

Bat Scoping Survey Newlyn, Shinfield Road

Client Space Q
Reference S1176.002
Issue Two
Date 20 October 2021



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Non-technical Summary

Background

In October 2020, Crossman Associates was commissioned by Space Q Studio to undertake a bat and bird survey of Newlyn, Shinfield Road, Shinfield, Reading, Berks, RG2 9BE. Proposals are for a part two-storey part single-storey rear extension, single-storey side extension, upper floor side extension and entrance porch.

Methodology

Survey work was undertaken by Fairbrass Knowles, a licensed bat worker and experienced ecologist. The building was inspected both externally and internally for the presence of or signs of bats or birds such as droppings, food remains or staining. Two bat dusk activity surveys were conducted in August and September 2021.

Results

The house is a large two-storey detached dwelling set in a mature garden. Surrounding habitat is predominantly urban with gardens and pockets of mature broad-leaved woodland nearby. The dwelling provides a large, complex roof with multiple pitches. The building is generally in good condition but does provide bats with potential roosting features in crevices associated with the eaves and roof tiles. The roof void provided no evidence of bat occupation. The dwelling offers **moderate** suitability for roosting bats. No birds were noted in association with any aspect of the building.

Activity surveys confirm the presence of a low status non-breeding common pipistrelle transitional roost associated with the flat roof, on the south east elevation.

Recommendations

It is recommended that the following are undertaken as part of the development:

- Works should be guided by a Natural England Low Impact Licence
- Exterior lighting must take into account the presence of foraging bats

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1. Background

- 1.1. In October 2020, Crossman Associates was commissioned by Space Q Studio to undertake a bat and bird scoping survey of Newlyn, Shinfield Road, Shinfield, Reading, RG2 9BE; site Ordnance Survey grid reference SU 7332 6972.
- 1.2. Figure 1 in Appendix I provides a site location plan.
- 1.3. The objectives of the survey were to:
 - Make an assessment of the likely presence or absence of bats and birds
 - Identify any legislative or planning policy constraints relevant to the site
 - Determine the need for further surveys, compensation or mitigation

Site Description

- 1.4. Newlyn consists of a large two-storey brick built two storey detached dwelling with pitched roofs clad with peg tiles. The dwelling is thought to date from the 1950's and over the years the dwelling has been considerably enlarged on all elevations with a variety of mainly single storey extensions that include both pitched and flat roofs. Overall the dwelling remains in a well maintained condition and is occupied.
- 1.5. The dwellings sits within its own good sized plot that includes a good sized mature rear garden and is situated adjacent to the eastern edge of Shinfield Road (A327) in Shinfield; a southern urban district of the town of Reading. Immediate surroundings to the north and south are characterised by similar dwellings which occupy both sides of Shinfield Road; dwellings tend to have larger than average sized gardens, which tends to lead to a leafy environment. To the east the landscape becomes more densely built with residential areas, while to the west lies the grounds of a large school with associated tree edged playing fields.

- 1.6. The wider landscape is mainly urbanised; however, areas are occasionally punctuated by small pockets of significant broad-leaved woodland; which include Nores Hill to the south-west and The Cowsey to the north-west. A small nature reserve occupies land to the south-east of the sites and adjacent to the M4.

Proposals

- 1.7. Proposals are for the erection of a part single, part two-storey side extension, plus conversion of loft to create habitable accommodation with 2no. roof lights.

Legislation

- 1.8. In the UK all species of bats are protected under the Wildlife and Countryside Act (1981) as amended and the Conservation of Habitats and Species Regulations, 2017. Under this legislation it is a strict liability offence to injure or destroy a bat or to disturb damage or destroy the resting place of a bat. Under this legislation the UK is obliged to fully take into account bats within the planning process and the level of bat activity on-site must be fully assessed prior to the assessment the planning application
- 1.9. In Britain all wild birds are granted legal protection under the Wildlife & Countryside Act ((1981) (as amended)). This legislation protects the birds, their eggs and nests whilst being built or in use.

2. Methodology

Desktop Study

Data search

- 2.1. The MAGIC website was accessed to gain information on any statutory site designations within 4 km of the site that are designated for bats.

National Planning Policy

- 2.2. National Planning Policy has been reviewed for policies that relate to nature conservation relevant to the site.

