

Romsey Close and Toynbee Road

784-B041847

Bat Emergence Survey Report

Planning Issues Limited

June 2023

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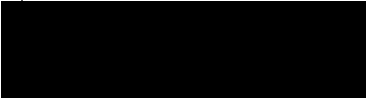


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ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
BCT	Bat Conservation Trust
BRA	Bat Roost Assessment
BRM	Breathable Roofing Membranes
CIEEM	Chartered Institute of Ecology & Environmental Management
CRow Act	Countryside and Rights of Way Act 2000
DEFRA	Department for the Environment, Food and Rural Affairs
EPS	European Protected Species
EPSL	European Protected Species Licence
Habitats Regulations	Conservation of Habitats and Species Regulations 2017 (as amended)
HAP	Habitat Action Plan
LERC	Local Ecological Record Centre
LBAP	Local Biodiversity Action Plan
LPA	Local Planning Authority
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
MRMs	Modern Roofing Membranes
NBCRMs	Non-bitumen Coated Roofing Membranes
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
PRFs	Potential Roosting Features
SAP	Species Action Plan
SSSI	Site(s) of Special Scientific Interest
W&CA	Wildlife & Countryside Act 1981 (as amended)

EXECUTIVE SUMMARY

Contents	Summary
Site Location	The site is located at Romsey Close and Toynbee Road in Eastleigh, Hampshire and is centred at Ordnance Survey National Grid Reference SU 45255 19252.
Proposals	The proposals for the site comprise demolition of the existing properties and re-development of the land into a complex of retirement living apartments, with associated infrastructure, parking and landscaping.
Scope of this Survey(s)	Bat emergence / re-entry surveys were carried out on the following buildings: • 2, 4, 6 and 8 Toynbee Road (Moderate suitability - 2 surveys) • 2, 3, 4 and 5 Romsey Close (Low suitability - 1 survey)
Results and Evaluation	The surveys noted a likely absence of roosting bats within the buildings. Mitigation is still recommended for potential adverse impacts to bats during the construction and operational phases through additional lighting and noise, loss of foraging habitat, and the use of modern roofing membranes in new buildings.
Recommendations	• An EPSL from Natural England is not required for works to proceed; • Temporary lighting and additional noise must be controlled during the construction phase and activities limited to daylight hours only during the active bat season of April to October inclusive; • Permanent lighting within the landscape design of the new development must follow the recommendations within the Institute of Lighting Professionals (ILP) Guidance Note 08/18 Bats and artificial lighting in the UK (ILP, 2018); • Non-bitumen Coated Roofing Membranes are to be avoided and instead Type 1F bitumen and hessian under-felt is to be used in new buildings; • Permanent enhancements are provided for bats within the site, including the provision of bat boxes, integration of bat bricks into new buildings and native species planting within the landscape design.
Conclusions	The mitigation measures suggested within this report are considered adequate to ensure that the proposals will not result in adverse impacts upon bats. Upon completion of all the actions within the below report, the proposed development is believed to meet the legal requirements set out under ecological legislation and national and local planning policy.

1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech was commissioned by Planning Issues Limited in March 2023 to conduct bat emergence surveys at Romsey Close and Toynbee Road, hereafter referred to as “the site”.

This report has been prepared by Assistant Ecologist Izzy Frey BSc and the conditions pertinent to it are provided in Appendix A.

Bats are protected species, full details of that protection, including types of offences and policy position are provided in Appendix B.

1.2 SITE LOCATION

The site is located at Romsey Close and Toynbee Road in Eastleigh, Hampshire and is centred at Ordnance Survey National Grid Reference SU 45255 19252. It comprises eight semi-detached residential dwellings currently in use, with residential gardens and associated parking – see Figure 1.

The buildings to be surveyed are listed below:

- 2, 3, 4 and 5 Romsey Close
- 2, 4, 6, and 8 Toynbee Road

1.3 DEVELOPMENT PROPOSALS

The proposals for the site comprise demolition of the existing properties and re-development of the land into a complex of retirement living apartments, with associated infrastructure, parking and landscaping (see Drawing Reference Number 22/SW051/GF01 Rev A).

1.4 PURPOSE OF THE REPORT

The purpose of this report is to:

- Determine if roosting bats are present on site.
- Identify if any additional surveys are required to inform this assessment.
- Determine if any potential impacts on bats are likely to arise from the development.
- Outline strategies to avoid/mitigate/compensate for any likely impacts on bats.
- Support a European Protected Species Licence (EPSL) license application where required.

The details of this report will remain valid until May 2024 after which the validity of this assessment should be reviewed to determine whether further updates are necessary.

The recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

2.0 METHODOLOGY

2.1 HISTORIC SURVEYS

A Bat Roost Assessment (BRA) of the properties at the site was previously undertaken by a different ecological consultancy which classified 2, 4, 6 and 8 Toynbee Road as having moderate suitability for roosting bats, and 2, 3, 4 and 5 Romsey Close as having low suitability for roosting bats. Bat emergence surveys were therefore recommended to be carried out at each of the properties.

