TYBALDS ESTATE, CAMDEN, GREATER LONDON

PRELIMINARY BAT ROOST ASSESSMENT

A Report to: London Borough of Camden

Report No: RT-MME-154667-05- Rev B

Date: June 2021

MIDDLEMARCH ENVIRONMENTAL

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	11/05/2021	Richard Sainsbury BSc (Hons) (Ecological Consultant)	Paul Roebuck BSc, MSc, MCIEEM (South East Manager)	Tom Docker CEcol MCIEEM (Managing Director)
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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

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

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

In March 2021, London Borough of Camden commissioned Middlemarch Environmental Ltd to undertake an updated Preliminary Roost Assessment of a proposed development at Tybalds Estate in Camden, London. This assessment is required to inform a planning application associated with the regeneration project for the site.

To fulfil the above brief to assess the potential for the existing buildings and structures on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 15th April 2021.

The 8 blocks of flats within the Tybalds Estate were assessed as having high potential to support roosting bats. Several potential roost features such as weepholes, airbricks, air vents, open-ended pipework and gaps between the fascia board were recorded around the buildings on site which could be utilised by bats to gain entry into the buildings and possible roost locations within the cavity wall. However, it is understood that the proposed works will not be impacting the cavity walls or the potential roost features within the buildings and therefore these features will not be affected. It is considered that the implications associated with the conversion works will not impact upon roosting bats or the potential roost features identified during the assessment and therefore no further survey effort will be required. Should the development proposals alter from Middlemarch Environmental Ltd's current understanding of the project and the potential roost features and cavity walls within the building become affected by the conversion works then additional survey effort will be required to assess the roosting status of the buildings.

The Preliminary Bat Roost Assessment has identified that the storage buildings and sheds are unsuitable to support roosting bats. No features were recorded during the external assessment of the structures which could be utilised by bats to gain entry into the internal areas and potential roost locations, nor were there any external roosting features identified. Therefore, the storage buildings and sheds are considered to provide negligible potential to support roosting bats. Thus, no further works are required in respect of roosting bats.

Following the results of the Preliminary Bat Roost Assessment, the following recommendations have been made:

R1 Tybalds Estate (Buildings B1 – B8)
Current proposals indicate that none of the high potential roosting features recorded on the buildings within Tybalds Estate will be impacted by the proposed works and therefore no further survey effort is required. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed structure 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 structures in the interim. In the unlikely event that a bat is found during conversion works all works must immediately cease and a suitably qualified ecologist should be contacted.

R2 Storage Buildings and Sheds
The storage buildings and sheds were fully inspected, and no bat roosts were identified. These structures had no potential for roosting bats. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed structure 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 structures 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 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.

R4 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.

CONTENTS

1. INTRODUCTION

1.1 PROJECT BACKGROUND

In March 2021, London Borough of Camden commissioned Middlemarch Environmental Ltd to undertake an updated Preliminary Roost Assessment of a proposed development at Tybalds Estate in Camden, London. This assessment is required to inform a planning application associated with the regeneration project for the site.

This report provides an assessment of the buildings within the entire Tybalds Estate. The planning application that this report supports, covers a smaller site area. The planning application site area is the majority but not all of the Tybalds Estate. Drawing 154667-05-01-Rev A provided within Chapter 7 further illustrates the extent of land covered by this assessment and the planning application site area.

Middlemarch Environmental Ltd has previously carried out a Preliminary Ecological Appraisal in 2012 for London Borough of Camden at these sites, the findings of which are detailed in Reports RT-MME-111475B-01. In 2019 Middlemarch Environmental Ltd completed further ecological assessments at Tybalds Estate, Camden in London, including a Preliminary Ecological Appraisal and a Preliminary Bat Roost Assessment, the findings of which are detailed in Reports RT-MME-129968-03 and RT-MME-129968-04 respectively.

To fulfil the above brief to assess the potential for the existing buildings and structures on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 15th April 2021.