Field Survey

Bat scoping survey

- 2.3. The building was methodically inspected internally and externally for any evidence of roosting bats, including actual bats, droppings, urine staining and evidence of feeding activity such as discarded insect wings and cases.
- 2.4. The building was also assessed for its suitability to support roosting bats by considering several factors including whether bats can access internal and external voids within the building and whether these voids provide adequate protection and shelter for roosting bats. If the building is not confirmed as a roost, it is assessed from High to Negligible Suitability as follows;
- **High Suitability** – many roosting opportunities including suitability for maternity colonies. Buildings tend to be old, large and rural;

- **Moderate Suitability** – some roosting opportunities. Building tend to be old, rural or with adjacent vegetation;
- **Low Suitability** – few roosting opportunities. Buildings tend to be modern, urban and maintained;
- **Negligible Suitability** – insignificant roosting opportunities. Buildings tend to be small, modern, urban and very well maintained.

Evening emergence / activity surveys

- 2.5. Activity surveys were undertaken in August and September 2021 and consisted of two dusk emergence surveys. Surveys were led by experienced ecologist Miguel Canovas. Surveyors were positioned so that all aspects of the building suitable for roosting bats could be observed. Surveys were undertaken during suitable weather conditions. The emergence surveys commenced 15 minutes prior to sunset and continued for two hours. All general bat activity on site was also noted.
- 2.6. Echo meter and Peersonic bat detectors were used together with visual observations on flight patterns and feeding behaviour to aid identification to species level. Recordings of bat calls were made and later analysed using dedicated computer software by Wildlife acoustics.

Birds

- 2.7. The building was also inspected for the presence of birds including house sparrow *Passer domesticus*. The building was checked for field signs including nesting material, accumulations of droppings and/or pellets.

3. Results

Desktop Study

Data Search

- 3.1. The MAGIC website informed of no sites specifically designated for bats within a 4 km radius.

Planning Policy

- 3.2. The National Planning Policy Framework (NPPF) contains sections of relevance to nature conservation that include:

- Paragraph 174: To protect and enhance biodiversity and geodiversity, plans should:
 - a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity⁵⁶; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;
 - b) and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

- Paragraph 175: When determining planning applications, local planning authorities should apply the following principles:
 - a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
 - c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists; and
 - d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

Field Survey

Bat scoping survey

- 3.3. Survey work was undertaken by Fairbrass Knowles an experienced ecologist and fully licensed bat worker and took place on 11 November 2020. The building was fully accessible.
- 3.4. The external and internal conditions of the building are described in the table below and photographic reference can be found in Appendix II.
- 3.5. A table in Appendix III set out the criteria for the assessment of potential for a building to support roosting bats.

Building	Feature	Feature Description	Bat suitability
Penny Royal	Overview	A large, higher end detached two storey dwelling built mainly of brick with pitched roofs of clay peg tiles. The original house is thought to date from the 1950's and has over the years been considerably enlarged on all elevations with a variety of single and two storey extensions with both pitched and flat roofs. Overall, the dwelling remains in a well-maintained state and is occupied.	Moderate Suitability ☒
	Exterior	Exterior walls are formed from a combination of well-pointed red cavity brick work and walls finished in painted render. All walls remain in good condition and provide no significant cracks, holes or evidence of subsidence. All windows and doors remain in good condition and fit well within their respective reveals.	
	Interior	Areas of living accommodation are composed of well-sealed rooms with plaster and painted walls and ceilings. A single roof void is present, occupying the main and original roof void, it consists of a rectangular shaped loft space that has a floor to apex height of approximately 2.5 m. The roof void is constructed following	

Building	Feature	Feature Description	Bat suitability
		a standard cut and pitch roof using exposed and gauged timbers that all remain in good condition. Traditional type 1 f Sarking felt forms the sarking layer throughout and remains in good condition with no evidence of significant rips or holes. A small room has been created within the western half of the loft and this has been decorated to living accommodation standards with painted plaster walls and ceilings. A large window is present on the western gable and provides good levels of natutal light. Refer to photograph 1 and 10. Overall the void appears to remain well sealed and during the inspection no obvious access points were noted and no bats, bat droppings or any other bat related evidence was found to be present.	
	Roof	The main roof is composed of a series of connected double pitched roofs clad with clay peg tiles and simple half round clay ridge tiles. Further pitched and clay tiled roofs clad newer extensions while other remaining extensions are composed of flat roofs covered with mineralised felt.	