2.2 DESK STUDY

The desktop study comprised a search of the Multi Agency Geographic Information for the Countryside (MAGIC) (<https://magic.defra.gov.uk>) website and Ordnance Survey (OS) and Aerial Imagery (<https://www.bing.com/maps>). This included a search for records of bat roosts or previously granted EPSL licenses for bats within 2km of the site. This search was conducted in June 2023.

2.3 FIELD SURVEYS

2.3.1 Bat Emergence / Re-entry Surveys

Surveys were conducted in accordance with industry standard best practice guidance as outlined in the Bat Conservation Trusts Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition.) (Collins, 2016).

As per the BCT guidance for buildings of moderate suitability for roosting bats, one dusk emergence survey(s) and one dawn re-entry survey were undertaken at 2, 4, 6 and 8 Toynbee Road. One dusk survey was carried out at 2, 3, 4 and 5 Romsey Close as is required for buildings of low suitability.

Surveyors were all suitably qualified ecologists and experienced at conducting bat surveys; details of the Tetra Tech personnel for each visit are provided in Table 1. As per the BCT Guidelines, the dusk surveys began 30 minutes prior to sunset and continued for 1.5 hours after sunset. The dawn survey commenced 1.5 hours prior to sunrise and continued until at least 15 minutes after sunrise or until no more bats were recorded in flight. Surveyors were positioned around the buildings as shown in Figure 1, so that all potential bat access points or roosting features could be clearly observed. The vantage positions around the buildings were the same for each of the surveys, and surveyor locations were covered either by individual Tetra Tech personnel or an infrared night vision camera. Where cameras were used in the place of a surveyor, regular checks were conducted throughout the survey period to ensure full coverage and proper visibility of potential roosting features, to account for the changing light levels during the survey.

Surveyors used Elekon Batlogger M detectors which use a broad-spectrum microphone and a heterodyne mode to make bat calls audible to the human ear, while recording and storing full spectrum data within an SD card for subsequent analysis. All bat activity heard and / or seen was also recorded onto a hard-copy survey sheet by surveyors, including flight paths, species and the time of observation.

In addition to standard surveyor positions, the night-vision cameras were also used. Canon XA11 cameras mounted on tripods were used in combination with infrared torches. The cameras were set up ahead of the survey start time and directed at the previously identified potential roosting features (PRFs) identified

on the buildings. The cameras and lighting were switched on and set to record at the start of the survey and switched off at the end. A member of Tetra Tech staff was assigned to monitor the position, battery life and field of view of the cameras as the survey progressed to ensure the equipment worked consistently throughout the recording period. Where cameras were used, after the survey, the recorded files were processed using MotionMeerkat (Weinstein, B. G., 2015) software to detect any movement in the footage, and any registered motion events were then reviewed to check for emerging bats. The corresponding recording device was then analysed using Bat Explorer software (Version 2.1.11.2) to establish the species of any bats recorded emerging from or returning to roosts, where necessary.

Temperature readings, cloud cover and wind condition assessments were also taken during each survey.

Weather metadata along with surveyor information, dates and survey timings for each of the visits carried out are provided in Table 1 below.

Table 1. Survey dates, metadata and surveyor details.

Date of survey	Sunrise / sunset	Start (S)	Finish (F)	Temperature (in °C) S/F	Rain S/F	Wind speed S/F	Cloud cover (%) S/F
2, 4, 6, 8 TOYNBEE ROAD (1 of 2) 10 th May 2023 (Dusk)	20:40	20:10	22:10	15/11	0/0	3/1	5/0
Surveyor names and survey licence number where applicable	- Principal Ecologist Sam Kelly MCIEEM PhD BSc (Hons) - Project Ecologist Ben Cooke MSc BSc - Seasonal Field Ecologist Lydon Trowbridge - Seasonal Surveyor James Tann - Graduate Placement Student Adam Friel 3 x Infrared Cameras						
2, 3, 4, 5 ROMSEY CLOSE (1 of 1) 25 th May 2023 (Dusk)	21:02	20:32	22:32	18/15	0/0	2-3/0	0/0
Surveyor names and survey licence number where applicable	- Project Ecologist Ben Cooke BSc MSc - Assistant Ecologist Chloe Mockridge BSc MSc - Assistant Ecologist Georgie Atkinson BSc - Seasonal Surveyor James Tann						

	4 x Infrared Cameras						
2, 4, 6, 8 TOYNBEE ROAD (2 of 2)	05:03	03:33	05:18	10/8	0/0	1/1	0/0
26 th May 2023 (Dawn)							
Surveyor names and survey licence number where applicable	- Project Ecologist Ben Cooke BSc MSc - Assistant Ecologist Chloe Mockridge BSc MSc - Assistant Ecologist Georgie Atkinson BSc - Seasonal Surveyor James Tann 4 x Infrared Cameras						

The results of the dusk emergence and dawn return bat surveys are provided in Section 3.0 below.