In addition, Middlemarch Environmental Ltd has been commissioned to undertake the following assessment:

- Updated Preliminary Arboricultural Assessment (Report RT-MME-154667-01);
- Updated Arboricultural Impact Assessment (Report RT-MME-154667-02);
- Updated Arboricultural Method Statement (Report RT-MME-154667-03); and,
- Updated Preliminary Ecological Appraisal (Report RT-MME-154667-04).

All UK bat species are legally protected species and they are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included within Appendix 1. This section also provides some brief information on the ecology of British bat species.

1.2 SITE DESCRIPTION AND CONTEXT

The site under consideration, hereinafter referred to as the survey area, comprises the land and residential dwellings which form the Tybalds Estate; a post-war housing estate located in the Bloomsbury area of central London. The survey area is situated within a residential district of the London Borough of Camden, central London at Ordnance Survey Grid Reference TQ305819.

The Tybalds Estate consists of several residential buildings (Babington Court, Chancellors Court, Blemundsbury, Devonshire, Falcon, Richbell, Springwater and Windmill) with associated hard and soft landscaping and parking spaces. These buildings consisted mostly of blocks of flats but with a few outbuildings in the form of store sheds, bin stores and electrical substations.

The survey area is bounded by properties on Great Ormond Street to the north, Orde Hall Street to the east, buildings off Theobalds Road to the south and Boswell Street and Old Gloucester Street to the west.

The survey area is dominated by buildings and hardstanding with small areas of amenity grassland, introduced shrub and scattered trees. Habitats recorded included: amenity grassland, bare ground with colonising vegetation, building, fence and wall, hardstanding, hedgerow, introduced shrub and scattered trees. The topography of the land was generally flat.

The wider landscape is dominated by further residential buildings, roads and recreational park space and gardens.

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 1.1.

Document Name / Drawing Number	Author
Existing Site Plan (Draft)	Matthew Lloyd Architects
210527_rev_TE_0 PROPOSED LANDSCAPE-FINAL OPT-Layout1.pdf	Unknown
Site Location Plan X-010	Matthew Lloyd Architects
X-116-PROPOSED MASTERPLAN-colour.pdf	Matthew Lloyd Architects

Table 1.1: Documentation Provided by Client

2. METHODOLOGY

2.1 DESK STUDY

As part of the Preliminary Ecological Appraisal (Report RT-MME-154667-04) an ecological desk study (which included a search for records of bats) was undertaken within a 1 km radius of the site. The consultees for the desk study were:

- Natural England - *MAGIC* website for statutory conservation sites; and,
- Greenspace Information Centre for Greater London.

Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided by these organisations. Relevant bat data are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report.

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

In line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), a Preliminary Bat Roost Assessment of the buildings and other structures was conducted during daylight hours. A visual assessment was undertaken 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. Table 2.1 provides examples of PRFs. Any accessible PRFs were inspected using binoculars, a torch and endoscope for evidence of possible bat presence. Buildings and other structures were surveyed externally.

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

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

Example of Potential Roost Features
Externally • 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. Internally • 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.

Table 2.1: Potential Roost Features (Adapted from Collins, 2016)

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)

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 SPECIES RECORDS

The data search was carried out in April 2021 by Greenspace Information Centre for Greater London. Records of bat species within a 1 km radius of the survey area provided by the consultee are summarised in Table 3.1. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance?	Legislation / Conservation Status
Mammals – Bats					
Unidentified bat *Vespertilionidae* sp.	6	2016	190 m west	#	#, LBAP
Unidentified bat *Chiroptera* sp.	1	2016	250 m south-west	#	#, LBAP
Common pipistrelle *Pipistrellus pipistrellus*	17	2016	375 m north-east	-	ECH 4, WCA 5, WCA 6, LBAP
Pipistrelle *Pipistrellus* sp.	1	1993	485 m south-east	#	ECH 4, WCA 5, WCA 6, LBAP
Soprano pipistrelle *Pipistrellus pygmaeus*	4	2016	715 m south-west	✓	ECH 4, WCA 5, WCA 6, LBAP
Nathusius's Pipistrelle *Pipistrellus nathusii*	1	2011	910 m north-west	-	ECH 4, WCA 5, WCA 6, LBAP

Key:
#: Dependent on species.

ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection.
WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds).
WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
LBAP: Local Biodiversity Action Plan

Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.

Table 3.1: Bat Species Records Within 1 km of Survey Area

3.3 PREVIOUS BAT SURVEYS

The 2019 Preliminary Bat Roost Assessment (Report RT-MME-129968-04) identified two buildings (Falcon Underbuild and Falcon TRA Hall) as having high potential to support roosting bats due to the numerous features of potential interest to roosting bats identified during the daytime survey.

Two buildings (Blemundsbury and Richbell Underbuild) and three structures (GOSH1, GOSH2 and Storage Sheds) was classified as having negligible potential to support roosting bats as no features of interest to bats were identified during the daytime survey.

4. SURVEY RESULTS

4.1 INTRODUCTION

The Preliminary Bat Roost Assessment was conducted on 15th April 2021 by Victoria Aelen (Ecological Consultant) and Richard Sainsbury (Ecological Consultant). Drawing C154667-05-01- Rev A, illustrating the layout of the buildings and structures on site and the results of the survey is provided in Chapter 7.

Weather conditions were recorded and are presented in Table 4.1.

Parameter	Conditions
Temperature (°C)	9
Cloud Cover (%)	80
Precipitation	Dry
Wind Speed (Beaufort)	F1-2

Table 4.1: Weather Conditions During the Preliminary Bat Roost Assessment

4.2 CONSTRAINTS

Due to the current COVID-19 pandemic, where buildings/structures are occupied or it is considered unsafe to do so, an internal inspection will not be completed. The buildings and structures were occupied at the time of the survey, and as such, an internal inspection was not undertaken.

A survey of the roofs of the buildings was conducted from ground level. Due to the height of some of the buildings not every aspect of the roofs could be surveyed fully.

4.3 SURVEY RESULTS

The site comprised of a large residential complex (Tybalds Estate) with 8 blocks of apartments, associated storage buildings and storage sheds. The apartment blocks consisted of Babington Court, Blemundsbury, Chancellors' Court, Devonshire Court, Falcon, Richbell, Springwater and Windmill. The potential for these buildings and structures to support roosting bats is discussed below.

4.3.1 Babington Court (Building B1) and Chancellors' Court (Building B2)

External Assessment
Babington Court (Building B1) and Chancellors' Court (Building B2) were of a similar design and construction and occupied the northern section of the site. These buildings were fourteen storeys high, post-war apartment blocks with flat concrete roofs (Plate 4.1 and 4.2). The buildings were brick-built with tightly fitted double glazed windows set in uPVC frames. Both buildings were in relatively good condition and were occupied at the time of the survey.

Plate 4.1: Building B1 - Babington Court (Western Elevation)

Plate 4.2: Building B2 - Chancellors' Court (Western Elevation)

A survey of the roofs of Buildings B1 and B2 was conducted from ground level. Due to the height of the buildings not all aspects of the roofs could be surveyed fully. The roofs were flat and constructed from concrete with a painted fascia board tightly fitted to each elevation of the building (Plate 4.3). A small, single-storey storage building was recorded on the roof of both buildings, surround by metal railings. Multiple open-ended pipes were also recorded on several aspects of the buildings across the site which provide potentially suitable crevices for roosting bats (Plate 4.4).

Plate 4.3: Extent of Painted Fascia Board and Roof Storage Building (Eastern Elevation)

Plate 4.4: Open-ended Pipework (Building B2 - Chancellors' Court, Northern Elevation)

Weepholes were recorded on multiple aspects of the buildings (Plate 4.5 and Plate 4.6). These gaps provide potential ingress points into the internal structure of the buildings and create a suitable roosting crevice for bats. It was not possible to inspect these features due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey. Aspects such as windows and doors within the buildings did not contain any potential roosting features.