Building	Feature	Feature Description	Bat suitability
		Overall roofs remain sound and the flat roofs all remain well sealed. Pitched roofs do however show various small but significant crevices created by occasional broken, slipped and irregular shaped tiles. These tend to be present on all elevations and provide small crevice dwelling bats with the potential to access the shallow and hidden cavity that lays in-between the sarking layer and the underside of the roof tile. Refer to photograph 2. Pitched roofs are not fitted with soffits, instead the rafters protrude slightly with the intervening spaces between the rafters infilled with timber boards, which generally fit tightly, however a few small but significant crevices were noted on the northern elevation, where boards may have warped/ split, creating small but significant crevices suitable for small crevice dwelling bats to gain access to the hidden cavity that lays behind. Refer to photographs 6 & 7. Verges all remain well-sealed as does the flashings that seal the chimney bases to the roof tiles.	

Bat emergence survey

- 3.6. Two surveyors attended the surveys. The building has moderate Suitability for roosting bats and was subject to two evening emergence surveys.
- 3.7. The table below details the results of the bat dusk survey

Table 2: Bat emergence results

Survey Date	05/08/2021	16/09/2021
Survey type	Dusk emergence	Dusk emergence
Survey Conditions	Cloud: 85% Weather: Dry Wind level 0 / 2 Start temp 15°C End temp 14°C Sunset time 20.45	Cloud: 30% Weather: Dry Wind level 0 / 1 Start temp 18°C End temp 17°C Sunset time 19.17
Emergence	4 Common pipistrelle bats emerged from the building.	1 Common pipistrelle bat emerged from the building.
General bat activity	<i>An emergence by a common pipistrelle at 20.45 bat seen emerging from the corner of the</i>	<i>An emergence by a common pipistrelle at 19.33 bat seen emerging from the corner of the</i>

	<i>flat roof SE elevation and flying E towards the back garden.</i> <i>An emergence by a common pipistrelle at 21.07, 2 (two) bats same as above.</i> <i>An emergence by a common pipistrelle at 21.20 same as above</i> A constant activity by common pipistrelle from 21.03 to 21.32 bats seen flying back and forth around the property garden and drive.	<i>flat roof SE elevation and flying E towards the back garden.</i> Constant activity by a single common pipistrelle bat. The bat was observed making foraging passes around the garden and over the front drive. 19.40 – 20.30.
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Birds

- 3.8. A house sparrow was observed re-entering the front gable near apex on the west elevation of the dwelling.

Evaluation

Bats

Bat habitat

- 3.9. The dwelling is located within a largely urbanised setting, however immediate and adjacent habitats provide numerous, well-connected gardens that in turn provide green corridors that link into the wider landscape that does provide a number of small woodlands, one of which is a local nature reserve. The area is considered to provide suitable habitat for more light tolerant species such as common pipistrelle *Pipistrellus pipistrellus*.

Scoping survey

- 3.10. During the scoping survey, no droppings, staining, feeding remains or actual bats were observed.
- 3.11. Potential roosting suitability:
- PRF's for crevice dwelling bats have been identified in association with crevices associated with roof tiles on the pitched roofs (for an example refer to photograph 2) and crevices associated with the eaves on the northerly elevations, (photographs 6 & 7)
- 3.12. The dwelling provides **moderate suitability** for roosting bats.

Activity surveys

- 3.13. The activity surveys revealed that bats are roosting in the dwelling. On the first dusk survey (05/08/2021) four common pipistrelle bats were observed emerging from the south-east elevation (flat roof corner under the fascia board). On the second dusk survey (16/09/2021), one common pipistrelle bat was observed emerging from the same location as the first dusk survey.
- 3.14. Common pipistrelle bats were the most abundant species and were recorded foraging around the dwellings garden.
- 3.15. The bat scoping and two activity surveys are considered to provide sufficient data to characterise the roost. The presence of a four common pipistrelle bats during august, but only a single bat by September, would indicate that the roost is likely to be a transitional roost. Such roosts are used by a few individuals or occasionally small groups for generally short periods of time or in the period prior to hibernation. This type of roost has a low conservation status and is not subject to timing constraints for development.

- 3.16. The lack of droppings underneath the roost or stuck to the walls, suggests that the roost is not a maternity roost.
- 3.17. The roost is not considered to be suitable for hibernation due to its relative exposure and potential for disturbance.

4. Recommendations

- 4.1. The recommendations in the paragraphs below are provided to help ensure that wildlife and important ecological features are protected during the course of works. Recommendations also set out mitigation measures to minimise harm where this cannot be avoided and provide compensation measures to allow the proposals to meet current legislative and planning policy objectives.
- 4.2. The Natural Environment and Rural Communities (NERC) Act (2006) states that a public authority must 'in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat'.
- 4.3. Under the Government's National Planning Policy Framework (NPPF) opportunities to incorporate biodiversity in and around developments should be encouraged.
- 4.4. Paragraph 174b) of the NPPF (2018) states 'Plans should ...identify and pursue opportunities for securing measurable net gains for biodiversity' and Paragraph 175d) states that '...opportunities to incorporate biodiversity improvements in and around developments should be encouraged especially where this can secure measurable net gains for biodiversity'.