2.4 LIMITATIONS

The optimal period to undertake bat presence / likely absence surveys is between May and August, although surveys in April and September may aid in identifying pre-maternity gathering roosts or transitional roosts. All surveys were all completed in May which is within the optimal survey window and are therefore compliant with the levels of survey effort required for the suitability assigned to these buildings. Each survey was separated by a period of at least two weeks and weather conditions were suitable for the entirety of each survey. Therefore, there were not any constraints associated with survey timing or weather conditions.

The BRA of the properties was carried out by a different ecological consultancy and additional information aside from building suitability was not provided prior to the surveys. It is not known exactly when these BRAs were carried out and therefore whether these assessments of the properties is accurate for their current condition or whether the validity of the original BRA has elapsed. However, it is concluded that as properties were all classed as either low or moderate - and as a result, at least one survey will have been carried out at each address – the likelihood of falsely reporting likely absence of bats is low.

The surveys were completed with the assistance of bat detectors. All survey techniques are subject to bias, and bat detector surveys may under-record species with weak echolocation calls, such as brown long-eared bats. However, these biases were considered when interpreting the results. (It is also of note that Batloggers are very effective at picking up quiet calls from brown long-eared bats). Some bat calls are variable dependent on the habitats they fly in and on their activity (commuting, foraging, social interaction, etc) and extremely similar between species. In these cases, it is accepted that species are identified to genus level or group level (e.g. *Myotis*, *Myotis* / *Plecotus* and *Nyctalus* / *Eptesicus*) (Collins, 2016). Where call parameters are inconclusive the species has been labelled as 'unknown'. This allows the dataset to be interpreted accurately and transparently.

Notwithstanding the limitations highlighted above, the survey effort applied is considered sufficient to meet the aims of the survey and this report, in accordance with the aforementioned guidelines.

3.0 BASELINE CONDITIONS

3.1 HISTORIC SURVEYS

2, 4, 6 and 8 Toynbee Road have been previously identified as having moderate suitability for roosting bats, and 2, 3, 4 and 5 Romsey Close were identified as having low suitability for roosting bats.

3.2 DESK STUDY

A search of MAGIC returned seven EPSLs granted for bats within a 2km radius of the site boundary as shown in Table 2, ordered by their proximity to the site.

Table 2. Bat EPSLs within 2km radius of the site boundary

Reference	Distance and Direction	Species	Licensable Actions
2018-37589-EPS-MIT-2	110m East	Common pipistrelle	Destruction of a resting place
2019-43153-EPS-MIT	1.41km Northeast	Common pipistrelle, brown long-eared	Damage of a resting place, impact on a breeding site
EPSM2012-4025	1.42km Northeast	Common pipistrelle, soprano pipistrelle, brown long-eared	Destruction of a resting place
2015-13185-EPS-MIT	1.48km Northeast	Common pipistrelle, soprano pipistrelle, brown long-eared	Destruction of a resting place
EPSM2009-1058	1.61km West	Common pipistrelle	Destruction of a resting place
2014-5470-EPS-MIT-1	1.73km South	Common pipistrelle, soprano pipistrelle, brown long-eared	Destruction of a resting place
2014-148-EPS-MIT	1.82km West	Common pipistrelle	Destruction of a resting place

3.3 FIELD SURVEYS

3.3.1 Bat Emergence / Re-entry Surveys

The infrared camera data was analysed using motion detection software and the output was then checked for emerging / re-entering bats by Consultant Ecologist Harriet Kimber BSc and Assistant Ecologist Izzy Frey BSc.

Table 3. Toynbee Road survey results

Survey	Building	Location and Surveyor	Results
1 of 2 (Dusk)	2	Front – Ben Cooke Rear - Camera 13	No emergences and or re-entries recorded.
	4	Front – Adam Friel Rear – Camera 10	No emergences and or re-entries recorded.
	6	Front – James Tann Rear - Camera 14	No emergences and or re-entries recorded.
	8	Front – Lydon Trowbridge Rear – Sam Kelly	No emergences and or re-entries recorded.

2 of 2 (dawn)	2	Front - Chloe Mockridge Rear - Camera 18	No emergences and or re-entries recorded.
	4	Front - Georgie Atkinson Rear - Camera 18	No emergences and or re-entries recorded.
	6	Front - James Tann Rear - Camera 10	No emergences and or re-entries recorded.
	8	Front - Ben Cooke Rear - Camera 12	No emergences and or re-entries recorded.

Table 4. Romsey Close survey results

Survey	Building	Location and Surveyor	Results
1 of 1 (Dusk)	2	Front - Georgie Atkinson Rear - Camera 10	No emergences and or re-entries recorded.
	3	Front - James Tann Rear - Camera 15	No emergences and or re-entries recorded.
	4	Front - Chloe Mockridge Rear - Camera 18	No emergences and or re-entries recorded.
	5	Front - Ben Cooke Rear - Camera 12	No emergences and or re-entries recorded.

