

Preliminary Bat Roost Assessment

Thames Young Mariners, Riverside DR, London

A Report To: Pick Everard
Report Number: RT-MME-160594-02
Date: July 2023



Quality Assurance

Date	Version	Author	Checked by	Approved by
14/07/2023	Final	Annabel Field (Ecological Project Officer)	Nick Davey MSc (Ecological Consultant)	

Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of Practice for Planning and Development”. The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Disclaimer

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Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, it may be necessary to undertake an updated survey to allow any changes in the status of bats on site to be assessed, and to inform a review of the conclusions and recommendations made.

Non-Technical Summary

Project Background

In June 2023, Pick Everard commissioned Middlemarch Environmental Ltd to undertake a Preliminary Bat Roost Assessment at Thames Young Mariners, Richmond, London. This assessment is required to inform a planning application associated with the redevelopment of the existing site to create new accommodation and educational facilities. To fulfil the above brief to assess the potential for the existing buildings on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 28th June 2023.

Scope of Survey

A Preliminary Bat Roost Assessment of the buildings was carried out on site in line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016). The assessment was conducted on 28th June 2023 by Nick Davey (Ecological Consultant) and Annabel Field (Ecological Project Officer).

Summary of Key Bat Features

It was concluded that Buildings B1 (Main Building), B2 (Wooden Cabin), B3 (Canoe shed), B4 (Cedar House) and B5 (Residential House) have low potential to support roosting bats.

Potential Impacts on Bats

The buildings on site are proposed for demolition and have been classified as having low potential to support roosting bats. Should bats use any of the buildings on site as roosting habitat, there is the potential for direct harm/disturbance to these bats during the works which would constitute a breach of legislation. Thus, further survey work is required to determine the presence/absence of roosting bats.

Recommendations

- R1 Buildings B1, B3, B4 and B5:** Buildings B1, B3, B4 and B5 were identified as having low potential to support roosting bats. Bat Surveys: Good Practice Guidelines, published by the Bat Conservation Trust (Collins, 2016), recommends that for structures with low bat roosting potential, at least one survey (consisting of either a dusk emergence survey or a dawn re-entry survey) be undertaken during the peak season for emergence/re-entry surveys (May to August) to determine the presence/absence of roosting bats within the structures.
- R2 Building B2:** Building B2, which supported low bat roosting potential, was fully inspected and no bat roosts were identified. Therefore, no additional survey work is currently required for this building, albeit survey data obtained for the site is valid for 12 months from the survey date. In the unlikely event that a bat is found during demolition works all works must immediately cease and a suitably qualified ecologist should be contacted.
- R3 Scheme Design:** The proposed development should be designed to minimise effects on bats in accordance with ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG).
- R4 Lighting:** In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.
- R5 Habitat Enhancement:** In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

Contents

1. Introduction.....	5
1.1 Project Background	5
1.2 Site Description and Context.....	5
1.3 Documentation Provided	6
2. Methods.....	7
2.1 Desk study	7
2.2. Field Survey	7
2.3 Constraints.....	8
3. Desk Study	9
3.1 Statutory Nature Conservation Sites	9
3.2 Previous Bat Surveys	9
4. Survey Results	10
4.1 Building/Structures.....	10
4.2 Site and Surrounding Habitats.....	17
5. Impact Assessment	18
5.1 Summary of Proposals	18
5.2 Summary of Key Bat Features	18
5.3 Potential Impacts on Bats.....	18
6. Recommendations	20
7. Drawings.....	22
Appendix 1	24
Relevant Legislation	24
Appendix 2	26
Examples of Potential Roost Features.....	26

1. Introduction

1.1 Project Background

In May, 2023 Pick Everard commissioned Middlemarch to undertake a Preliminary Bat Roost Assessment at Thames Young Mariners, Riverside DR, London. This assessment is required to inform a planning application associated with redevelopment of the existing site to create new accommodation and educational facilities.

A Preliminary Ecological Appraisal, including a Preliminary Bat Roost Assessment was previously undertaken by Surrey Wildlife Trust Ecology Services in November 2020 (Report 3974-1). Subsequently, Middlemarch has carried out the following surveys/assessments at this site, the findings of which are detailed in the following reports:

- Preliminary Arboricultural Appraisal (RT-MME-157100-01);
- Arboricultural Impact Assessment (RT-MME-157100-02);
- Ecological Walkover Survey (RT-MME-157100-03);
- Preliminary Bat Roost Assessment (RT-MME-157100-04);
- Badger Survey (RT-MME-157100-05);
- Biodiversity Net Gain Assessment (RT-MME-157100-06); and,
- Dusk Emergence Bat Survey (RT-MME-158089).

