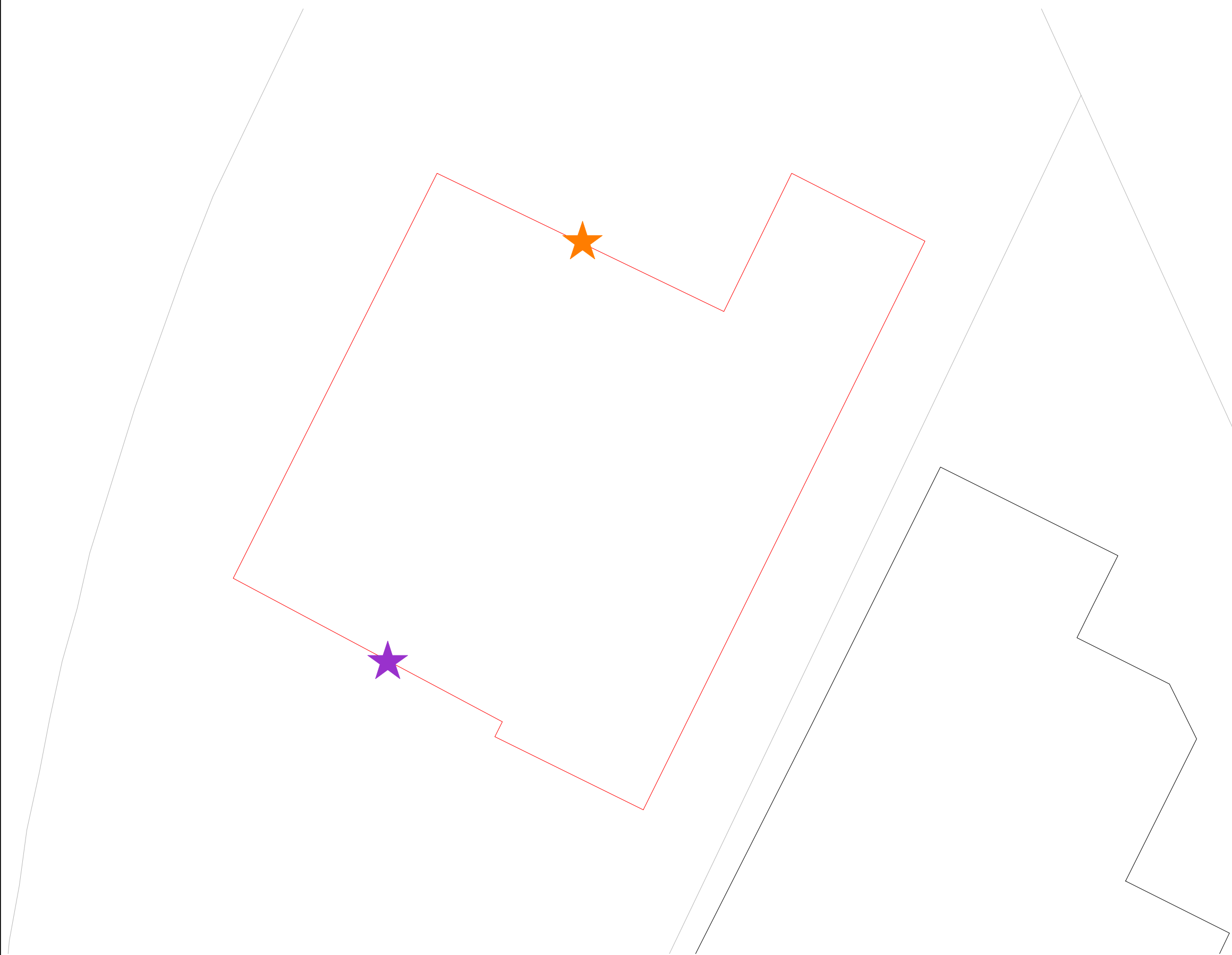
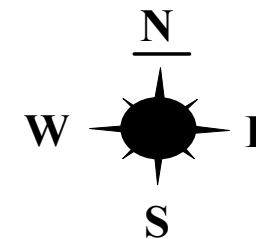
Wildlife and Countryside Act 1981 <<http://jncc.defra.gov.uk/page-3614>>



Appendices

Appendix 1: Map of Roost Locations





Appendix 1: Bat Roost Location Plan

Address: 18 Maple Grove,
Fixby, Huddersfield
HD2 2FG
JCA Ref: 16421b/AWe

NOT TO SCALE

KEY	
	Common pipistrelle day roost
	Common pipistrelle maternity roost
	Buildings
	Surveyed building



Arboricultural & Ecological Consultants

Appendix 2: Outline Bat Method Statement for Work at 18 Maple Grove

To ensure no bats are harmed during the development works, the following method statement will be followed:

1. Work will be undertaken outside of bat roosting season (1st April – 31st October inclusive) when bats are most likely to be absent from the roosts.
2. Contractors and site personnel will be given a 'toolbox talk', to ensure they are aware of the signs of bats, the species of bat likely to be found, relevant legislation and how to respond if bats are encountered.
3. Prior to work commencing, a walkover of the site will be undertaken to inspect any features suitable for roosting bats with an endoscope.
4. The ecologist will then supervise the removal of any roost features, which will be undertaken by hand.
5. If any bats are encountered during the work, they will be captured by the suitably licensed ecologist. Bats will be contained within a well-ventilated box with a soft cloth and shallow water dish and then released in suitable weather conditions.
6. When the ecologist is satisfied that all features with potential for roosting bats have been removed safely or are no longer at risk from disturbance, then work may continue unsupervised. However, in the event that a bat is encountered during the remainder of the work then all work must cease, and the licensed ecologist contacted immediately.



Appendix 3: Author Qualifications

Consulting Staff: Ecology

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management.

Adam joined JCA to lead the expanding ecology department. Having returned to education as a mature student, Adam studied Countryside Management for two years before undertaking a Bachelor's degree, for which he was awarded First Class Honours. Adam has many years' experience in ecological consultancy, working on projects ranging from individual planning applications to national infrastructure projects. Adam holds a Natural England Level 1 great crested newt survey class licence, a Natural England Level 2 bat survey class licence (and the Scottish and Welsh equivalents) and a CSCS card.

Joe Earnshaw, Assistant Ecologist

BSc (Hons), MSc Biodiversity and Conservation, Qualifying CIEEM member.

Joe joined the ecology department of JCA in 2018 after taking part in JCA's student training programme. He initially obtained a bachelor's degree in animal management from Askham Bryan College, York. He has since furthered his education and brings to the company an MSc in Biodiversity and Conservation from the University of Leeds. Joe has expertise in aquatic invasive species identification and control.



The advice which we have prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and bona fide opinions.

Signed

.....

Adam West
16/08/2021

Proofread by

.....

.....

Joe Earnshaw *Qualifying CIEEM Member*
18/08/2021

For and on behalf of **JCA Ltd**

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ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes
- Butterfly & Insect Surveys

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)
- Planting Schemes
- Monitoring of bird or bat boxes.

ARBORICULTURAL SERVICES

Guidance for Architects & Developers

- British Standard 5837 Surveys
- Arboricultural Implications Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control



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