No bat emergences or re-entries were recorded across the surveys, however low numbers of common pipistrelle *Pipistrellus pipistrellus* were observed and recorded foraging and commuting in proximity to the houses and in the residential gardens across the site. The potential impacts of the development on local populations of foraging and commuting bats and those using the site is therefore discussed in the following section.

4.0 DISCUSSION

4.1 IMPACTS

No bats were observed emerging from or re-entering the buildings during the dusk emergence and dawn return surveys. Roosting bats are therefore considered likely absent from 2, 4, 6 and 8 Toynbee Road and 2, 3, 4 and 5 Romsey Close and the development can proceed without further survey, licensing or mitigation with regard to roosting bats.

In the unlikely event bats or evidence of roosting bats (e.g. droppings) are discovered prior to or during these works, then works must cease immediately to avoid an offence being committed and a licensed bat ecologist consulted to determine an appropriate course of action.

If works do not begin by **June 2024** an update bat building inspection and / or nocturnal surveys will be required to provide an update to the site conditions, under the guidance of a licensed bat ecologist.

As foraging and commuting common pipistrelle bats have been identified using the site, potential impacts on bats associated with the construction and operational phases of the development are considered below.

4.1.1 Habitat Loss

The site currently comprises eight semi-detached properties with large gardens at the rear containing trees, grassland and other mature vegetation. Despite the site being located within a residential area, the proposals represent a change in land use from four individual buildings with greenspace to a large apartment building encompassing the majority of the land on site. It is anticipated that a small area of foraging and commuting habitat for bats will be lost as a result of the development, although this is not thought to be of much value to the local bat population as only one species of bat, common pipistrelle, was occasionally recorded foraging and commuting near to the buildings during the surveys. The line of scattered trees along the northern site boundary provides intrinsically dark habitat, shelter, and foraging opportunities within the canopy for the local bat population. Recommendations for measures which will mitigate against potential habitat loss on site and suggestions for enhancing the site for bats are provided in section 4.2 below.

4.1.2 Construction-phase Disturbance

Disturbance is anticipated during the construction phase due to the addition of temporary artificial lighting, along with construction traffic and machinery and resulting increased noise levels.

The Institution of Lighting Professionals (ILP) states that the impacts from artificial lighting on bats are likely to have significant impacts on some species, potentially affecting reproductive, foraging and roosting opportunities (ILP, 2018). A light management strategy in the form of a sensitive lighting scheme is therefore required to mitigate against any potential impacts to bats using the site.

Noise disturbance may cause displacement of bats from roosts and important foraging areas, which can potentially result in reduced survivability of individuals due to an increased susceptibility to predation, reduced quality and availability of habitats and reduced foraging opportunities (California Department of Transportation, 2016). Bats are also susceptible to acute acoustic trauma and hearing damage which

impairs their ability to passively listen (i.e., for other bats and predators) and echolocate to navigate within their environment and find prey. This therefore has implications for both their immediate and long-term survival (California Department of Transportation, 2016). Bats may also be caused to allocate more time to vigilance behaviour due to loud or sudden noise disturbance, resulting in less time spent on other vital behaviours such as breeding and foraging which is ultimately detrimental to their physical condition and reproductive capabilities.

Recommendations to reduce these impacts are suggested in Section 4.2 below.

4.1.3 Operational-phase Disturbance

There are several potential pathways for disturbance and resulting impacts to bats in the operational phase of the development. The proposed developed area will be very close to the site boundaries, therefore the lighting scheme must be designed to reduce light spill onto these boundaries and protect potential existing flight paths, as bats were identified foraging and commuting at the site during the emergence surveys. This is particularly important along the northern boundary of the site where the scattered trees are due to be retained. This will ensure that the development blueprint is designed in accordance with the specific policy outlined in paragraph 180 of the National Planning Policy Framework (NPPF) regarding limiting the impact of light pollution on intrinsically dark landscapes to promote nature conservation.

Permanent lighting in the form of streetlights and external fixtures on buildings pose a risk of illuminating bats in flight and thus making them more vulnerable to predation. The same is true for additional light spill which occurs from the headlights of moving vehicles and parking areas around the development. In addition, increased lighting also affects prey distribution, which influences the relative distribution of bats in the area. Lighting a commuting or foraging route can potentially have an impact upon the integrity of a nearby bat roost, even if the roost itself is not directly affected. Roosting bats are presumed likely absent from the buildings and it is not known whether there are any active bat roosts in proximity to the site, however seven EPSLs previously granted within 2 km were identified by the desk study, the closest being 110m to the east. Species where roosts were previously damaged or destroyed under license included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared *Plecotus auritus*. Replacement roosts form one of the mitigation requirements for EPSLs, therefore artificial roosts for these species are likely to exist locally – although their usage status is unknown.

