DARWIN ECOLOGY
integrating nature conservation

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Bat Building Assessment Report

All Saints Church
The Avenue, Hampton TW12 3RS

January 2018

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1. EXECUTIVE SUMMARY

1.1. Darwin Ecology Ltd was commissioned by the Vicar and Church Wardens of All Saints' Church Hampton via Loxton & Associates to undertake a bat building inspection at All Saints Church, The Avenue, Hampton TW12 3RS. The survey was required in connection with the proposals to demolish the existing Church Hall and the bungalow at no. 44 The Avenue Hampton TW12 3RG, and construction of a new Narthex to the Church, a new Church Hall incorporating one flat and 3x four bedroom houses and 1x three bedroom house. The new Church Hall will be linked to the Church with a corridor through the north wall.

1.2. No confirmed evidence of bats was found during the external or internal inspection. The buildings have the following assessments for bat roost potential; the church has high potential, the hall has negligible potential and bungalow has low potential.

1.3. The proposed works to create an entryway into the church north wall will have no impact on bats and no further work is necessary. No further works are required for the hall as this has negligible potential. The proposed works to demolish the house will impact bats should they be present and therefore it is recommended that one bat emergence survey with two surveyors is undertaken during the active bat season of May to September, during suitable weather conditions. This survey is required in order to confirm the presence or likely absence of bat roosts from the potential roosting features identified, species usage, and roost type.

1.4. If a roost is confirmed within the bungalow during the emergence survey, the proposed development will require a European Protected Species (EPS) Mitigation Licence or a Bat Low Impact Class Licence (BLICL) to enable the works. Natural England always recommend three surveys for a licence application and therefore a further two surveys will need to be undertaken.

1.5. Following the results of the survey work, mitigation can be put in place in order to ensure no bats are harmed, injured or disturbed by the proposed works.

1.6. Any new external lighting must be directed to avoid light spillage onto vegetation, particularly linear habitat features such as woodland edges or potential roosting sites within trees and buildings. Bats are sensitive to light and could potentially avoid the area if access points or the surrounding areas become lit.

1.7. As bats are likely to use the surrounding habitat, the installation of 2 woodcrete bat boxes installed on southern aspects of mature trees on site is also recommended as well as a biodiversity enhancing planting scheme.

2. INTRODUCTION AND BACKGROUND

2.1. Darwin Ecology Ltd was commissioned by the Vicar and Church Wardens of All Saints' Church Hampton via Loxton & Associates to undertake a bat building inspection at All Saints Church, The Avenue, Hampton TW12 3RS. The survey was required in connection with the proposals to demolish the existing Church Hall and the bungalow at no. 44 The Avenue Hampton TW12 3RG, and construction of a new Narthex to the Church, a new Church Hall incorporating one flats and 3x four bedroom houses and 1x three bedroom house. The new Church Hall will be linked to the Church with a corridor through the north wall.

2.2. The survey and report follow the standard Bat Conservation Trust (2016) guidelines.

Site Overview

2.3. The site is situated within the suburban area of Hampton, on the north bank of the River Thames, in the London Borough of Richmond upon Thames, England. It is approximately 8 km west of Kingston upon Thames and 10 km southeast of Heathrow airport. The site does not lie within any designated statutory or non statutory sites however it is within a Site of Special Scientific Interest Impact Risk Zone (IRZ). The size and impacts of the development are low level and do not fall within any of the risk categories for the IRZ designation. Within 2km there are 3 designated areas. Bushy Park and Home Park (SSSI) lies 1.3 km east, Kempton Park Reservoirs (Ramsar) lies 0.9 km southwest and Kempton Nature Reserve (LNR) lies 0.7 km west of the site.

2.4. Immediately surrounding the proposed development are residential dwellings along the northern and eastern boundaries. Old Farm Road and The Avenue are adjacent along the southern and western boundaries. There is a small local park opposite the site across The Avenue. The wider landscape comprises residential dwellings and associated urban services with local parks, commons, meadows, semi-improved grassland, deciduous and broadleaved woodland, orchard, wood pasture and parkland. The habitats surrounding the site provide potential roosting, foraging and commuting habitat for a number of species of bat.

2.5. The proposed development comprises of one church, two halls and one bungalow house. The 1908 built church and the bungalow are brick built with clay tiles and the halls are stone and brick with part flat metal roof and part corrugated iron roof. The new hall proposed is planned to be linked via a glass corridor to the church. There will be no alterations to the windows or the roof of the church. The bat scoping survey concentrated on the bungalow and the two halls which are all planned to be demolished. Habitats within the site boundary

include the buildings, hardstanding, amenity grassland and ornamental planting. The gardens offer foraging opportunities for bats.

