

Bat Surveys Report: Tourmalene, 63 Old Watling Street, Gravesend

Client Mr H Sangha
Reference S1207.001
Issue One
Date 30 June 2023

Written by Miguel Canovas

Crossman Associates

Ecological Consultants
Fire Engine House
Oakhill, Bath BA3 5BJ
01761 233414
info@crossmanassociates.co.uk

www.crossmanassociates.co.uk



Non-technical Summary

Background

In May 2023, Crossman Associates was commissioned to undertake a bat survey of Tourmalene, 63 Old Watling Street, Gravesend DA11 7NT. Development proposals include demolition and replacement.

Methods

The scoping survey was undertaken by Miguel Canovas, an experienced ecologist and bat worker. The building was inspected both externally and internally for any evidence of bat / bird presence, such as droppings, food remains, staining or actual bats / birds. Two additional bat activity surveys were also undertaken.

Results

The dwelling is located within a residential area. Overall, the dwelling remains in good condition. However, the roof provides features suitable for roosting bats and include broken/lifted roof/ hanging wall tiles. The property has moderate suitability for roosting bats.

The Garage has negligible suitability for roosting bats.

The bat surveys identified a day roost of common pipistrelles.

Recommendations

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

- A Natural England bat licence.
- Ecological enhancements to include two bat boxes and a bird nest box.
- Exterior lighting planned sensitive to nocturnal wildlife.

Contents

1. BACKGROUND	3
SITE DESCRIPTION	3
LEGISLATION	3
2. METHODOLOGY	5
DESKTOP STUDY	5
3. RESULTS	7
DESKTOP STUDY	7
FIELD SURVEY	9
4. RECOMMENDATIONS	14
SPECIES RECOMMENDATIONS	14
BIODIVERSITY ENHANCEMENTS	17
5. LIMITATIONS	18
6. REFERENCES	19

1. Background

- 1.1. In May 2023, Crossman Associates was commissioned to undertake a bat survey of Tourmalene, 63 Old Watling Street, Gravesend DA11 7NT. The site Ordnance Survey grid reference for the site is TQ 64455 71217. Development proposals include demolition and replacement.
- 1.2. Figure 1 under Appendix II provides a site location map.
- 1.3. The objectives of the survey were to:
 - Make an assessment of the likely presence or absence of bats
 - Identify any legislative or planning policy constraints relevant to the site
 - Determine the need for further surveys, compensation or mitigation

Site Description

- 1.4. The building comprises a detached house, a detached garage with a well-maintained garden.
- 1.5. The property is located in a residential environment south of Gravesend, Kent. Surrounding areas tend to include similar properties with maintained gardens and there is a nearby golf course. The property occupies a residential environment near to parklands.

Legislation

- 1.6. 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 (Amendment) (EU Exit) 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.
- 1.7. 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. A bat scoping survey was carried out on the 9th May 2023 by Miguel Canovas, an experienced ecologist and licenced bat worker.
- 2.4. 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.
- 2.5. 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. Buildings tend to be old, large and rural
- **Moderate Suitability** – some roosting opportunities. Buildings tend to be old, rural with some recent maintenance
- **Low Suitability** – few roosting opportunities. Buildings tend to be modern, urban and well maintained
- **Negligible Suitability** – insignificant roosting opportunities. Buildings tend to be small, modern, urban and very well maintained.

Birds

- 2.6. 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.

Evening emergence re-entry/ activity surveys

- 2.7. Two evening emergence/ activity surveys were carried out by two bat surveyors led by experience and licenced bat worker Miguel Canovas. The surveyors were positioned so that all aspects of the building suitable for roosting bats could be observed. The Surveys were undertaken during suitable weather conditions. The emergence surveys commenced at 15 minutes before sunset and continued for two hours.
- 2.8. Echo meter touch and Elekon batscanner bat detectors and IR cameras 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 Audacity and wildlife acoustics.

3. Results

Desktop Study

Data Search

- 3.1. The MAGIC website informed that there are no statutory sites within 4 km of the site designated for bats.

Planning Policy

- 3.2. National policy guidance is provided by National Planning Policy Framework (NPPF), which sets out the Government's planning policies for England and how they should be applied to planning applications;

Conserving and enhancing the natural environment

Planning decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Habitats and Biodiversity

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 reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Field Survey

Bat scoping survey

- 3.3. The external and internal conditions of the buildings are described in the table below and photographs can be found in Appendix II.
- 3.4. A table within Appendix III; information sheets set out the criteria for the way a building is assessed for its potential to support roosting bats.