The lighting across the development therefore must be sensitively designed with bats in mind, so that light spill is reduced and foraging and commuting habitat is retained where possible and protected. Suggestions for limiting the impact of artificial light are discussed further in Section 4.2 below.

4.1.4 Breathable Roofing Membranes

There is a potential risk of killing and injury to bats during the operational phase of the development which would contravene the legislation which protects all bat species in the UK.

Research by Waring et al. (2013) found that many Modern Roofing Membranes (MRMs) incorporated into new buildings pose a risk to bats whereby they become trapped by loose fibres as the material ages. Trapped bats are then unable to escape and will dehydrate and starve to death. Use of these membranes, also referred to as Breathable Roofing Membranes (BRMs) and non-bitumen coated roofing membranes

(NBCRMs), should be avoided where possible in new developments and alternatives to these are suggested in Section 4.2 (Bat Conservation Trust, 2022).

4.2 MITIGATION

As a likely absence of roosting bats has been identified within the existing buildings on site, specific mitigation for roosting bats is not required. However, foraging and commuting bats were still observed in proximity to the buildings during the nocturnal surveys and therefore adverse effects on bats are anticipated during the construction and operational phases. Mitigation will therefore be required in accordance with the NPPF and policy DM11 of the Eastleigh Borough Local Plan to protect, conserve and enhance biodiversity by ensuring that all potential impacts to bats are avoided as far as possible and are otherwise appropriately compensated for.

The mitigation hierarchy principles are:

- Avoidance – to avoid adverse effects as far as possible by designing out or using preventative measures during the construction process thus resulting in an environmental effect of neutral significance.
- Reduction – to minimise adverse effects as far as possible.
- Compensation – involves measures of the same value to off-set the impact.

4.2.1 Habitat Retention/Replacement

The loss of some foraging habitat in the form of the property gardens is anticipated, however the new proposals for the land are comparable to what is already present at the site regarding the scale and type of development proposed. In addition, there is little suitable bat habitat nearby to connect the site to wider commuting corridors and the site is surrounded by existing urban development. The scattered trees along the northern site boundary are to be retained and provide a potentially suitable commuting feature for bats. The implementation of a sensitive lighting scheme (discussed further below) is therefore vital for ensuring that existing foraging and commuting habitat remains accessible for local bat populations by preventing additional light spill onto boundary habitats. The landscape design for the new development is recommended to include additional tree and hedgerow planting of native species along all site boundaries, and the sowing of wildflower mixes in areas of greenspace to enhance floristic biodiversity. In addition, a relaxed mowing scheme for amenity grassland should be adopted to encourage wildlife and attract invertebrates thus creating replacement foraging habitat for bats. The landscaping across the site should be designed with bat-friendly planting in mind; a list of species suitable for a variety of purposes is provided in Appendix D. These measures will encourage an increase in biodiversity at the site, in accordance with the objectives of the NPPF and Eastleigh Borough Local Plan.

4.2.2 Construction-phase Disturbance

Construction activities will create increased levels of ambient noise within the site and adjacent area, which, as demonstrated in Section 4.1 above, can have detrimental effects on bats. It is strongly advised that no night-time working (specifically extending beyond sunset or commencing before sunrise) is undertaken between the months of April to October inclusive (during the bat active season). Where security lighting is necessary, lights triggered by motion sensors must be used and their coverage must be kept to a minimum i.e., through the use of lighting cowls.

4.2.3 Operational-phase Disturbance

Permanent lighting within the new development must be minimized in proximity to any areas of existing habitat to be retained and not directed at boundary habitats, to protect pre-existing bat flight paths. The lighting design must result in zero upward light spill and light spill of less than 1 lux onto retained and created boundary habitats and linear features. A consideration of the available lighting technology should be made, for example through the use of LED lighting which emits less UV light and can typically be programmed to switch off or dim at certain times.

Any exterior lights installed on new buildings are to be directed downward. If walkways around the site are to be lit, these must use LEDs lamps with a low colour correlated temperature – preferably below 3500K; and fitted with motion sensors to reduce unnecessary light pollution during periods of inactivity around the development. Hoods and cowls on lamps also ensure light can be directed below the horizontal plane. A ground-level bollard style of light may be more appropriate than traditional streetlights as this removes the majority of upward light spill. When designing a bat-friendly lighting strategy, reference must be made by developers to the Institute of Lighting Professionals (ILP) Guidance Note 08/18 Bats and artificial lighting in the UK (ILP, 2018).

4.2.4 Breathable Roof Membranes

Many types of roofing membranes such as those typically used during the construction of residential properties, have been found through research to pose a risk to bats and in turn, can be damaged by bats, impairing their efficiency. The use of Non-bitumen Coated Roofing Membranes should be avoided and instead it is recommended that Type 1F bitumen and hessian under-felt should be considered as an alternative within all new buildings.