Plate 4.5: Extent of Weepholes (Building B1 – Babington Court, Northern Elevation)

Plate 4.6: Extent of Weepholes (Building B2 – Chancellors' Court, Southern Elevation)

4.3.2 Blemundsbury (Building B3) and Windmill (Building B4)

External Assessment

Blemundsbury (Building B3) and Windmill (Building B4) were of a similar design and construction and occupied the eastern section of the site. These buildings were eight storeys high, post-war apartment blocks with flat concrete roofs (Plate 4.7 and 4.8). The buildings were predominantly brick-built with prefabricated metal stairwells present on the eastern and western elevations. Several concrete balconies were recorded on the northern and southern elevations. Tightly fitted double glazed windows were noted and sat in uPVC frames. Both buildings were in relatively good condition and were occupied at the time of the survey.

Plate 4.7: Building B3 – Blemundsbury (Northern Elevation)

Plate 4.8: Building B4 – Windmill (Southern Elevation)

A survey of the roofs of Buildings B3 and B4 was conducted from ground level. Due to the height of the buildings not all aspects of the roofs could be surveyed fully. The roofs were flat and capped with concrete (Plate 4.9). An associated stairwell extension, constructed from brick and prefabricated metal was noted on the roofs of both buildings, surrounded by metal railings.

Multiple airbricks were also recorded beneath the suspended floors on the northern and southern aspects of the buildings which provide potentially suitable crevices for roosting bats (Plate 4.10). It was not possible to inspect these features due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey. Aspects such as windows and doors within the buildings did not contain any potential roosting features.

Plate 4.9: Building B4 – Windmill (Northern Elevation)

Plate 4.10: Airbrick (Building B4 – Windmill, Southern Elevation)

4.3.3 Springwater (Building B5) and Richbell (Building B6)

External Assessment
Springwater (Building B5) and Richbell (Building B6) were of a similar design and construction and occupied the southern section of the site. These buildings were eight storeys high, post-war apartment blocks with flat concrete roofs (Plate 4.7 and 4.8). The buildings were predominantly brick-built with prefabricated metal walls present on the southern elevations. Several suspended concrete balconies were recorded on the eastern and western elevations. Tightly fitted double glazed windows were noted and sat in uPVC frames. Both buildings were in relatively good condition and were occupied at the time of the survey.

Plate 4.11: Building B5 – Springwater (Eastern Elevation)

Plate 4.12: Building B6 – Richbell (Southern Elevation)

A survey of the roofs of Buildings B5 and B6 was conducted from ground level. Due to the height of the buildings not all aspects of the roofs could be surveyed fully. The roofs were flat and capped with concrete. An associated stairwell extension, constructed from brick and prefabricated metal was noted on the roofs of both buildings, surrounded by metal railings.

Multiple airbricks and vents were recorded beneath the suspended floors and amongst the prefabricated metal wall on the eastern, western and southern aspects of the buildings respectively; which provide potentially suitable crevices for roosting bats (Plates 4.13 and 4.14). It was not possible to inspect these features due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey. Aspects such as windows and doors within the buildings did not contain any potential roosting features.

Plate 4.13: Extent of Airbricks (Building B6 – Richbell, Western Elevation)

Plate 4.14: Air Vents on Prefabricated Metal Wall (Building B5 – Springwater, Southern Elevation)

4.3.4 Falcon (Building B7)

External Assessment
Falcon (Building B7) was of a similar design and construction and occupied the south-western section of the site. This building was eight storeys high, post-war apartment blocks with flat concrete roofs (Plate 4.15). Several suspended concrete balconies were recorded on the eastern and western elevations. Tightly fitted double glazed windows were noted and sat in uPVC frames. The building was in relatively good condition and occupied at the time of the survey.

Plate 4.15: Building B7 - Falcon (North-Eastern Elevation)

Plate 4.16: Building B7- Falcon (South-Eastern Elevation)

A survey of the roof of Building B7 was conducted from ground level. Due to the height of the buildings not all aspects of the roofs could be surveyed fully. The roof was flat and capped with concrete (Plate 4.16). An associated stairwell extension, constructed from brick was noted on the roof of the building, surrounded by metal railings.