In addition, Middlemarch has been commissioned to undertake the following ecological survey work at the site in order to provide updated findings:

- Ecological Walkover Survey (RT-MME-160594-01);
- Badger Survey (RT-MME-160594-03); and,
- Dusk Emergence Bat Survey (RT-MME-160594-04).

To fulfil the above brief and provide an updated assessment of the potential for the existing buildings and structures on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 28th June 2023.

All UK bat species are legally protected and are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included within Appendix 1.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Site Location	The site forms the southern section of the wider Thames Young Mariners, Riverside Drive, Richmond TW10 7RX.
National Grid Reference	TQ16427236
Site Area (ha)	3.8 ha
Topography	Predominantly flat, albeit with steep banks in the north of the site, sloping down towards the lake.
Land Cover (on site)	The current development site forms the southern section of the wider Thames Young Mariners site. The site was used extensively for amenity purposes and was dominated by extensive amenity grassland, while also including the southern reaches of the large lake, fringed by a series of docks and pontoons, along with extensive semi-natural habitats including trees, scrub and woodland, which were also prevalent at the site boundaries). The site also included a complex of buildings towards the west, along with associated storage units and hardstanding, while the wider ownership boundary, to the north, included the remainder of the lake, with woodland and scrub bordering this.
Land Cover (site surrounds)	The surrounding area comprises urban housing to the east and west (beyond the Thames), with Ham Lands LNR (comprising woodland, scrub, grassland and wetlands) encircling most of the site and extending to the north and south. The wider area is predominantly urban with areas of amenity grassland to the north east and golf courses to the east and west. The site is in the London Borough of Richmond.

Table 1.1: Summary of Site and Surroundings

1.3 Documentation Provided

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.2.

Document / Drawing Number	Author
Landscape Masterplan PR-200-PEV-XX-XX-DR-L-00200	Pick Everard

Table 1.2: Documentation Provided by Client

2. Methods

2.1 Desk study

The desk study included a search for statutory nature conservation sites designated for bats within a 10 km radius of the site.

2.2 Field Survey

A Preliminary Bat Roost Assessment of the buildings and structures was carried out on site in line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004)¹ and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016)². The assessment was conducted on 28th June 2023 by Nick Davey (Ecological Consultant) and Annabel Field (Ecological Project Officer). Weather conditions were recorded and are presented in Table 2.1.

Parameter	Condition
Temperature (°C)	22
Cloud (%)	100
Wind (Beaufort)	F2
Precipitation	Dry

Table 2.1: Weather Conditions During Field Survey

A visual assessment was conducted during daylight hours of the buildings and structures to determine the presence of any Potential Roost Features (PRFs), together with a general appraisal of the suitability of the site for foraging and commuting bats. Please refer to Appendix 2 for a list of example PRFs. Any accessible PRFs were inspected using binoculars, a torch and an endoscope for evidence of possible bat presence. Buildings B1 to B4 were surveyed externally and internally, while building B5 could be accessed externally only (see section 2.3).

For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

Based on the PRFs present, the survey area was assessed using the suitability classes detailed within Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016)², as detailed in Table 2.2.

¹ English Nature (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

² Collins, J. (ed). (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Ed.)*. The Bat Conservation Trust, London.

Suitability	Description
High	A structure 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.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Negligible	Negligible habitat features on site likely to be used by roosting bats.

Table 2.2: Classification of Structures with Bat Potential (Adapted from Collins, 2016)²

2.3 Constraints

It was not possible to gain internal access to building B5, however, a thorough external inspection was undertaken. The findings of the external survey for this building were consistent with those recorded in 2022, with no additional PRFs recorded, and therefore it was deemed that the survey effort provided a thorough appraisal of the potential of the building to support roosting bats.

3. Desk Study

3.1 Statutory Nature Conservation Sites

The site is not located within 10 km of any statutory nature conservation sites designated for the presence of bats.

3.2 Previous Bat Surveys

A Preliminary Ecological Appraisal was previously undertaken by Surrey Wildlife Trust Ecology Services in November 2020 (Report 3974-1). The assessment included a Preliminary Bat Roost Assessment.

