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20th December 2023

**Preliminary Roost Assessment:
2 Primrose Avenue, Newark-on Trent, Nottinghamshire**

Dear Daniel,

This letter has been prepared by Senior Ecologist Kiran Johal MZool (Hons) ACIEEM of Archer Ecology Ltd for the purpose of evidencing a preliminary (bat) roost assessment undertaken of the property at 2 Primrose Avenue in Newark-on-Trent, Nottinghamshire. The proposed works involve the construction of a two-storey extension on the western aspect of the building. This will involve stripping two rows of tiles off the western aspect of the existing roof so that they marry into the new roof of the proposed extension.

The survey was required to inform a planning application for an extension to the property and for the purpose of determining whether the works could result in the potential and unlawful disturbance to and/or killing/injuring of bats, as well as damage/destruction of potential roost sites. The potential for interactions with other faunal receptors, including nesting birds, was also determined. A summary of the recommendations of this letter report are given below and explained in further detail within the report:

- Ahead of works with the potential to disturb PRFs, a single nocturnal bat survey is to be conducted to establish the presence or likely absence of roosting bats, between May and August (inclusive);
- If no bats emerge during the nocturnal survey then PRF 7 should be covered or boarded to prevent bats from colonising later in the season, as bats are transient animals that often change roost sites;

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- One integrated bat box to be installed in the new extension;
- Any new lighting at the site to be sensitive to avoid disturbance to bat foraging and commuting routes;
- Nesting bird check of loft to be undertaken prior to the commencement of works;
- One swift brick to installed within walls of new extension.

It should be noted that if bats are found to be utilising PRF 4 or PRF 7 then works will not be able to proceed until further surveys of the building are conducted and a licence from, or site registration with, Natural England may be required. In the event that an active bird nest is identified; then works should immediately cease and no works must take place until it is confirmed by the ecologist that all young have fledged, and the nest is no longer active.

Legislation

Bats receive protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). It is an offence to take, kill or injure a bat, damage or destroy a resting place of a bat, or disturb a bat whilst it is occupying a place of shelter.

All nesting birds and active nests are protected under the Wildlife and Countryside Act (1981, as amended) which makes it an offence to take, damage or destroy the nest of any wild bird while it is in use or being built, and to take or destroy the egg of any wild bird. Certain birds, listed under Schedule 1 of the Act, are also protected against disturbance whilst building a nest, or when on or near a nest containing eggs/unfledged young.

Methodology

A detailed inspection of the property was carried out on 8th December 2023 by Senior Ecologist Kiran Johal ACIEEM MZool (Hons) who is registered to use class licence WML-CL18 to survey for bats (licence number: 2021-54853-CLS-CLS). Kiran has over six years' experience of completing preliminary roost assessments.

With reference to survey guidelines available at the time of undertaking the site visit (i.e., the Bat Conservation Trust's Good Practice Guidelines, 4th edition (Collins, 2023), the survey comprised a detailed inspection of the external fabric of the building from ground level with the aid of a torch and binoculars, as well as an internal inspection of the loft void within the building, and the identification of Potential Roosting Features (PRF). Evidence of other species, such as nesting birds was also recorded during the survey.

The site is located at 2 Primrose Avenue in Newark-on-Trent, Nottinghamshire (centred at OSGR SK 80938 55716); the site location is shown in Figure 1, overleaf.



Figure 1 – Location of the site in context with the wider landscape

Results

Site Description

2 Primrose Avenue comprises a two-storey, detached, residential property which is brick-built with cavity walls. On the eastern extent of the building is a single storey porch with a half-pitched, concrete tile roof which is new and in a good condition. The roof of the main property is single-pitched and comprises concrete tiles. It is supported by standard fink roof trusses and lined with a non-bitumen coated roofing membrane, which is generally in good condition. However, the membrane does feature some areas that have been torn or have gaps.

Internally, the property is currently undergoing extensive renovation works. The loft void is partially boarded and has a thick layer of fibreglass insulation installed at the joist level; The insulation covers the joists such that they are not visible. Therefore, for safety reasons the loft inspection was undertaken from the boarded section of the roof only. However, this is not anticipated to have significantly affected the results of the survey as the loft was small in size and the boarded section was in the central part of the loft, such that a torch could be used to inspect the majority of the loft for signs of bats and/or other species. A boiler was installed on the southern gable end of the loft.