Weepholes were recorded on multiple aspects of the buildings (Plate 4.17 and Plate 4.18). These gaps provide potential ingress points into the internal structure of the buildings and create a suitable roosting crevice for bats. It was not possible to inspect these features due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey. Aspects such as windows and doors within the buildings did not contain any potential roosting features.

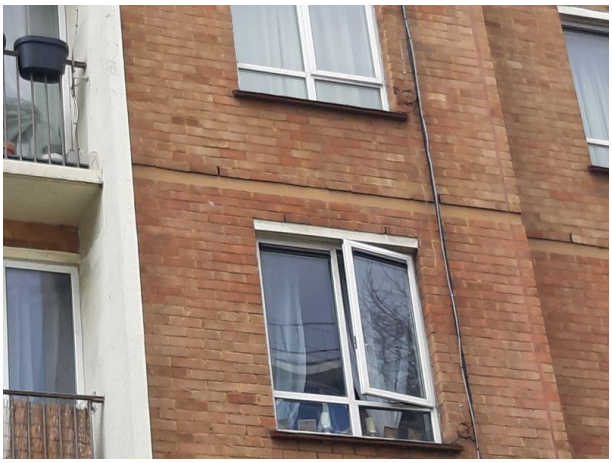


Plate 4.17: Extent of Weepholes (Eastern Elevation)

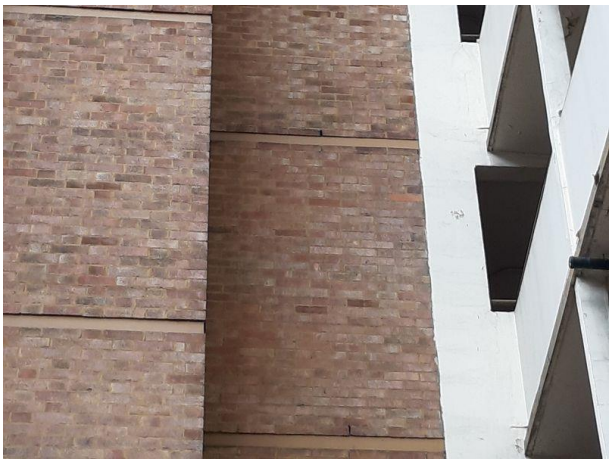


Plate 4.18: Extent of Weepholes (Southern Elevation)

Multiple airbricks were also recorded beneath the suspended floors on the eastern and western aspects of the buildings which provide potentially suitable crevices for roosting bats (Plate 4.19 and 4.20). It was not possible to inspect these features due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey.

Plate 4.19: Extent of Airbricks (Building B7, Southern Elevation)

Plate 4.20: Extent of Airbricks (Building B7, Eastern Elevation)

4.3.5 Devonshire Court (Building B8)

External Assessment
Devonshire Court (Building B8) was of a similar design and construction and occupied the north-western section of the site. This building was eight storeys high, post-war apartment blocks with flat concrete roofs (Plate 4.21 and 4.22). Several suspended concrete balconies were recorded on the eastern elevation. A stairwell extension adjoined the building to the south-east. Tightly fitted double glazed windows were noted and sat in uPVC frames. The building was in relatively good condition and occupied at the time of the survey.

Plate 4.21: Building B8- Devonshire Court (Southern Elevation)

Plate 4.22: Building B8 – Devonshire Court (Eastern Elevation)

A survey of the roof of Building B8 was conducted from ground level. Due to the height of the building not all aspects of the roof could be surveyed fully. The roof was flat and constructed from concrete with a painted fascia board tightly fitted to each elevation of the building (Plate 4.23). A small, single-storey storage building was recorded on the roof of both buildings, surround by metal railings. Multiple open-ended pipes were also recorded on several aspects of the buildings across the site which provide potentially suitable crevices for roosting bats (Plate 4.24).