The assessment concluded that three of the buildings on site (Report 3974-1 Ref: B1-B3) had low bat roosting potential.

4. Survey Results

4.1 Building/Structures

Building 1 (Main Building)

External Assessment

Consistent with the findings from the 2022 Preliminary Bat Roost Assessment, Building B1 (Main Building) consisted of an irregular shaped single storey brick-built building (Plate 4.1). The majority of the building had a flat felt roof, though one portion of the building on the eastern extent featured a pitched roof. The entire building featured a plastic soffit/fascia board, and all windows were double glazed. Building B1 included a storage tower on the western aspect, containing the buildings heating system, as well as a residential dwelling on the south-eastern aspect. A sheltered porch area was located on the north-eastern extent of the building, below which was a set of garages (Plate 4.2).

As previously, areas of lifted roofing felt were present on the western and eastern aspects of the building (Plates 4.3 to 4.5), albeit a detailed torchlight inspection from the balcony below recorded those gaps on the western elevation to contain no evidence of roosting bats, while these features were not considered to extend sufficiently to form suitable roosting features. As such, this elevation was not considered to provide suitable features for roosting bats. On the eastern aspect of the building, gaps in the soffit board and soffit box were noted, which could permit entry into an enclosed space behind the soffit/fascia board (Plate 4.6). Bird boxes were also present on the eastern elevation of the residential property, while a bat box was present on the south-facing wall of the residential dwelling, however, these were fully inspected using a torch and endoscope, and no associated evidence of roosting bats was recorded. Other features included a large gap in the soffit box on the southern elevation, a small gap in the brickwork on the southern elevation (Plate 4.7) and several areas of damaged brickwork surrounding the courtyard (Plates 4.8, 4.9).



Plate 4.1: Building 1 (Main Building – Southern Elevation)



Plate 4.2: Western Elevation of Building 1 (Main Building)

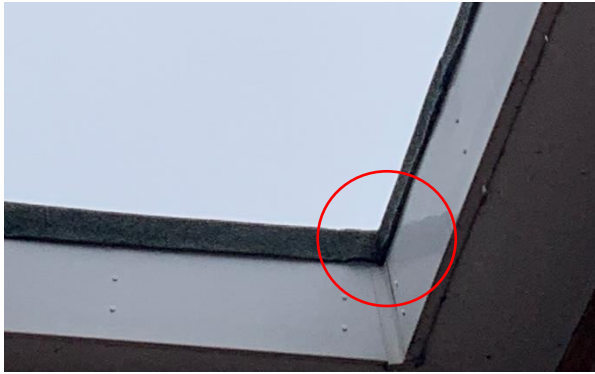


Plate 4.3: Lifted Roofing Felt (Western Aspect)



Plate 4.4: Lifted Roofing Felt (Western Aspect)



Plate 4.5: Lifted Roof Felt (Eastern Elevation)



Plate 4.6: Gap in the Soffit (Eastern Elevation)



Plate 4.7: Gap in the brickwork (Southern Elevation)



4.8: Damaged Brickwork (Northern Elevation/Southern Edge of Courtyard)



Plate 4.9: Hole in the Brickwork (Northern Elevation/Southern Edge of Courtyard)

Internal Assessment

The internal space was in good condition. No enclosed roof spaces were present, and all rooms were in frequent use.

Roosting Potential

No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal and external inspections of the building. Overall, this building supported low potential for roosting bats.

Building 2 (Wooden Cabin)

External Assessment

Building B2 consisted of a single-storey wooden cabin, located directly north of Building B1 (Plate 4.10). The building had a pitched felt roof, along with double glazed windows on the northern, southern, and eastern aspects.

As previously, one of the wooden beams at the west-facing roof apex was damaged (Plate 4.11), albeit a detailed inspection identified this feature not to provide access to gaps or crevices suitable for roosting bats.

A lifted wooden panel was noticed by a window on the northern elevation, albeit the space behind this was exposed and likely of limited suitability for roosting bats. This space, representing the only identified PRF associated with this building, was fully expected and there was no evidence of roosting bats.



Plate 4.10: Building 2 (Wooden Cabin - North-Eastern Aspect)



Plate 4.11: Damage to Wooden Roof Apex (Western Aspect)

Internal Assessment

The interior of Building 2 (wooden cabin) was in good condition and in frequent use. No internal loft spaces were present.