Suitability for Roosting Bats

No evidence of bats was identified within the loft space. However, several PRFs and access/egress points were noted both internally and externally, as bulleted below. Where possible, these are shown in Figure 2, detailed below, and further photographs of them are given with Appendix I.

- PRF 1 – Loft space, with opportunities for bats to access/egress the loft void due to holes and tears within the roofing membrane;
- PRF 2 - Opportunities for bats to roost at the gable end between the breezeblock wall and roofing membrane;
- PRF 3 – Missing mortar between ridge tiles, which may allow access for bats beneath the tiles and into the area between the tiles and roofing membrane;
- PRF 4 – Lifted roofing tiles, allowing access for bats beneath the tiles into the area between the tiles and roofing membrane;
- PRF 5 – Missing mortar at the eaves on the gable end of the southern aspect of the roof which may allow access for bats into the area between the roofing membrane and tiles;
- PRF 6 – Hole in wall on western aspect where pipe has been removed, which may allow access for bats into the cavity wall;
- PRF 7 – Missing bricks and holes on northern aspect of the building where pipes have been removed, allowing access for bats into the cavity wall. It is anticipated that this area has been recently exposed as part of the current renovation works.

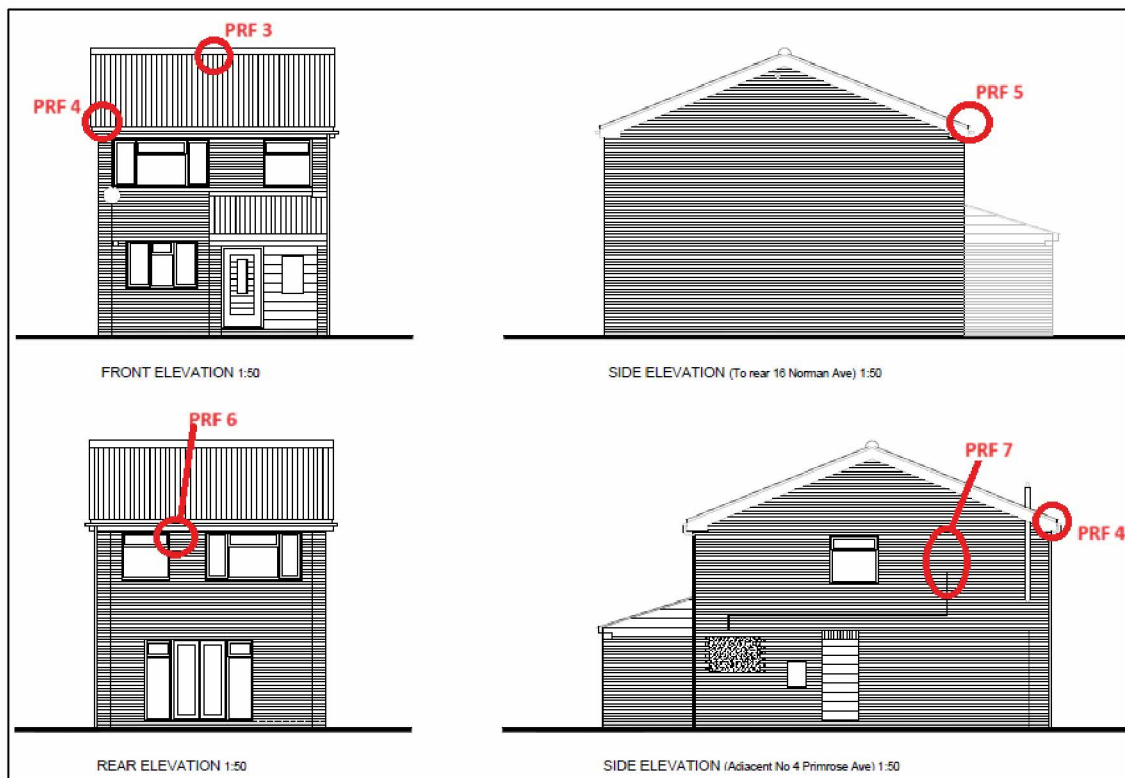


Figure 2 – Locations of external potential roost features and access/egress points

The internal and external inspection yielded no evidence of roosting bats. In line with roosting categories contained within BCT guidelines, the property at 2 Primrose Avenue has been assessed as offering '**low**' **bat roosting potential** as it supports several features that could be utilised by individual bats opportunistically, and did not support any features suitable for use by a large bat roost. Though it may be argued that PRF 6 and PRF 7, which offer access into the cavity wall, could be used by a larger number of bats, PRF 7, which is on the northern aspect of the property, is anticipated to have been created within the past 6 months, due to the relocation of the boiler from the northern aspect of the property to the southern aspect. PRF 6 is also anticipated to have been recently created. Due to the recency of these works, it is not anticipated that bats are likely to have colonised these PRFs. Furthermore, PRF 7 is located on the northern aspect of the property, such that it is likely to be unsuitable for use by a maternity roost as it would be shaded for most of the day during the summer months, and therefore would not maintain suitable climatic conditions for a maternity colony of bats.