Bats

Natural England Low Impact Class Licence

- 4.5. The dwelling supports a single Transitional / Occasional roost used by common pipistrelle bats, which is legally protected. Works to demolish the building will require a European Protected Species Development Licence from Natural England.

- 4.6. It will be necessary to register the site under the Natural England Mitigation Class Licence scheme, which is the most appropriate licence for low status roosts used by common bat species.
- 4.7. Once planning permission has been granted and prior to works commencing, the site will be registered with Natural England under the Low Impact Class Mitigation Scheme.
- 4.8. The Registration requires the details of survey results, planned works and proposed mitigation, which is detailed below. Licence applications require full planning permission and Natural England aim to process applications within 10 working days of receipt.

Mitigation

- 4.9. The removal of the roof would result in the loss of one number non-breeding common pipistrelle transitional / occasional roost used by low numbers of bats. Due to the low conservation status of the roost there is not considered to be any timing constraint to the development.
- 4.10. Prior to works commencing there will be a requirement to undertake a toolbox talk which will be a conversation between the ecologist and the builders to inform them of their obligations in relation to roosting bats. The toolbox talk will cover basics such as bat biology and where bats might be found during the development and what to do with a bat is found during works.
- 4.11. Also prior to works commencing, one permanent woodcrete bat box will be installed within the grounds of the site. The bat box will function as a receptor for any bats which are found during the development works. In the event that a bat is found, it will be removed by an ecologist, using a gloved hand, and placed within the bat box. The bat box provides a safe place to put any bats that are found during the development.

- 4.12. If works are likely to take place between 31 October – 31 April, one hibernation grade bat box will be made available.
- 4.13. Key stages of development will be overseen by an ecologist and these will include the removal of roof tiles and carpentry associated with their fitment.

Compensation

Integral bat boxes

- 4.14. Replacement bat roosts for common pipistrelle bat will consist of two integrated (in-built) Habibat type 001 bat roosting boxes.
- 4.15. This model is designed for a variety of bat species, including pipistrelle bats. The boxes are approximately the size of a shoebox and are incorporated in the outer skin of the supporting walls as they are constructed. The boxes can be fitted to suit any existing brick, wood, stonework or rendered finish, making the box unobtrusive and aesthetically pleasing. On existing walls a section of masonry / cladding will require removal.
- 4.16. Apart from the front entrance the Habibat Roosting Box is fully sealed preventing bats from gaining entry to any interior part of the building. The boxes should be sited approximately 3 m – 4 m high on exterior gable ends / walls. The boxes should ideally be sited in such a location that bats are able to access into suitable habitat and away from exterior lighting, windows, doors and main throughfares. The boxes are self-cleaning and require no further maintenance.
- 4.17. Bat boxes can be purchased directly from www.habibat.co.uk telephone number 01642 724626.

- 4.18. The final siting of the bat boxes will be done in conjunction with the architects / planners / ecologist and will form part of the legal agreement set out under the Natural England Low Impact Licence.
- 4.19. An information sheet on integral bat roosting boxes is included in Appendix III.

Lighting

- 4.20. The surveys have revealed that the property is used by bats as a foraging / commuting site, including greater horseshoe bats, of which significant numbers were recorded during the first activity survey. The use of inappropriate use of external lighting has the potential to disturb and discourage the areas usage by bats and other nocturnal wildlife, leading to the potential severance of wildlife corridors, possibly leading to the abandonment of important foraging / commuting routes if inappropriate exterior lighting is introduced, forcing bats to take less favourable routes which may have long term impacts on important maternity / hibernation sites. Therefore, any exterior lighting that is to be employed should be of the modern LED-type and should take into account the presence of bats.
- 4.21. The choice of lighting is important to minimising light spill and it is recommended that the following factors are considered to reduce the impact as much as possible:
- Narrow spectrum lights with no UV content
 - Low pressure sodium and/or warm white LED
 - Directional downlighting, illuminating downwards and below the horizontal plane to avoid light trespass
- 4.22. The lighting of pathways and the driveway (if desired) can be achieved by using directional lights and or cowl. An information sheet on lighting can be found in Appendix III.