Roosting Potential

No evidence of bats, e.g., droppings, urine staining, feeding remains or scratch marks, was recorded during the internal and external inspections of the building. Overall, this building supported low potential for roosting bats, while the only identified PRF (lifted wooden panel on the northern elevation) was fully inspected, with no evidence of roosting bats recorded.

Building 3 (Canoe Shed)

External Assessment

Building 3 consisted of a large single storey wooden shed with a pitched felt roof, used to store water sport equipment. The walls of the building comprised a mixture of wooden boarding and brickwork on top of breezeblock foundations. Garage doors were present on the eastern and western elevations of the building.

As previously, Building 3 was in generally poor condition. Much of the wooden cladding was damaged or missing, there were holes at the eaves, loose fitting joints and cracks in the brickwork (Plate 4.12-4.16). The damage observed in the wooden cladding led to an enclosed area between the wooden cladding and internal ply lining. A bird nest was also noted in a gap in the wooden cladding on the southern facet of the building. A metal storage container was present adjacent to the northern elevation of the building, likely blocking access for bats from the majority of this elevation.



Plate 4.12: Missing Wooden Cladding (Southern Aspect)



Plate 4.13: Damaged Wooden Cladding (Eastern Aspect)



Plate 4.14: Damaged Brickwork (Eastern Aspect)



Plate 4.15: Loose Fitting Joins (Southern Aspect)



Plate 4.16: Gaps At The Eaves (Southern Aspect)

Internal Assessment

The interior of Building 3 consisted of a large open space with exposed treated timber roof beams (Plate 4.17). The building was poorly insulated with only the ceiling possessing any form of insulation. There were holes in the ceiling insulation, but none appeared to extend into significant enclosed cavities capable of supporting larger numbers of bats (Plate 4.18).



Plate 4.17: Interior of Building 3



Plate 4.18: Gap in The Ceiling Insulation

Roosting Potential

No evidence of bats, e.g., droppings, urine staining, feeding remains or scratch marks, was recorded during the internal and external inspections of the building. Overall, this building supported low potential for roosting bats.

Building 4 (Cedar House)

External Assessment

Building 4 consisted of a single storey wooden building with a pitched felt roof (Plate 4.19). The building had a series of single glazed windows with wooden frames. The building was in generally poor repair at the time of the survey. The external vents on the north-facing wall had sustained damage, granting access into the internal space (Plate 4.20). A pipe hole was also present on the north-facing wall, and appeared to extend into the wall structure (Plate 4.21).



Plate 4.19: Building 4 (Cedar House).



4.20: Damaged Roof Vent (Northern Aspect)



Plate 4.21: Pipe Hole (Northern Aspect)

Internal Assessment

The internal areas appeared disused and in poor repair, albeit no internal loft spaces, or features suitable for roosting bats, were recorded within this building.

Roosting Potential

No evidence of bats, e.g., droppings, urine staining, feeding remains or scratch marks, was recorded during the internal and external inspections of the building. Overall, this building supported low potential for roosting bats.

Building 5 (Residential House)

External Assessment

Building 5 (residential house) consisted of a detached single-storey house with a flat felt roof. The building was brick built, with a plastic soffit/fascia board and double-glazed windows.

As previously, areas of lifted roofing felt were present at all aspects, presenting limited opportunities for bats to roost under the roofing material (Plate 4.22). A pipe hole was identified in the soffit box at the southern extent of the property (Plate 4.23).



Plate 4.22 Lifted Roofing Felt (Western Aspect)



Plate 4.23: Pipe Hole (Southern Aspect)

Internal Assessment

It was not possible to gain internal access, however, a thorough external inspection was undertaken.

Roosting Potential

No evidence of bats, e.g., droppings, urine staining, feeding remains or scratch marks, was recorded during the external inspection of the building. Given the findings of the external inspection were consistent with those recorded by Middlemarch in 2022, with no additional PRFs recorded during the latest survey, this building is considered, as previously, to support low bat roosting potential.

4.2 Site and Surrounding Habitats

The development site formed the southern part of the wider Thames Young Mariners site, the centre of which comprised a large lake fed from backwater from the River Thames channel. The lake was fringed by a range of semi-natural habitats and a series of docks and pontoons. Scattered trees, narrow bands of woodland and scrub were present along the site boundaries. The lake and associated semi-natural habitat along site boundaries are considered to offer high value foraging and commuting habitat for bats. The lake, in particular, is likely to represent a significant and important foraging resource for local bat populations.