Suitability for Hibernating Bats

The site is not considered to be suitable for use by hibernating bats as it comprises a well-insulated modern house which is currently inhabited, such that it is heated during the winter months. Therefore, the site is unlikely to maintain a stable cool temperature as required by hibernating bats and is considered to be of '**negligible**' **bat hibernation potential**. Hibernating bats are not considered to be a constraint at this site and are not discussed further within this report.

Suitability for Birds and Other Species

An accumulation of approximately six mouse droppings were observed atop the fibreglass insulation adjacent to the loft hatch. A disused bird's nest, likely built by a house sparrow *Passer domesticus*, was identified above the boiler, between the breezeblocks at the southern gable end and the roofing membrane. House sparrow are listed as red on the Bird of Conservation Concern 5¹. The property continues to offer potential nesting habitat for small-sized passerines within wall cavities and the loft void and underneath the tiles.

¹ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: The fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747. Available online at <https://britishbirdscsco.uk/content/status-our-bird-populations>.

Conclusions and Recommendations

Roosting Bats

The proposed works involve the construction of a two-storey extension on the western aspect of the building. This will involve stripping two rows of tiles off the western aspect of the existing roof so that they marry into the new roof of the proposed extension. The site does offer potential roosting opportunities for bats although the majority of these are associated with the southern and south-eastern aspects of the roof which will not be directly affected by the proposals. PRF 4 (western aspect) and PRF 7, however, are located on the northern aspect of the property and will be impacted by the proposals.

Therefore, in accordance with the Bat Conservation Trust's *Good Practice Guidelines, 4th edition* (Collins, 2023), the building should be subject to a single nocturnal bat survey. The survey should be undertaken between May and August (inclusive), in suitable conditions for bats to be active (above 10°C, dry with low levels of wind).

Bats are transient animals and often change roost sites depending on weather conditions and other factors, therefore even if no bats are recorded during the nocturnal survey there is a chance that bats could colonise the feature and subsequently be harmed during works. If no bats are noted to emerge from the building, then tightly fitting boarding that is flush to the brickwork, with no gaps, should be installed over PRF 7 to prevent this from occurring. In addition, works to strip the two rows of existing roof tiles should be conducted under the supervision of a suitably licensed ecologist.

It should be noted that if bats are found to be utilising PRF 4 or PRF 7 then works will not be able to proceed until further surveys of the building are conducted and a licence from Natural England may be required.

Enhancement Measures for Bats

Due to the presence of a non-bitumen coated roofing membrane within the main roof void, it is not considered appropriate to reinstate the lifted tiles at PRF 4, as any bats utilising this feature could become entangled within the membrane which could result in their injury or death. Therefore, the roof tiles should be reinstalled to ensure that they are tight fitting, and there are no gaps that could allow access for bats into the roof of the main loft void. As an additional enhancement measure, it is recommended that an integrated bat box such as the 'Vivara Pro Build-in Woodstone Bat Tube' is installed within the wall of the northern aspect of the new extension. The bat box should be positioned at a height of at least 4m as close to the eaves of the building as possible, and away from any artificial light sources.

Foraging and Commuting Bats

As a precautionary measure and in order to avoid impacts upon nocturnal bat activity, dark unlit corridors should be maintained around and across the site, allowing bats to pass through unhindered by artificial light. All introduced lighting must be sensitive to nocturnal bat activity and be curtailed to avoid impacting

light-sensitive bat species. Introduced lighting should be positioned at a minimum of 7m from tree lines, woodland, and hedgerows. Mercury or metal halide lamps must also be avoided. The hours of illumination could be restricted to provide a minimum of 8 hours of darkness per night. Introduced lighting should further comprise a maximum of 1 lux which is comparable to moonlight conditions.