- 4.23. The lighting of pathways and the driveway (if desired) can be achieved by using directional lights and or cowl. An information sheet on lighting can be found in Appendix III.

Birds

Integral sparrow nest boxes

- 4.24. New nesting opportunities should be provided for the local bird population with a particular emphasis on house sparrows (which have suffered significant decline) and were observed in the general vicinity. It is recommended that 2 number sparrow nest boxes are fitted.
- 4.25. Sparrow nest boxes are ideally fitted below eaves or on gable walls and away from windows, doors and main throughfares and ideally on a north or eastern elevation or in-between. Suitable models include the Schwegler 1SP and a model produced by Vivara, both are suitable for surface mounting as well as integral mounting. Both models are strong, durable, long lasting and available in brown or stone colour. An information sheet on integral bird nesting boxes is included in Appendix III.
- 4.26. Bird boxes are available from www.wildlifeservices.co.uk telephone number 0333 9000 92. Further models are supplied by Habitat www.habitat.co.uk telephone number 01642 724626.
- 4.27. **It is recommended that the siting of the bird box is done in consultation with a suitably qualified ecologist.**

5. Limitations

- 5.1. This report records wildlife found during the survey and anecdotal evidence of sightings. It does not record any plants or animals that may appear at other times of the year and were therefore not evident at the time of visit.
- 5.2. This report represents a preliminary assessment only. Recommendations and conclusions are subject to change should further findings significantly differ from those collected from the survey efforts to date.
- 5.3. The advice contained in this report relate primarily to factual survey results and general guidance only. On all legal matters you are advised to take legal advice.

6. References

Bat Conservation Trust (BCT) *Bats and Lighting in the UK* BCT

HMSO (1981) *Wildlife and Countryside Act 1981 (and subsequent amendments)*. HMSO

HMSO (1995) *Biodiversity*. The UK Steering Group Report

Joint Nature Conservation Committee (JNCC) *Common Standards Monitoring Guidance for Reptiles and Amphibians* (2004) JNCC

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

Mitchell-Jones, A.J , & McLeish A.P. (2012) *The Bat Worker's Manual* (4th Edition)

Multi-Agency Geographical Information for the Countryside (MAGIC)
Website at www.magic.gov.uk

Stace, C. (1997) *New Flora of the British Isles 2nd Edition*. Cambridge University Press

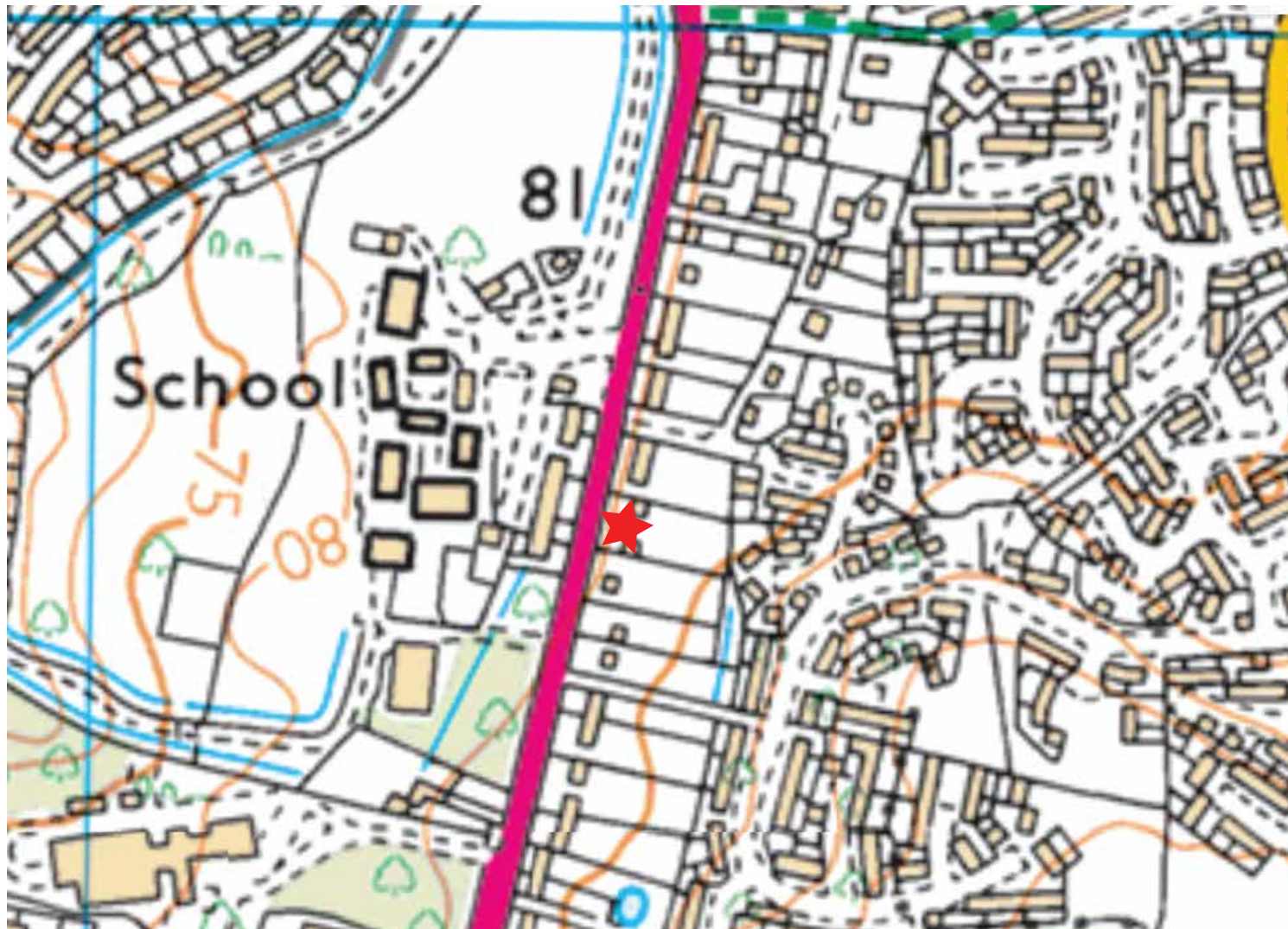
TSO (2012) *National Planning Policy Framework*. TSO