Building	Feature	Feature Description	Bat suitability
Tourmalene, Gravesend	Overview	Detached two storey house. The property, is in good condition and is currently occupied. No bats or evidence of bats were found inside or outside of the property.	Moderate suitability ☒
	Exterior	Brick and rendered walls no gaps or cracks were observed. The windows and doors are all well sealed. There are hanging wall tiles around the building, lifted tiles and gaps were observed. A well-maintained garden is present at front and rear of the dwelling.	
	Interior	Areas of living accommodation are composed of rooms with well-sealed rooms with plaster and painted walls and ceilings. The roof voids are insulated, exposed timbers and type 1 bituminous sarking lining. No gaps were observed.	
	Roof	The roof is clad with flat roof tiles. There are few lifted/ broken tiles on the roof.	

Building	Feature	Feature Description	Bat suitability
		The chimney brick work is in good condition and the flash work which seals the chimney to the roof remain well sealed in place.	
	Garage	The garage walls and roof remain in good condition, no gaps or cracks were observed.	Negligible suitability ☒

Bat emergence survey

- 3.5. The property has been assessed to offer moderate Suitability for roosting bats, therefore, in line with survey guidance (2016), two evening emergence survey were undertaken on 31th May and 29th June. The surveys were led by Miguel Canovas CEnv, an experienced ecologist and licenced bat worker.
- 3.6. The table below details the results of the surveys.

Table 2; Bat emergence table

Survey Date	31/05/2023	29/06/2023
Survey Conditions	Cloud: 90% Weather: Dry Wind level 0 / 1 Start temp 14 ⁰ C End temp 13 ⁰ C Sunset time 20.53	Cloud: 30% Weather: Dry Wind level 0 / 1 Start temp 18 ⁰ C End temp 17 ⁰ C Sunset time 21.19
Emergence survey	21.25 a common pipistrelle bat emerged from a gap between the window and the wall hanging tile southern elevation dormer.	21.25 a common pipistrelle bat emerged from a gap at the wall hanging tile northern elevation dormer.
General bat activity. Non emergence	21.25 the common pipistrelle <i>Pipistrellus pipistrellus</i> bat emerged and flew south across the front garden and did not return during the survey.	21.43 the common pipistrelle bat emerged and flew east to the neighboring gardens. 21.45 A pass by a noctule bat not seen.

Birds

- 3.7. No birds or bird nesting activity was recorded in any aspect of the dwelling.

Evaluation

Bat scoping survey

- 3.8. The site is located in a residential area but lies near to parkland and farmlands, which is likely to function as commuting and foraging resource for different species of bats.
- 3.9. During the survey no bats were present, and no bat droppings were found.

Garage

- 3.10. The garage offers no significant bat roosting opportunities and is assessed to have **negligible Suitability** for roosting bats.
- 3.11. During the scoping survey no droppings, staining, feeding remains or actual bats were observed in any aspect of the building. No evidence of bat activity was noted.

Emergence/ Re-entry surveys

- 3.12. The emergence and re-entry surveys identified common pipstrelle bats emerging and the external hanging wall tiles of the building.
- 3.13. The property is not considered to be supporting a maternity roost due to absence of a large quantity of droppings or any other evidence to suggest large numbers of bats.
- 3.14. The low number of bats confirms the presence of a non-breeding day roost for common pipistrelles. The roost is of low conservation value.
- 3.15. Current proposals will destroy the roost, possibly leading to the injury or death of bats if they are present at the time of works. Without an appropriate Natural England licence in place this would be a strict liability offence.

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. The NPPF (2021) states that planning decisions should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Species recommendations

Bats

- 4.4. All bats within the UK are fully protected under the Wildlife and Countryside Act (1981) as Amended and the Conservation of Habitats and Species Regulations 2017. Under this registration there are strict liability offence to injure or destroy a bat or to disturb, damage or destroy the resting place (roost) of a bat. Under the Bonn Convention, the UK is obliged through the planning system to protect important bat habitats.

- 4.5. The level of survey work is considered to be adequate to confirm the current status of roosting bats on site and it is not considered necessary or beneficial to undertake any additional survey visits.

Natural England Low Impact Class Licence

- 4.6. For works to legally proceed, 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 non-breeding summer roosts used by commoner bat species.
- 4.7. 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.

Compensations

- 4.8. The proposals are a demolition and replacement. In order to maintain bats on site at a favourable conservation status, it will be necessary to provide bats with a suitable and proportional replacement roost.