Image 1: The building subject to the bat building inspection

3. BAT LEGISLATION

3.1. In England and Wales, all bat species and their roosts are legally protected under the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010). You will be committing a criminal offence if you:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

3.2. Barbastelle, Bechstein's, greater horseshoe, lesser horseshoe, brown long-eared, soprano pipistrelle, and noctule bats are all priority species under the UK Biodiversity Action Plan (UK BAP) and have also been adopted as species of principal importance in England under Section 41 of the NERC Act 2006.

3.3. The government's statutory conservation advisory organisation, Natural England, is responsible for administering European Protected Species (EPS) licences that permit activities that would otherwise lead to an offence.

3.4. A licence can be obtained if the following three tests have been met:

- Regulation 53(9)(a) - there is "no satisfactory alternative" to the derogation, and;
- Regulation 53(9)(b) - the derogation "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" and;
- Regulation 53(2)(e) - the derogation is for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment".

4. METHODOLOGY

Bat Building Inspection

4.1. Laura Ashford MSc carried out an internal and external bat inspection survey of the properties at All Saints Church on 17th November 2017 in accordance with the following methodology.

Internal Survey:

4.2. An investigation was carried out of all roof and wall features for signs of bats roosting and the access potential of the roof for bats. The surveyor looked for bats, bat droppings, likely access points, signs of feeding, dead bats, scratch marks and staining, and made a suitability assessment of the structure of the roof.

External Survey:

4.3. An investigation was carried out of features that may indicate bat presence. For example; gaps under roof and ridge tiles, or behind soffit boards and wooden fascias. A search for bat droppings was made beneath each potential entry/exit point identified. The surveyor used a powerful, low heat LED torch, binoculars, an endoscope and a Batscanner.

Habitat Assessment:

4.4. The trees and other habitats immediately adjacent to the area to be affected within the site were assessed for their potential to support roosting and foraging bats. The trees were assessed visually for evidence of bats and assessed for features which increase the likelihood of bats roosting, such as storm damage, rot holes, ivy cover, flaying bark and splits in the trunk.

5. OVERVIEW OF SURVEY RESULTS

Building Surveys

External Survey

5.1. The site for development comprises one church, two halls and one bungalow house. The 1908 built church and the bungalow are brick built with clay tiles and the halls are stone and brick with part flat metal roof and part corrugated iron roof (Images 2 - 5).

5.2. The church had a number of missing tiles and gaps particularly along the apexes, see images 6 and 7 for examples on the east elevation. The church is assessed as having high bat potential.

5.3. The halls had no features which would support bats. The hall is assessed as having negligible potential to support roosting bats.

5.4. The bungalow has some features including missing tile, raised tile and gaps under the lead flashing that could be utilised by crevice roosting bats or provide access internally, see images 8 and 9. Most of the tiles were in good condition as were the fascia and soffit boards. These features, together with the good quality surrounding landscape for supporting bats such as the River Thames and the Kempton Reservoirs results in the bungalow being assessed as having a low potential for roosting bats.

Image 2: All Saints Church

Image 3: The existing hall

Image 4: The bungalow, west elevation

Image 5: The bungalow, east elevation

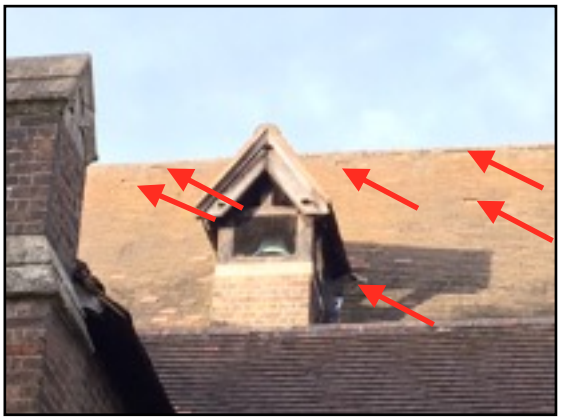

Image 6: Church roof, east elevation. Arrows point to missing tiles and gaps.

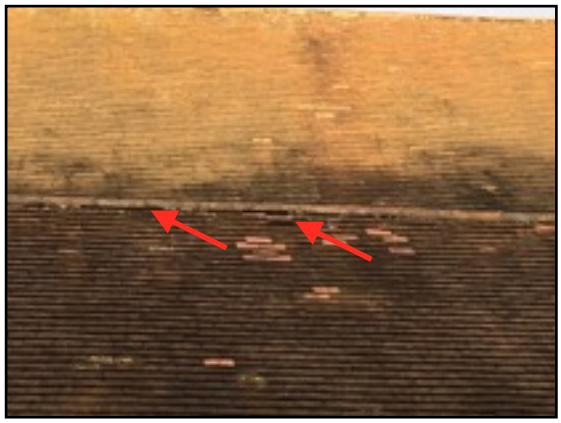

Image 7: Church roof, east elevation. Arrows point to missing tiles and gaps.