4.3 LICENSING

Bat roosts have not been identified in any of the buildings at the site at the time of the surveys, therefore an EPSL is not required in order for the works to proceed lawfully. As mentioned previously, should any bats or evidence of bats be discovered once the works commence, all construction activities must cease immediately, and a bat licensed ecologist is to be consulted for advice before proceeding. The requirement for an EPSL must be reviewed if works do not begin by **June 2024**, after which an update bat building inspection and / or nocturnal surveys will be required to provide an up-to-date assessment of the site conditions.

4.4 ENHANCEMENT

It is a requirement of the NPPF and Policy DM11 of the Eastleigh Borough Local Plan to provide enhancements for biodiversity as part of development. The following measures are proposed in order to enhance the site for bats.

4.4.1 Integrated Bat Bricks

Built-in bat bricks are to be incorporated into the south-facing walls of the new buildings on site to provide additional roosting opportunities for the local bat population. These must be installed at a height of 4-6 meters and remain unobstructed by vegetation or other structures once installed, and ideally placed away

from roads, footpaths and fences to remove accessibility to cats and minimise potential disturbance from human activity. Examples of suitable models for this purpose are provided in Appendix C. Bat features may be best incorporated into walls closest to the site boundaries within darker areas where noise and light disturbance is likely to be lower. Examples of suitable models for this purpose are provided in Appendix C. The exact quantity and locations of these are to be determined by a bat licensed ecologist after careful consideration of the finalised site plans, prior to the construction of the new buildings. These enhancements will be made in view of the requirements of the NPPF and the Local Plan for all new developments to maintain, protect and enhance biodiversity, along with contributing to the favourable conservation status of bat species which feature within the local Species Action Plan (SAP) for Eastleigh Borough.

4.4.2 Landscaping

Areas of landscaping within the new development such as gardens and borders around roads and parking areas in the proposed design are recommended to be planted and sowed with a variety of native plants to attract different types of insects. These may include evening-flowering species such as honeysuckle *Lonicera sp.* and evening primrose *Oenothera biennis* and pale coloured, open flowered species which can be identified by night flying insects. Non-native species such as butterfly-bush *Buddleja davidii* may also be included in the planting scheme to enhance and extend the flowering season for insect prey species. Additional infill planting around the site boundaries with woody species such as dog rose *Rosa canina*, hazel *Corylus avellana*, field maple *Acer campestre*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna* and dogwood *Cornus sanguinea* may be considered, to benefit bats and to provide a natural screen between the new development and adjacent residential areas. This will also help to protect foraging and commuting habitat from light spill, as well as helping the development to meet the requirements of the NPPF and the Local Plan to conserve and enhance biodiversity.

A species list of plants suitable for a range of landscaping purposes compiled by the BCT is provided in Appendix D.

5.0 SUMMARY

As a result of the findings of the bat emergence and re-entry surveys it is recommended that:

- An EPSL from Natural England is **not** required for works to proceed;
- Temporary lighting and additional noise must be controlled during the construction phase and activities limited to daylight hours only during the active bat season of April to October inclusive;
- Permanent lighting within the landscape design of the new development must be in line with the ILPs Guidance Note 08/18 Bats and artificial lighting in the UK (ILP, 2018);
- Non-bitumen Coated Roofing Membranes are to be avoided and instead Type 1F bitumen and hessian under-felt is to be used in new buildings; and
- Permanent enhancements are provided for bats within the site, including the integration of bat bricks into new buildings and native species planting within the landscape design, in accordance with the conservation objectives of the NPPF and Policy DM11 of the Eastleigh Borough Local Plan.

6.0 CONCLUSION

This report details the findings of the bat emergence and re-entry surveys carried out at the site and identifies the potential impacts of the proposed development on the local bat population present. Recommendations are therefore given regarding measures which will mitigate against such impacts and enhance the site with regard to conserving and enhancing biodiversity in line with the NPFF and Policy DM11 of the Eastleigh Borough Local Plan. No limitations to the survey effort were identified and therefore the information gathered, and the mitigation measures suggested within this report are considered adequate to ensure that the proposals will not result in adverse impacts upon bats. Upon completion of all the actions within the above report, the proposed development is believed to meet the legal requirements set out under ecological legislation and national and local planning policy.

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FIGURES

FIGURE 1: Site Location Plan and Surveyor Locations



Site Location Plan and Surveyor Positions

Romsey Close and Toynbee Road, Eastleigh



Planning Issues

Legend

-  Site boundary
-  Buildings
-  Surveyor position

Notes:

Drawn by: ROSIE.DURHAM
Checked by: IF
Office: Southampton

Figure No. 1
Revision No. A
07 June 2023

0 5.5 11 16.5 22 Meters
Scale 1:500 @A3

British National Grid
NGR: 445257E 119249N

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APPENDICES

APPENDIX A: REPORT CONDITIONS

APPENDIX B: PLANNING POLICY & LEGISLATION

APPENDIX C: BAT BOXES / BRICKS

APPENDIX D: BAT FRIENDLY PLANTING

APPENDIX A: REPORT CONDITIONS

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

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The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B: PLANNING POLICY & LEGISLATION

Conservation of Habitats and Species Regulations 2017 (as amended)

The 2018 amendments mainly related to the impact of the *People Over Wind* decision and some implications arising for neighbourhood plan development and a range of other planning tools including Local Development Orders and Permission in Principle – see here for full details:

<https://www.legislation.gov.uk/uksi/2018/1307/note/made>

The 2019 amendments related to the EU exit. Most of these changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant. The obligations of a competent authority in the 2017 Regulations for the protection of sites or species do not change – see here for full details:

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

The Regulations make it an offence to deliberately capture, kill, disturb or trade bats (including dead animals).