TSO (2006) *Natural Environment and Rural Communities Act* TSO

Appendix I – Site Figures



Site location



Client Azam Ashari
Title Site Location
Site Newlyn, Reading
Figure 1
Date 25 November 2020
Scale Indicative



Appendix II – Site Photographs

Photographs 1- 3



Photograph 1:

Front; western elevation.

This window illuminates the section of converted loft



Photograph 2:

Detail; showing gap associated with a missing roof tile.



Photograph 3:

Southern elevation

Photographs 4 - 6



Photograph 4:

Rear; eastern elevation



Photograph 5:

Northern side elevation



Photograph 6:

Gap associated with the boarding beneath the eaves overhang; northern elevation

Photographs 7 - 9



Photograph 7:

Further gap associated with the eaves; north-west corner



Photograph 8:

The modern extensions are fitted with close fitting fascias and soffits



Photograph 9:

Eastern end of roof void

Photograph 10



Photograph 10:

Roof void; western side; which has been converted to living accommodation.



Appendix III– Information Sheets

Bat Habitat Suitably Criteria

Bat Roosting Suitability	Criteria	Survey requirement to prove likely absence
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further survey work required
Low	A building, structure or tree with one or more potential roosting sites that could be used by individual bats opportunistically; however, these possible roost sites do not provide enough space, shelter, protection and/or suitable surrounding habitat to be used by large numbers of bats and are unlikely to be suitable for maternity or hibernation roosts.	One activity survey
Medium	A building, structure or tree with one or more potential roost sites that could be used by bats due to the size, shelter, protection, conditions and surrounding habit, but is unlikely to support a roost of high conservation status.	Two activity surveys
High	A building, structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three activity surveys

Survey requirements are taken from Bat Surveys for Professional Ecologists: Good Practice Guidelines (2016), which is the recognised industry standard guidance used by local planning authorities and other statutory consultees.

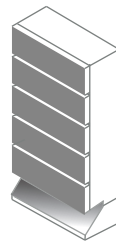
Bat Tubes

BUILT-IN HABITATS N° 004

Woodcrete Bat Tubes

We recommend the use of woodcrete-type bat tubes that are manufactured by Habibat or Schwegler. These are a well known brands so are always accepted as a compensation measure for planning applications and Natural England Licence applications. The tubes also have a low visual impact on the development because they can be built into the exterior wall and then rendered or painted, or in the case of the Habibat, faced with brick or stone.

Recommended bat tubes

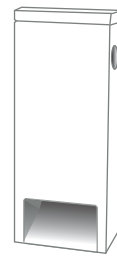


Habibat

The great advantage of the Habibat box is that it can be faced with brick, stone or render, so that it blends in and doesn't alter the aesthetic of the build.