Nesting Birds

Should the works commence during the main nesting bird season (March to August, inclusive) a pre-works nesting bird check of the loft should be undertaken immediately (within 24 hours) prior to the proposed extension works by a suitably experienced ecologist. In the event that an active bird nest is identified then the works should immediately cease and no works must take place until it is confirmed by the ecologist that all young have fledged, and the nest is no longer active.

The British Standard BS 42021:2022 came into effect on 31st March 2022 and sets out requirements for the selection and installation of integral nest boxes in new developments. This includes the incorporation of at least one integrated bird nest box for swift *Apus apus*, starling *Sternus vulgaris*, great tit *Parus major*, blue tit *Cyanistes caeruleus* or house sparrow within each dwelling. Whilst the proposals are not for the construction of a new development, it is recommended that, as an enhancement measure, one swift brick is installed within the walls of the northern aspect of the new extension. Swift bricks are considered to constitute 'universal nest bricks'² and are suitable for use by a number of bird species including swifts, house sparrows, starlings and tit species. The brick should be installed at a height of approximately 4m to reduce the risk of predation and in an uncluttered location where there is a clear flight path to the box.

Should you wish to discuss anything further, please don't hesitate to get in touch.

Yours sincerely,



Kiran Johal ACIEEM MZool (Hons)
Senior Ecologist



Appendix I – Photographs

² Newell, D. 2021. Swift Bricks: The 'universal' nest brick. CIEEM. Available online at <https://cieem.net/swift-bricks-the-universal-nest-brick-by-dick-newell/>



Photograph 1- Eastern aspect of 2 Primrose Avenue



Photograph 2- Northern aspect of 2 Primrose Avenue



Photograph 3- Western aspect of 2 Primrose Avenue



Photograph 4- Southern aspect of 2 Primrose Avenue



Photograph 5- Potential roost feature 1, gaps between sheets of roofing membrane



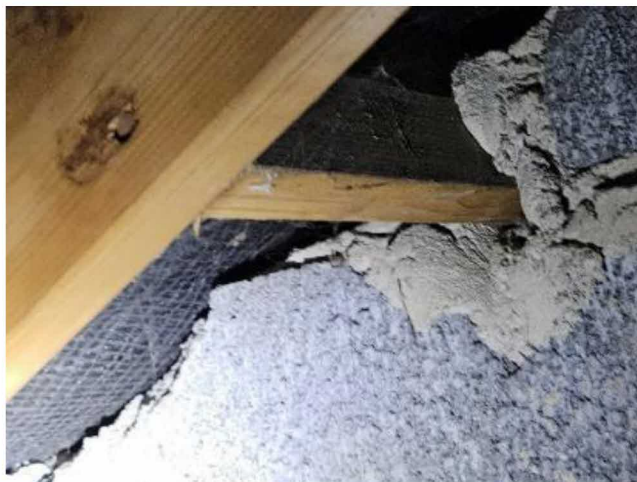
Photograph 6- Potential roost feature 1, hole in roofing membrane



Photograph 7- Potential roost feature 1, gaps between sheets of roofing membrane



Photograph 8- Potential roost feature 2, space between top of breeze block gable end and ridge



Photograph 9- Potential roost feature 2, space between top of breeze block gable end and ridge



Photograph 10- Potential roost feature 3, missing mortar between ridge tiles



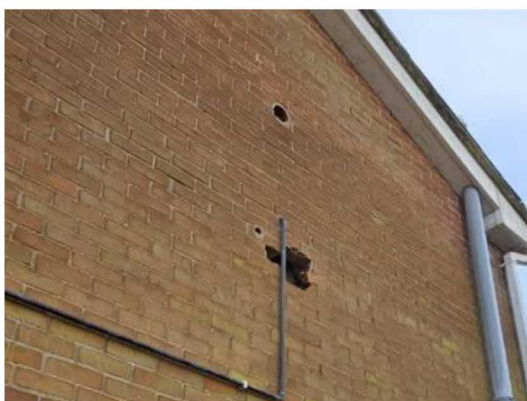
Photograph 11- Potential roost feature 4, lifted roof tiles



Photograph 12- Potential roost feature 5, missing mortar on southern aspect



Photograph 13- Potential roost feature 6, hole in brick work on western aspect



Photograph 14- Potential roost feature 7, missing bricks and holes on northern aspect



Photograph 15- Mouse droppings in loft



Photograph 16- Sparrow nest in loft