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. Since it was first introduced, the Act has been amended several times. All bats are protected through inclusion under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and benefit from various levels of protection. This legislation makes it an offence to:

- Intentionally or recklessly kill or injure these animals; and
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell individual reptiles.

All are also listed under Schedule 5 Section 9.4b and 9.4c which makes it an offence to:

- Intentionally disturb while occupying a structure or place used for shelter or protection; and
- Obstruct access to such a site.

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

Seven species of bat are listed under Section 41 of the NERC Act 2006; soprano pipistrelle, brown long-eared bat, greater horseshoe bat, lesser horseshoe bat, barbastelle, Bechstein's bat and noctule.

National Planning Policy Framework

A revised NPPF was issued on 20th July 2021 (Ministry of Housing Communities and Local Government, 2021) and currently supplements government Circular 06/2005, Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 180 then goes on to confirm that: 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 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.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level) and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision-making process.

The Biodiversity Action Plan for Hampshire is the relevant document for this site (Hampshire Biodiversity Partnership, 2000) and it includes Species Action Plans (SAPs) for barbastelle, serotine, Bechstein's, pipistrelle bat species, and greater horseshoe bat.

The Biodiversity Action Plan for Eastleigh Borough (Eastleigh Borough Council, 2012) also lists nine species of bat as Priority Species.

It should be noted that the existence of an SAP or HAP does not always infer an elevated level of importance for those features. These plans may be designed to encourage an increase in these, rather than to protect a county-scarce feature (for example)

Local Plan

The appropriate planning authority for the development is Eastleigh Borough Council. The policies pertinent to the application relate to Eastleigh Borough Council Local Plan Policy DM11 (Eastleigh Borough Council, 2022).

The local plan states that:

The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:

- a. *protect, conserve and enhance all:*
 - i. *international, national and local nature conservation designations; and*
 - ii. *networks of natural habitats and features, including the Local Ecological Network, Priority Biodiversity Areas and Priority Biodiversity Links, watercourses, wetland complexes, woodland trees, and trees and hedgerows important to biodiversity and local character;*

and facilitate their adaptation to climate change wherever possible;

- b. *assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);*
- c. *seek a net gain of biodiversity on all development sites (including sites for redevelopment) through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils; and*
- d. *contribute to major elements of the PFSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements*

Policy DM11 then carries on to state that:

Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:

- a. *there are no alternative solutions;*
- b. *the adverse effects are unavoidable;*
- c. *measures are taken to mitigate or, as a last resort, compensate for the adverse effects;*
- d. *there is an overall biodiversity net gain; and*
- e. *if there are any residual adverse effects which cannot be avoided, mitigated or compensated, the benefits of the development must clearly outweigh the adverse effects on the nature conservation value of the site and any broader impacts on national and local designations.*

The National and Local Designations (section 5.73) of the local plan states that:

Habitats and features that are important for wildlife but outside designated nature conservation sites are also necessary to maintain the biodiversity of the Borough. The revised Eastleigh Borough Biodiversity Action Plan (July 2012/45) sets out ways in which the Borough's biodiversity can be conserved and enhanced, and defines Priority Biodiversity Areas and Priority Biodiversity Links. These are areas with the greatest concentrations of priority habitats and species or potential to enhance or restore priority habitats and links where there is opportunity to enhance, restore or create areas, corridors or stepping stones of habitat to facilitate the movement of priority species.

Section 5.76 also states:

In accordance with the Biodiversity Action Plan 2012-2022 and the NPPF, the Council will through the planning process (including financial contributions through CIL or other mechanisms) secure the enhancement of existing and the creation of new areas of nature conservation value- for example as part of landscape schemes, environmental improvements and countryside management schemes associated with new development. Such enhancement and creation of biodiversity interest will be sought particularly within the Eastleigh Biodiversity Priority Areas and Priority Links. The Council will also have regard to opportunities to manage wetland habitats in ways that assist delivery of the Environment Agency's River Basin Management Plan.

APPENDIX C: INTEGRATED BAT BRICKS

Introduction

The information in this appendix relates to bat bricks that can be easily incorporated into building and landscape plans. The information provided is not exhaustive and provides examples of some of the types of boxes available.

Including bat boxes throughout the development site has a number of benefits:

- Any roosting or resting places lost as a result of the work will be replaced;
- The ecological value of the site will be enhanced;
- Priority species within the UK and local Biodiversity Action Plans (BAPs) will be encouraged.