Image 8: West facing elevation of the house arrows point to missing tile and gaps under the lead flashing.

Image 9: No gaps visible under the soffit boards of the bungalow.

Internal Survey

5.5. The church internal roof was overlaid with timber. No potential roosting locations or access could be observed due to the height of the roof (see image 10). No bats or signs of bats were observed in the church itself, on any window ledges, walls or seating areas. The church is in use and was in clean, good condition.

5.6. The hall was a modern building in comparison to the church. It had no internal roosting voids or locations and no access to the building could be seen. The hall was assessed as having negligible roosting potential for bats. See image 11.

5.7. The bungalow had one roof void measuring approximately 12m by 7m and had an apex 3m high. It had a window, chimney, 2 water tanks and a section of roof over the bricked gable end addition of the house. The void was open to the rafters with timber lying directly behind the tiles and on the most of the floor with insulation underneath. No liner was present therefore the void was cool and draughty. No access points could be seen. No evidence

was found of bats or bats themselves. A few mouse droppings were present. See images 12-14.

Image 10: Internal rafters of the church.

Figure 11: Internal roof of the hall, other sections of the building had no voids only plastered ceilings.

Image 12: Internal roof void of the bungalow.

Figure 13: Timber behind the tiles with some cobwebs.

Image 14: Section of roof void over the gable addition to the house.

Figure 15: The internal wall where the church will be linked to a new corridor linking it to the hall. No evidence of bats was found in this area.

Figure 16: The external section of the wall whereby the corridor will enter the church.

5.8. Images 15 and 16 show the internal and external areas were the halls will be linked to the church via a corridor.

5.9. No confirmed evidence of bats was found during the external or internal inspection. Overall, the buildings have the following assessments for bat roost potential; the church has high potential, the hall has negligible potential and bungalow has low potential.

Habitat Survey

5.10. No trees immediately adjacent to the proposed development were noted to have potential to support roosting bats. The area around the buildings due to be directly affected by proposals consists of an area of amenity grassland, hard-standing and ornamental planting. The garden areas provide potential foraging and commuting habitat for bats.

6. DISCUSSION AND RECOMMENDATIONS

Status of Bats on Site

6.1. The church, hall and bungalow showed no evidence of a current bat roost as no bats or evidence of bats, such as droppings, were observed during the building inspections. Although no confirmed evidence of bats was found, due to the roof features present and the high quality surrounding habitat, the external assessment of the bungalow determined the building had low potential and the church had high potential to support external crevice roosting bats such as pipistrelles (*Pipistrellus spp.*).

Impact of Proposals & Recommendations

Impacts

6.2. The proposed works to demolish part of the wall on the north side of the church for a corridor will involve no impacts to the roof of the church or the windows and will therefore be small scale on one area of the brick wall. It has been assessed that there will be no impacts for any potential roosting bats proposed by these works and no further mitigation is necessary.

6.3. The demolition of the halls will have no impact on bats as the roosting potential for these buildings externally and internally is negligible. No further mitigation works are necessary.

6.4. The demolition of the bungalow would impact bats should they be present in the way of injury, killing and damaging, destroying a bat roost. Due to the low bat roosting potential of this building it is recommended that one bat emergence survey is undertaken between May and September to ascertain if any bats are roosting before the works commence.

Recommendations:

6.5. *Emergence Survey:* An emergence survey will be required to confirm the likely presence / absence of bats. An emergence survey will also help to confirm the species, type of roost and number of bats using the roost, if they are found to be present. Emergence surveys should be undertaken in accordance with best practice guidance detailed by the Bat Conservation Trust (Bat Surveys – Good Practice Guidelines 2016). Emergence surveys should be conducted between May and September, with one survey between June and August during the bat maternity season. Two surveyors will be required to ensure all aspects of the building are clearly seen. Surveyors will record bat activity using hand held EM Touch bat detectors to confirm species identification. Survey results will be recorded

including bat access points, bat species, time, and type of activity (e.g. emergence, commuting, foraging).

6.6. If a roost is confirmed within the house during the emergence survey, the proposed development will require a European Protected Species (EPS) Mitigation Licence or a Bat Low Impact Class Licence (BLICL) to enable the works. Natural England always recommend three surveys for a licence application and therefore a further two surveys will need to be undertaken. BLICL and EPS licences can be applied for after full planning permission has been granted.

6.7. Following the results of the survey work, mitigation can be put in place in order to ensure no bats are harmed, injured or disturbed by the proposed works. Possible enhancements will also be recommended.

Lighting

6.8. Any new external lighting must be directed to avoid light spillage onto vegetation, particularly linear habitat features such as woodland edges or potential roosting sites within trees and buildings. Bats are sensitive to light and could potentially avoid the area if access points or the surrounding areas become lit. Appropriate lighting options will prevent a negative impact on bats potentially using the habitats on site and should be approved by a suitably qualified Licensed Bat Ecologist.