Specifications

Height	44 cm
Width	21 cm
Depth	10 cm
Weight	7 kg



Schwegler 1FR & 2FR

There are two similar designs that we use regularly. The 1FR is designed to be used singularly whereas the 2FR has transverse connecting holes (model shown) that allow tubes to be connected together.

Specifications

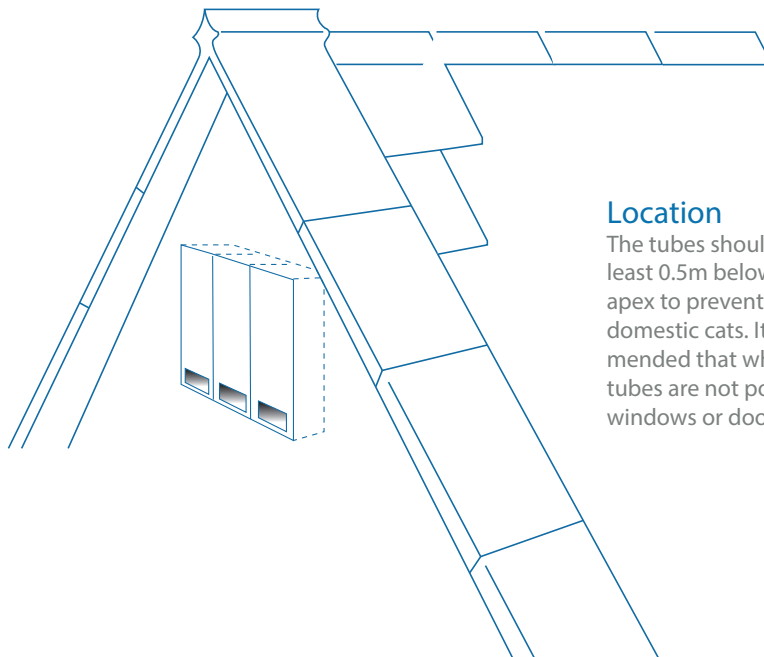
Height	47.5 cm
Width	20 cm
Depth	12.5 cm
Weight	9.8 kg

How Many to Install

The number of bat tubes to install is dependent on the level of compensation or mitigation that is required. Typically one tube is recommended on sites where there are low number of bats and multiple groups of tubes are recommended on sites of high ecological significance.

Installation

The tubes should be built into the exterior wall of the building, typically at the gable apex. The tubes should be installed flush with the surrounding wall and can then be rendered or painted with breathable paint if required.



Location

The tubes should be positioned at least 0.5m below the eave or gable apex to prevent predation by domestic cats. It is also recommended that where practical, the tubes are not positioned above windows or doors.

Bat Tubes

Bat tubes are an excellent way to provide discreet and low impact roosting opportunities for certain species of bats that tend to occupy crevices within buildings. They are relatively compact and can be installed flush or beneath a rendered surface and can be painted with an air permeable paint if required.