Crevice dwelling bats

- 4.9. Currently the only species identified is pipistrelle bat, which are a crevice-dwelling bat, and the following provides suitable compensation replacement roost for crevice dwelling bats.
- 4.10. The Habibat Bat Box is a solid box, approximately the size of a shoe box, made of insulated concrete with an internal roost space, which can be incorporated into the fabric of a building when it is being renovated.
- 4.11. The Habibat box is suitable for species, which are most commonly found roosting in buildings in the UK, including pipistrelle sp. These boxes will offer a permanent roosting opportunity for crevice dwelling bats.

- 4.12. Two boxes will be required to provide adequate compensation.

Installation information

- 4.13. Correct placement of Habibat is fundamental to the successful uptake by bats, it will be necessary to remove a section of the brick / stonework, which will enable a flush fit. A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish to create an aesthetic finish.
- 4.14. Habibat bat boxes are available direct from <http://www.habibat.co.uk/>
- 4.15. An information sheet on this type of bat roost can be found under Appendix III; information sheets.

Mitigation

- 4.16. Due to the presence of bat roosts, roof removal will need to be overseen by a licenced bat ecologist. Works will also be preceded with a toolbox talk.
- 4.17. A Schwegler tree-mounted bat box (or similar) will be installed on a mature tree prior to the start of works and will act as safe place for bats to be put if any are found during works.

Timing constraints

- 4.18. In the case of non-breeding summer roosts for abundant species (including common pipistrelle bat) there is not considered to be a timing constraint to the works.

Lighting

- 4.19. The site lies near to parklands and farmlands, these habitats are likely to support a number of species of bat; typical species that would be likely to be present include common pipistrelle and soprano pipistrelle, 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 and avoid over illumination of the garden, trees, river and adjacent properties. This can be achieved by using directional lights and or cowls.

Biodiversity Enhancements

- 4.20. During the construction phase of the loft conversion, there is an opportunity to incorporate inexpensive ecological enhancements that aim to increase the biodiversity of the site.
- 4.21. New nesting opportunities will be provided for the local bird population with a particular emphasis on house sparrows (which have suffered significant decline) and it is recommended that a sparrow nest box is installed within the development.
- 4.22. Sparrow nest boxes are ideally fitted below eaves. Suitable models include the Vivara Woodstone Sparrow Nest Box, which is suitable for integral and surface mounting. This model is strong, durable, long lasting and available in brown or stone colour. Models can be found on vivira.co.uk.

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. 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 (2021) *National Planning Policy Framework*. TSO

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

Appendix I – Site Figures



Site location



Client Mr H Sangha
Title Location plan
Site Tourmalene, Gravesend
Figure 1
Date 30 June 2023
Scale xxx

Appendix I – Site Photographs

Photographs 1- 3



Photograph 1:

Front- Southern elevation

Bat emergence location



Photograph 2:

Southwestern elevation



Photograph 3:

Back - Northern elevation

Bat emergence location



Photographs 4 - 6



Photograph 4:

Roof void



Photograph 5:

Garage



Photograph 6:

Garden



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.

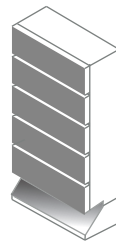
Bat Tubes

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

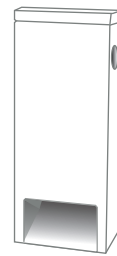


Habibat

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

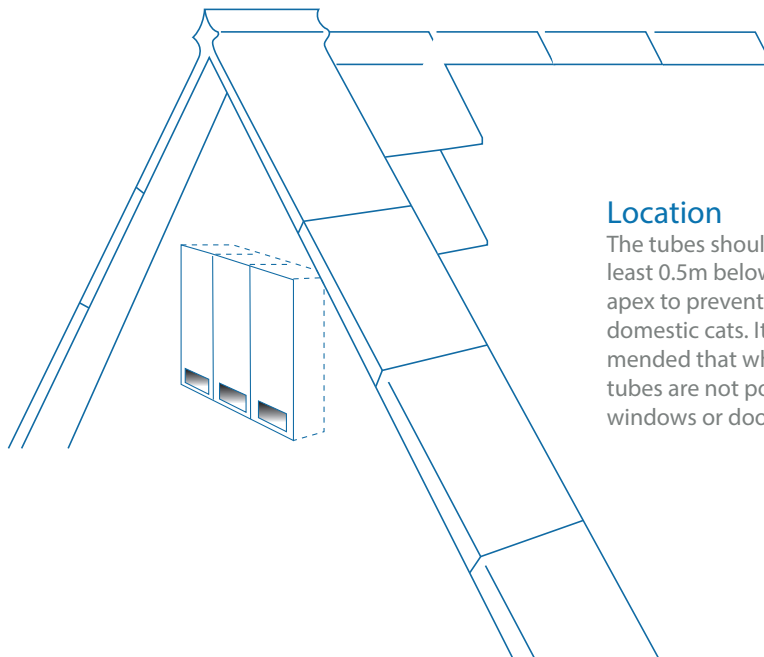
Height	47.5 cm
Width	20 cm
Depth	12.5 cm
Weight	9.8 kg