Site facilities were predominantly located within the western portion of the site, comprising a series of buildings, with associated storage units, introduced shrubs, managed amenity grassland and hardstanding. These areas of the site are considered to only offer limited value to foraging and commuting bats. Security lighting is present within these areas of the site.

The River Thames, situated immediately west of the site, provides bats with a commuting corridor as well as foraging opportunities. Ham Lands, a Local Nature Reserve featuring broadleaf woodland, meadow grassland and standing water habitats, abuts north and south of the wider Thames Young Mariners site and provides foraging, commuting and roosting opportunities for bats. The residential gardens situated east of the site provide some commuting and foraging opportunities, but the presence of contra-indicators, such as street/security lighting, may discourage bats from utilising such habitats.

5. Impact Assessment

5.1 Summary of Proposals

The proposed works involve the demolition of the existing buildings and erection of a series of buildings to provide accommodation and learning facilities. The majority of the works will take place within the existing building footprints, however, small areas of amenity grassland, introduced shrub and poor semi-improved grassland will be lost.

5.2 Summary of Key Bat Features

Roosting Bats

The Preliminary Bat Roost Assessment has identified a series of potential features which could be utilised by roosting bats within the buildings on site. Except for building B2, the buildings contained features which could not be fully inspected on account of their height. Therefore, whilst no evidence of bats or bat activity was found during the survey, as many features were not fully inspected on the majority of buildings (except for B2), it was not possible to determine whether bats were utilising the buildings at the time of the survey.

It was concluded that Building B1 (Main Building), B2 (Wooden Cabin), B3 (Canoe shed), B4 (Cedar House) and B5 (Residential House) have low potential to support roosting bats. PRFs recorded included:

- Lifted roofing felt;
- Damaged brickwork;
- Damaged wooden cladding;
- Loose fitting joins;
- Gaps at the eaves; and,
- Pipe Holes.

The PRFs identified in these buildings may provide suitable habitat for a small number of bats to use opportunistically but are considered unlikely to be used by larger number of bats on a regular basis or form a significant roost. Given that all features associated with building B2 were fully inspected, with no evidence of roosting bats recorded, it was concluded that no roosting bats were present within this building at the time of the survey.

Commuting and Foraging Bats

The site itself provides high quality habitat for foraging and commuting bats and is well connected to a broader network of habitats.

5.3 Potential Impacts on Bats

The buildings on site are proposed for demolition. The buildings have been classified as having low bat roosting potential and as such are unlikely to support a roost beyond low conservation significance.

Should bats use any of the buildings on site as roosting habitat, there is the potential for direct harm/disturbance to these bats during the works which would constitute a breach of legislation. Thus, further survey work is required to determine the presence/absence of roosting bats.

Any increase in artificial lighting on the lake, scattered trees, scrub or woodland, predominantly located at the site boundaries, may significantly impact the viability of these habitats for nocturnal species including bats.

The proposals should be designed to retain and protect the high value habitats on site, including the lake, scattered trees, woodland and scrub habitat.

The proposed development should seek to enhance the value of the site for bats. Built-in bat boxes should be integrated within the new buildings and habitats should be provided which will attract night-flying insects. Proposed enhancements include the planting of a number of scattered trees, along with the creation of linear wildflower grassland margins around the existing intensively managed amenity grassland. The habitat will serve as a semi-natural buffer for the woodland habitat and provide a linear commuting and foraging habitat.

Recommendations regarding lighting, habitat enhancement and additional surveys have been made in Chapter 6.