Plate 4.23: Extent of Painted Fascia Board (Eastern Elevation)

Plate 4.24: Open-ended Pipework (Eastern Elevation)

Gaps in the fascia board were recorded on the eastern elevation of the building (Plate 4.25 and Plate 4.26). These gaps provide potential ingress points into the internal structure of the buildings and create a suitable roosting crevice for bats. It was not possible to inspect these features due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey. Aspects such as windows and doors within the buildings did not contain any potential roosting features.

Plate 4.25: Gaps in Fascia Board (Eastern Elevation)

Plate 4.26: Gaps in Fascia Board (Eastern Elevation)

4.3.6 Storage Buildings

External Assessment
The three storage buildings were of a similar design and construction and comprised of single storey, brick-built structures with a combination of flat bitumen felt and concrete roofs (Plate 4.27, 4.28, 4.29 and 4.30). These buildings were in relatively good condition and operational at the time of the survey, with no gaps or cracks noted between the brickwork. The roofs were in overall good condition with no gaps or tears recorded. Wooden doors were fixed within wooden frames. The frames were of good condition and were tightly fitted to the external wall with no gaps recorded.

No features were recorded during the external assessment of the storage buildings which could be utilised by bats to gain entry into the internal areas of these buildings. In addition, no external features suitable for roosting bats were noted on the buildings. The buildings were in good condition and tightly sealed with no potential ingress/egress points or features for bats.

Plate 4.27: Storage Building (Western Elevation)

Plate 4.28: Storage Building (Eastern Elevation)

Plate 4.29: Storage Building (Northern Perspective)

Plate 4.30: Storage Building (Southern Elevation)

4.3.7 Terraces of Storage Sheds

External Assessment
Three terraces of storage sheds were situated along the northern boundary of the site and were currently being used for private storage (Plates 4.31, 4.32, 4.33 and 4.34). The sheds had corrugated metal roofs, plastic guttering, brick walls and large wooden doors. Transom gaps above the door were meshed, preventing internal access to the shed spaces.

No features were recorded during the external assessment of the storage sheds which could be utilised by bats to gain entry into the internal areas of these buildings. In addition, no external features suitable for roosting bats were noted on the buildings. The buildings were in good condition and tightly sealed with no potential ingress/egress points or features for bats.

Plate 4.31: Storage Shed (Western Elevation)

Plate 4.32: Storage Shed (Eastern Elevation)

Plate 4.33: Storage Shed (Western Perspective)

Plate 4.34: Storage Shed (Western Elevation)

4.4 SITE AND SURROUNDING HABITATS

The site is situated within a residential area of Camden, Greater London. It was considered that the site contained limited suitable foraging and commuting habitat along linear features such as scattered trees and hedgerows found throughout the site.

The site itself is located within a predominately residential area of Camden which experiences constant traffic movement and is well lit by the surrounding buildings, street lighting and passing vehicles. Within the wider landscape, Tybalds Estate is well connected to Coram's Field SINC (Local) (Site of Importance for Nature Conservation; Site of Local Importance) which is located approximately 190 m to the north, Russel Square SINC (Local) located 230 m to the west, Lincoln's Inn Field SINC (Local) 390 m to the south and St Andrew's Garden SINC (Local) 400 m to the north-east; which are of high value to commuting and foraging bats.

Habitats within 1 km of the site suitable for roosting, commuting and foraging include:

- Residential houses and associated gardens;
- Churches, schools, hospitals and associated grounds; and,
- Railway lines with vegetated banks.

Overall, the wider landscape provides more favourable habitat for roosting, commuting and foraging bats in comparison to the habitats on site, therefore the survey area is considered to have moderate potential to be used by bats.

5. DISCUSSION AND CONCLUSIONS

5.1 SUMMARY OF PROPOSALS

It is understood that the regeneration project will involve the conversion of the lower ground/ground floors of three blocks of flats: Blemundsbury (5 flats), Richbell (2 flats) and Falcon (3 flats). Three terraces of storage sheds along the site's northern boundary are to be demolished and subsequently replaced with two new buildings (Eastern and Western Mews). Three new buildings are proposed to be built on hardstanding between current apartment blocks (Block B, C and D). A lift will also we added to the southern aspect of the current Devonshire development. Additional landscaping and bulky waste store will also be implemented on site. The proposed works will also include installation of photo-voltaic panels on the flat rooves of three blocks (Blemundsbury, Richbell and Falcon).