6.9. Any potential impact on bats can be minimised by: using low - pressure sodium lamps instead of high - pressure sodium or mercury lamps. “Warmer” lights should be used as a preference as these are less penetrating than bright white lights (such as LEDs). Maintaining the brightness as low as possible; limiting the times during which the lighting can be used to provide some dark periods. Motion sensors are strongly recommended, using a short timer to reduce the duration of lighting and reduce disturbance to bats. Directing the lighting to where it is needed to avoid light spillage onto vegetated margins; and minimising upward lighting by fitting lights with downward facing baffles to avoid light pollution.

6.10. Light can be restricted by fitting hoods which direct the light below the horizontal plane, at an angle less than seventy degrees. Limiting the height of lighting columns and directing light at a low level away from vegetation reduces the ecological impact of the light.

Compensatory roosts if bats are confirmed:

6.11. If bats are found to be roosting within the stables, then the provision of alternative roosting sites for bats during and post-construction works will be necessary to ensure the bats on site will have access to undisturbed roosts at all times. Compensatory roosting sites will be

designed and provided within the new build or a suitable alternative structure to replicate the lost roosts as closely as possible. These will be designed to be suitable for use by the specific species of bats due to be affected.

Site Enhancements:

6.12. As bats are likely to use the surrounding habitat, the installation of 2 woodcrete bat boxes such as the 3FN Schwegler Bat Box or the 2F Schwegler Bat Box (both double front panel), installed on southern aspects of mature trees on site is recommended.

6.13. Any future planting should seek to enhance biodiversity, improve connectivity to the surrounding habitats and provide food and shelter for a wide range of faunal species. The text regarding Landscape and Biodiversity from the Design and Access Statement provides excellent recommendations to accommodate a wide range of species including hedgehogs, birds and bats.

7. REFERENCES

Bat Conservation Trust (2016). Bat Surveys – Good Practice Guidelines. BCT London.

Gunnell, K., Murphy, B. & Williams, C. (2013). *Designing for Biodiversity: A technical guide for new and existing buildings.* Second Edition. RIBA Publishing.

Mitchell-Jones, A.J., (2002). Bat Mitigation Guidelines. English Nature, Peterborough.

Mitchell-Jones, A. J. & McLeish, A. P. (2004). Bat Workers' Manual (3rd Edition). JNCC, Peterborough.

Schofield, H. W. & Mitchell-Jones, A.J. (2004). The Bats of Britain and Ireland. Vincent Wildlife Trust, Ledbury.

APPENDIX 1 - SURVEY AND REPORTING LIMITATIONS AND EXCEPTIONS

This report and its survey results should be considered in conjunction with the terms and conditions proposed and scope of works agreed between Darwin Ecology Ltd and the client.

This report has been produced in the context of the proposals stated in the Introduction & Background section of this report (Section 2) and should not be used in any other context.

Darwin Ecology Ltd have endeavoured to identify the likely presence / absence of protected species wherever possible on site, where this falls within the agreed scope of works. Current standard methodologies have been used, which are accepted by Natural England and other statutory conservation bodies. No responsibility can be accepted where these methodologies fail to identify all species or significant species on site.

Extended Phase 1 and Preliminary Ecological survey techniques provide a preliminary assessment of the likelihood of protected species occurring on the development site, based on the suitability of the habitats and any field signs found during the site visit. A Phase 1 survey should not be taken as providing a full and definitive survey of any protected species group.

Extended Phase 1 and Preliminary Ecological Appraisals represent a snapshot of conditions at the time of survey and are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. Surveys should therefore not be considered a comprehensive list of all plant species or as conclusive proof that certain protected species are not present or will not be present in the future.

Where the presence/absence of a certain species is in question our ecologists must apply a precautionary approach until further survey data can be sought to better inform the decision.

Darwin Ecology Ltd will advise on the optimum survey season for a particular habitat or protected species prior to undertaking the survey work. Darwin Ecology Ltd cannot accept responsibility for the accuracy of surveys undertaken outside this period.

The potential impacts, mitigation and enhancement sections of the report provide an overview and is for guidance only. This section should not be solely relied upon, but should be considered in the context of the whole report.

Interpretations of survey results and recommendations outlined in the report represent our professional opinions, expressed in accordance with recognised industry practices and current legislation at the time of reporting. The results of survey work undertaken by Darwin Ecology Ltd are representative at the time of surveying.

Where the client had supplied us with data from previous reports, it has been assumed that this information is valid. No responsibility can be accepted by Darwin Ecology Ltd for inaccuracies within any previous data supplied.

Amendments to this report after its submission may be necessary in light of new, relevant information and / or legislation. This report should be referred to us for re-assessment if any such amendments are necessary or after the expiry of one year from the date of the report.