6. Recommendations

All recommendations provided in this section are based on Middlemarch's current understanding of the site proposals provided by Pick Everard, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

- R1 Buildings B1, B3, B4, and B5:** Buildings B1, B3, B4 and B5 were identified as having low potential to support roosting bats. Bat Surveys: Good Practice Guidelines, published by the Bat Conservation Trust (Collins, 2016), recommends that for structures with low bat roosting potential at least one survey (consisting of either a dusk emergence survey or a dawn re-entry survey) be undertaken during the peak season for emergence/re-entry surveys (May to August) to determine the presence/absence of roosting bats within the structures. Should this survey confirm the presence of roosting bats, it will be necessary to undertake additional surveys in order to inform a Natural England licence application. In addition, should the survey identify the presence of significant levels of bat activity at the site, it may be necessary to undertake further survey visits to comprehensively assess the value of the site to bats.
- R2 Building B2:** Buildings B2, despite having low potential features to support roosting bats, was fully inspected, with no evidence of roosting bats recorded. As such, no further survey work of this building is required at present. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed buildings have not commenced within this timeframe it will be essential to update the survey effort to establish if suitable features have developed and if bats have colonised the buildings in the interim. In the unlikely event that a bat is found during demolition works all works must immediately cease and a suitably qualified ecologist should be contacted.
- R3 Scheme Design:** The proposed development should be designed to minimise effects on bats in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG). The ecological mitigation hierarchy requires all development schemes to apply to following principles:
- *Avoidance* – the proposed development should seek to avoid/minimise losses of features with bat potential, in the first instance and incorporate these features in the landscaping layout of the scheme accordingly. Similarly, protection measures for retained features and surrounding habitats should be considered to prevent incidental damage or disturbance during the construction phases. These measures will help to reduce the likelihood of impacting bats and minimise losses of suitable bat roosts and habitat.
 - *Mitigation* – where significant harm cannot be wholly or partially avoided, adverse effects should be minimised by design or through the use of effective mitigation measures such as minimising light spill (see recommendation 4 below).
 - *Compensation* – where unavoidable losses occur and mitigation cannot be provided, compensation for significant residual harm will be required as a last resort or planning permission could be refused. Where there is a significant effect on a bat roost, a compensation strategy sufficient to obtain a development licence from Natural England may also be required.

R4 Lighting: In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors such as bat species. Examples of good practice include:

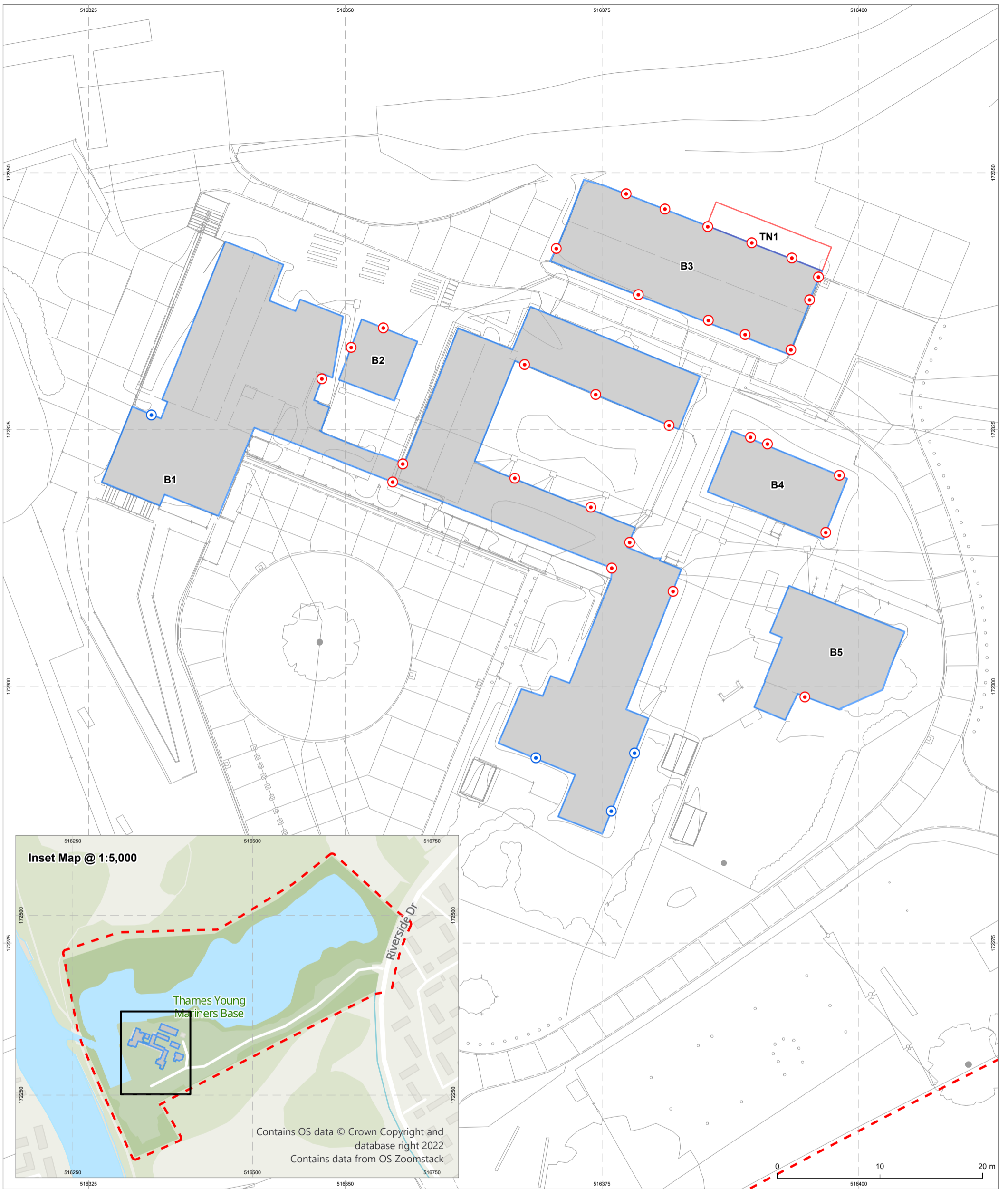
- Avoiding the installation of new lighting in proximity to key ecological features, such as the lake, scattered trees, woodland and scrub.
- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.
- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.
- Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.
- For internal lights, recessed light fittings cause significantly less glare than pendant type fittings. The use of low-glare glass may also be appropriate where internal lighting has the potential to influence sensitive ecological receptors.