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.


crossman
ASSOCIATES

Written by Alex Crossman

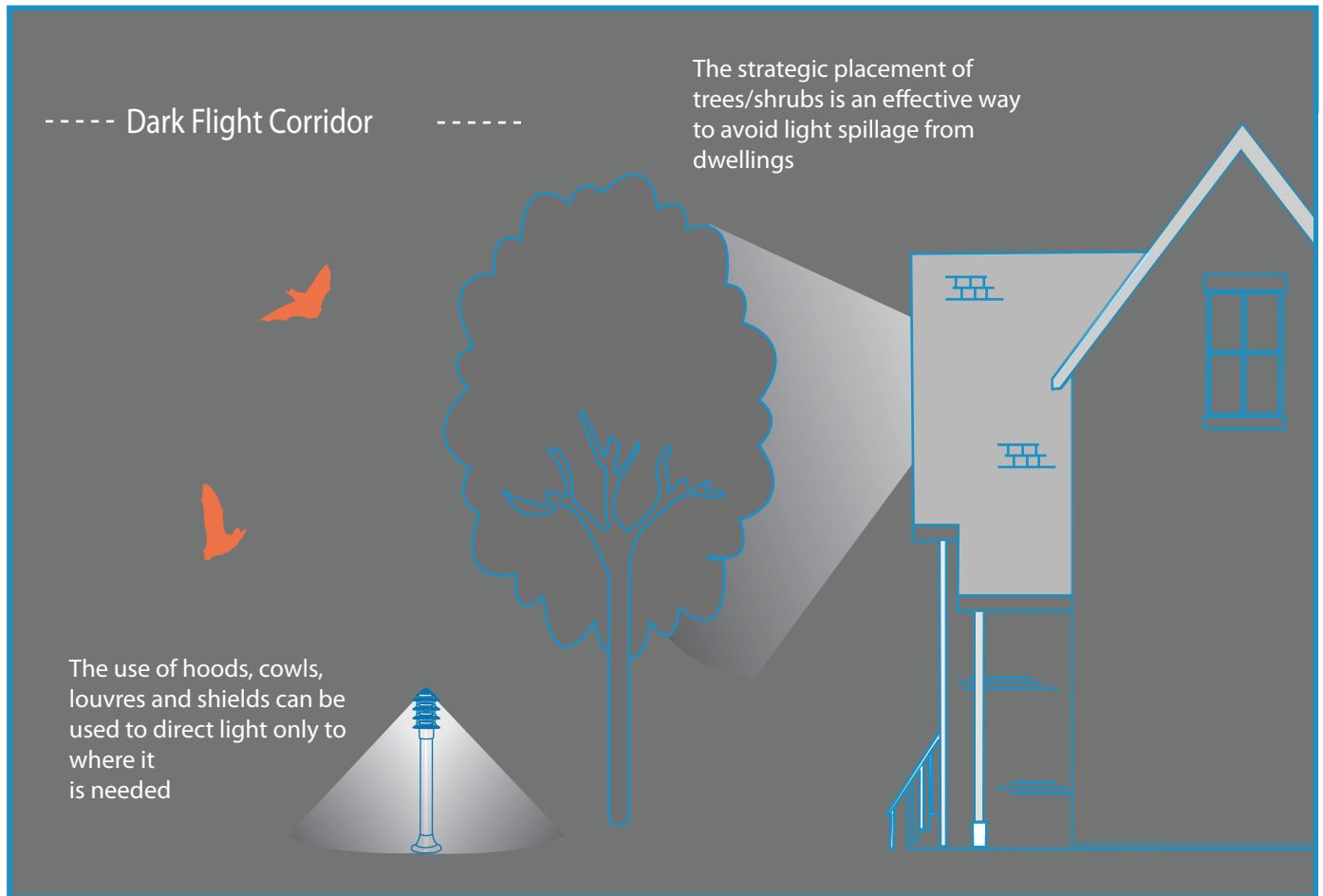
01761 233414

hello@crossmanassociates.co.uk

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.


crossman
ASSOCIATES

Written by James Tristram

01761 233414

hello@crossmanassociates.co.uk

Fire Engine House, Oakhill, Bath, BA3 5BJ

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