Bats

For Buildings

The inclusion of a variety of bat bricks and tubes for buildings is recommended to encourage a diversity of bat species. Bat bricks and tubes require no maintenance.

Built-in bat box
(can be faced to suit building design)



Bat tube
(can be bricked in or rendered over into the façade)



APPENDIX D: BAT FRIENDLY PLANTING

Table F1: Trees, shrubs and climbers

Common name	Scientific name
Bramble	<i>Rubus fruticosus</i>
Buddleia	<i>Buddleja sp.</i>
Common alder	<i>Alnus glutinosa</i>
Dog rose	<i>Rosa canina</i>
Elder	<i>Sambucus sp.</i>
English oak	<i>Quercus robur</i>
Gorse	<i>Ulex sp.</i>
Guelder rose	<i>Viburnum opulus</i>
Hawthorn	<i>Crataegus sp.</i>
Hazel	<i>Corylus sp.</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Hornbeam	<i>Carpinus sp.</i>
Ivy	<i>Hedera sp.</i>
Jasmine	<i>Jasminum sp.</i>
Rowan	<i>Sorbus sp.</i>
Silver birch	<i>Betula pendula</i>

Table F2: Flowers for borders

Common name	Scientific name
Aubretia*	<i>Aubrieta sp.</i>
Candytuft*	<i>Iberis sp.</i>
Cherry pie*	<i>Heliotropium arborescens</i>
Corncockle	<i>Agrostemma githago</i>
Cornflower	<i>Centaurea cyanus</i>
Corn marigold	<i>Glebionis segetum</i>
Corn poppy	<i>Papaver rhoeas</i>
Echinacea*	<i>Echinacea sp.</i>
English Bluebell	<i>Hyacinthoides non-scripta</i>
Evening primrose*	<i>Oenothera sp.</i>
Field poppies	<i>Papaver rhoeas</i>
Honesty*	<i>Lunaria annua</i>
Ice plant 'Pink lady'*	<i>sedum spectabile</i>
Knapweed	<i>Centaurea sp.</i>
Mallow	<i>Malva sp.</i>
Mexican aster*	<i>Cosmos bipinnatus</i>
Michaelmas daisy*	<i>Aster novi-belgii</i>

Night-scented stock*	<i>Matthiola longipetala</i>
Ox-eye daisy	<i>Leucanthemum vulgare</i>
Phacelia*	<i>Phacelia tanacetifolia</i>
Poached egg plant*	<i>Limnanthus douglasii</i>
Primrose	<i>Primula vulgaris</i>
Red campion	<i>Silene dioica</i>
Red valerian*	<i>Centranthus ruber</i>
Scabious	<i>Scabiosa</i> sp.
St John's wort	<i>Hypericum perforatum</i>
Sweet William*	<i>Dianthus barbatus</i>
Tobacco plant*	<i>Nicotiana</i>
Verbena*	<i>Verbena</i> sp.
Wallflowers*	<i>Erysimum</i> sp.
Wood forget-me-not	<i>Myosotis sylvatica</i>
Yarrow	<i>Achillea millefolium</i>

Plants marked * are hybrids or exotics

Table F3: Herbs

Common name	Scientific name
Angelica	<i>Angelica</i> sp.
Bergamot	<i>Monarda</i> sp.
Borage	<i>Borago officinalis</i>
Coriander	<i>Caroiandrum</i> sp.
English marigolds	<i>Calendula officinalis</i>
Fennel	<i>Foenicululm</i> sp.
Feverfew	<i>Tanacetum parthenium</i>
Hyssop	<i>Hyssopus officinalis</i>
Lavenders	<i>Lavandula</i>
Lemon balm	<i>Melissa officinalis</i>
Marjoram	<i>Origanum majorana</i>
Rosemary	<i>Rosmarinus officinalis</i>
Sweet cicely	<i>Myrrhis odorata</i>
Thyme	<i>Thymus vulgaris</i>

Table F4: Wildflowers for pond edges and marshy areas

Common name	Scientific name
Bog bean	<i>Menyanthes</i> sp.
Bugle	<i>Ajuga</i> sp.
Creeping Jenny	<i>Lysimachia nummularia</i>
Flag iris	<i>Iris pseudacorus</i>
Hemp agrimony	<i>Eupatorium cannabinum</i>

Lady's smock	<i>Cardamine pratensis</i>
Marsh mallow	<i>Althaea officinalis</i>
Marsh marigold	<i>Caltha palustris</i>
Marsh woundwort	<i>Stachys palustris</i>
Meadowsweet	<i>Filipendula ulmaria</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Water avens	<i>Geum rivale</i>
Water forget-me-not	<i>Myosotis scorpioides</i>
Water mint	<i>Mentha citrata</i>

(Source: 'Encouraging bats – Gardening for bats', Bat Conservation Trust, 2015)