R5 Habitat Enhancement: In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. Bat boxes should be installed to provide roosting habitat for species such as pipistrelle. In general, bats seek warm places and for this reason boxes should be located where they will receive full/partial sun, although installing boxes in a variety of orientations will provide a range of climatic conditions. Position boxes at least 4 m above ground to prevent disturbance from people and/or predators.


The proposals will incorporate tree planting and wildflower grassland creation which will likely attract insects and provide additional foraging and commuting habitat for bats on site. The planting of species which attract night-flying insects is also encouraged as this will also be of value to foraging bats, for example: evening primrose *Oenothera biennis*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.

7. Drawings

Drawing C150694-02-01 – Preliminary Bat Roost Assessment Map



- Legend**
- - - Site boundary
 - Potential roosting feature
 - Potential roosting feature, fully inspected with no evidence of roosting bats recorded
 - Building with low bat roost potential
 - TN1 - Metal container; likely restricting bat access to northern elevation

Project		Thames Young Mariners, Riverside Dr, London	
Drawing		Preliminary Bat Roost Assessment Map	
Client		Pick Everard	
Drawing Number	C160594-02-01	Revision	00
Scale @ A3	1:350	Date	July 2023
Approved By	ND	Drawn By	AW
			
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C160594-02-01

Appendix 1

Relevant Legislation

Bats and the places they use for shelter or protection (i.e. roosts) receive legal protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer 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 species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, or *obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CRoW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The reader should refer to the original legislation for the definitive interpretation.

The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. Species of Principal Importance for Nature Conservation in England are material considerations in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

Appendix 2

Examples of Potential Roost Features

External Features

- access through window panes, doors and walls;
- behind peeling paintwork or lifted rendering;
- behind hanging tiles;
- weatherboarding;
- eaves;
- soffit boxes;
- fascias;
- lead flashing;
- gaps under felt (even including those of flat roofs);
- under tiles/slates;
- existing bat and bird boxes; and
- any gaps in brickwork or stonework permitting access into access to cavity- or rubble-filled walls.

Internal Features

- behind wooden panelling;
- in lintels above doors and windows;
- behind window shutters and curtains;
- behind pictures, posters, furniture, peeling paintwork;
- peeling wallpaper, lifted plaster and boarded-up windows;
- inside cupboards and in chimneys accessible from fireplaces.
- within attic voids:
- the top of gable end or dividing walls;
- the top of chimney breasts;
- ridge and hip beams and other roof beams;
- mortise and tenon joints;
- all beams (free-hanging bats);
- the junction of roof timbers, especially where ridge and hip beams meet;
- behind purlins;
- between tiles and the roof lining; and
- under flat felt roofs.

Potential Roost Features (Adapted from Collins, 2016²)