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Written by Alex Crossman

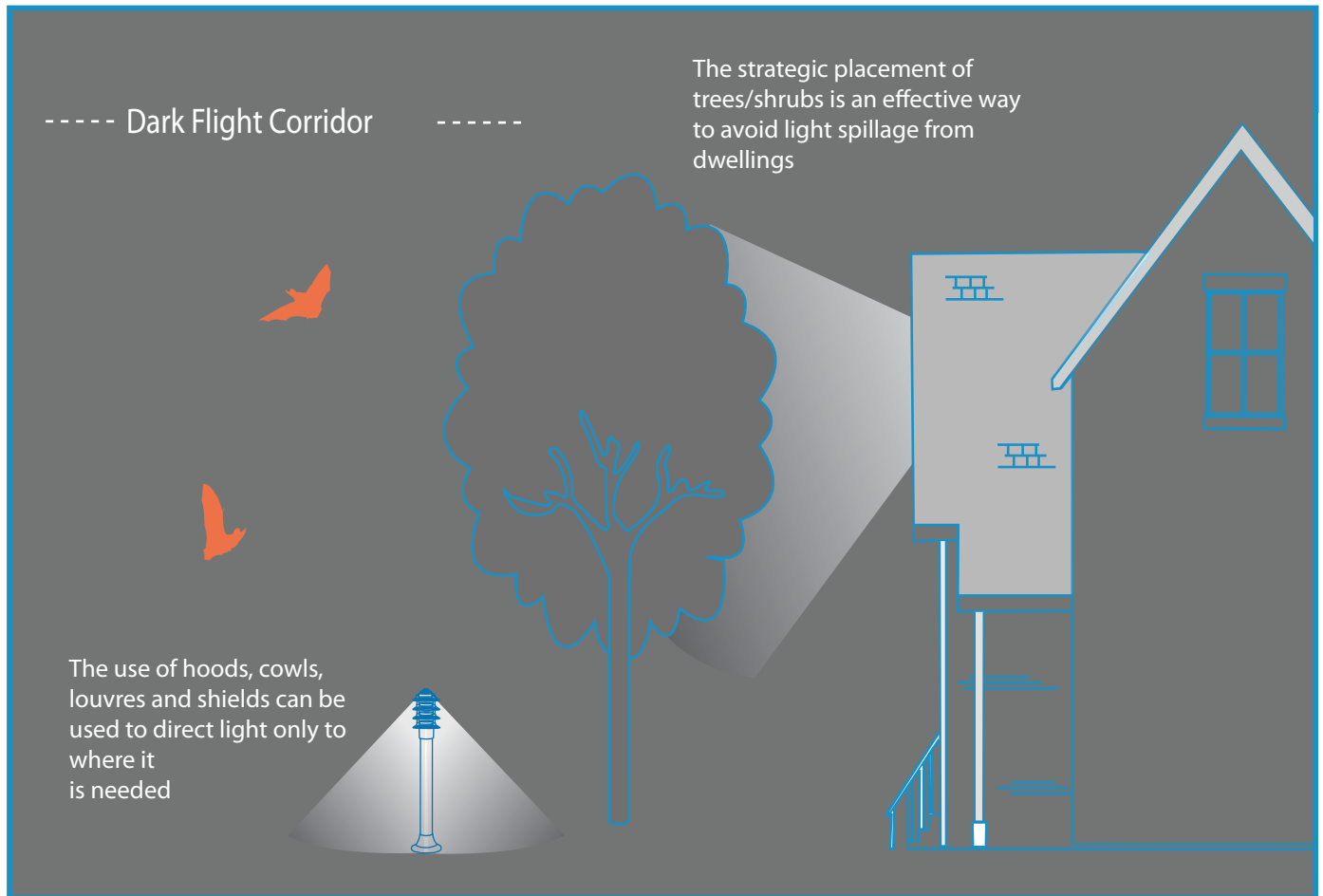
01761 233414

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Fire Engine House, Oakhill, Bath, BA3 5BJ

Sensitive Lighting for Bats

MITIGATION GUIDELINE N° 001



Lamp Type

The impact of light on bats can be minimised by the use of low/high pressure sodium lamps.

Lighting Column

The height of lighting columns should be kept as low as possible to reduce the impact of light spill. For example, when designing lighting for pedestrian walkways, use short bollard lights that produce a low level light (as low as 3 lux) directed downwards.

Light Mapping

Mapping the light spill of a lighting scheme using computer software can prove essential in designing schemes that are fit for purpose, that minimise energy costs and create dark flight corridors and foraging areas for bats.

Light Levels

Proposed light levels within landscape plans should be as low as possible. If lighting is not needed, don't light.

Timing of Lighting

The times at when lighting is left on should be limited where possible. The use of movement sensors and timers for lights is useful for saving energy and reducing the amount of time a light is left on.

Impacts of Light on Bats

As nocturnal mammals, light causes disturbance to bats and many species will actively avoid lit areas. The illumination of bat roosts can delay bats emerging and thus shorten their foraging time and may eventually lead to bats abandoning their roost. The illumination of foraging or commuting areas may also lead to an increase in the rate of predation of bats by predators.


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Information sheet Artificial bird nesting boxes for Buildings: Swifts, house martins and house sparrows



Habibat house
sparrow nest box



Vivara woodstone sparrow
nest box; suitable for both
integral fitment or surface
mounting

Ibstock Swift boxes are also suitable for house sparrows. Can be customised to suit any exterior finish. Site boxes under eaves, away from windows and direct sunlight.

Sparrow boxes should be grouped together and be at least 2 m of the ground. The boxes can be also be sited on gable walls. At least 3 per averaged size house.

Swifts boxes should be at least 5 m above the ground with an clear un-obstructed flight path.

Schwegler house martin box model 9 b double is a suitable box for house martins and can be used to encourage the uptake of a building by this species. The boxes can be attached to the exterior walls in a sheltered position; ideally beneath the eaves. At least two sets should be placed on an averaged size house.

Ibstock Box



Schwegler model 9b