5.2 ASSESSMENT OF BUILDINGS

During the assessment of the buildings in the Tybalds Estate, numerous features were recorded around the buildings such as weepholes, airbricks, air vents, open-ended pipework and gaps between the fascia board which could be utilised by bats to gain entry into the buildings and potential roost locations.

No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the external survey of the buildings. However, potential roost features such as airbricks and weepholes were present within the buildings on site. These features provide potential ingress/egress points for roosting bats, leading into a cavity wall which could support a large colony of bats.

It is currently understood that Babington Court (Building B1), Chancellors' Court (Building B2), Springwater (Building B5) and Windmill (Building B4) are not subject to future development proposals. It is also acknowledged that the proposed conversion works for Blemundsbury Underbuild (Building B3), Devonshire Court (Building B8), Falcon Underbuild (Building B7) and Richbell Underbuild (Building B6) will not be impacting the cavity walls within the buildings and therefore the potential roost features identified will not be affected.

Due to an inability to fully inspect all features identified during the external inspection due to their height and location, the presence of internal cavity walls and an internal inspection not being undertaken due to COVID-19 restrictions, it is not possible to conclude whether the buildings are currently utilised by roosting bats. Therefore, the 8 blocks of flats within the Tybalds Estate were assessed as having high potential to support roosting bats.

Taking all into account; the nature of the proposed works, locations of the potential roost features and suitability of the surrounding habitats for bats, it is considered that the implications associated with the conversion works will not impact upon roosting bats and therefore no further survey effort will be required.

Should the development proposals alter from Middlemarch Environmental Ltd's current understanding of the project and the potential roost features and cavity walls within the building become affected by the conversion works then additional survey effort will be required to assess the roosting status of the buildings.

5.3 ASSESSMENT OF OTHER STRUCTURES

The Preliminary Bat Roost Assessment has identified that the storage buildings and sheds are unsuitable to support roosting bats. No features were recorded during the external assessment of the structures which could be utilised by bats to gain entry into the internal areas and potential roost locations, nor were there any external roosting features identified. Therefore, the storage buildings and sheds are considered to provide negligible potential to support roosting bats. Thus, no further works are required in respect of roosting bats.

5.4 POTENTIAL IMPACTS ON BATS

The 8 blocks of flats within the Tybalds Estate were assessed as having high potential to support roosting bats. Potential roost features such as airbricks and weepholes were present within the buildings on site. These features provide ingress/egress points for roosting bats into a cavity wall which could support a large colony of bats. However, it is understood that the proposed works will not be impacting the cavity walls or the potential roost features within the buildings and therefore these features will not be affected.

The surrounding habitat within the local area is considered unfavourable for foraging and commuting bats due to limited vegetation present within the urban landscape. Artificial lighting will negatively impact upon light sensitive species such as brown long eared bats and create barriers for dispersal.

Taking all into account; the nature of the proposed works, locations of the potential roost features and suitability of the surrounding habitats for bats, it is considered that the implications associated with the conversion works will not impact upon roosting bats and therefore no further survey effort will be required.

Should the development proposals alter from Middlemarch Environmental Ltd's current understanding of the project and the potential roost features and cavity walls within the buildings become affected by the conversion works then additional survey effort will be required to assess the roosting status of the buildings.

6. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the site proposals, 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 Tybalds Estate (Buildings B1 – B8)

Current proposals indicate that none of the high potential roosting features recorded on the buildings within Tybalds Estate will be impacted by the proposed works and therefore no further survey effort is required. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed structure 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 structures in the interim. In the unlikely event that a bat is found during conversion works, all works must immediately cease and a suitably qualified ecologist should be contacted.

R2 Storage Buildings and Sheds

The storage buildings and sheds were fully inspected, and no bat roosts were identified. These structures had no potential for roosting bats. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed structure 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 structures 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 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:

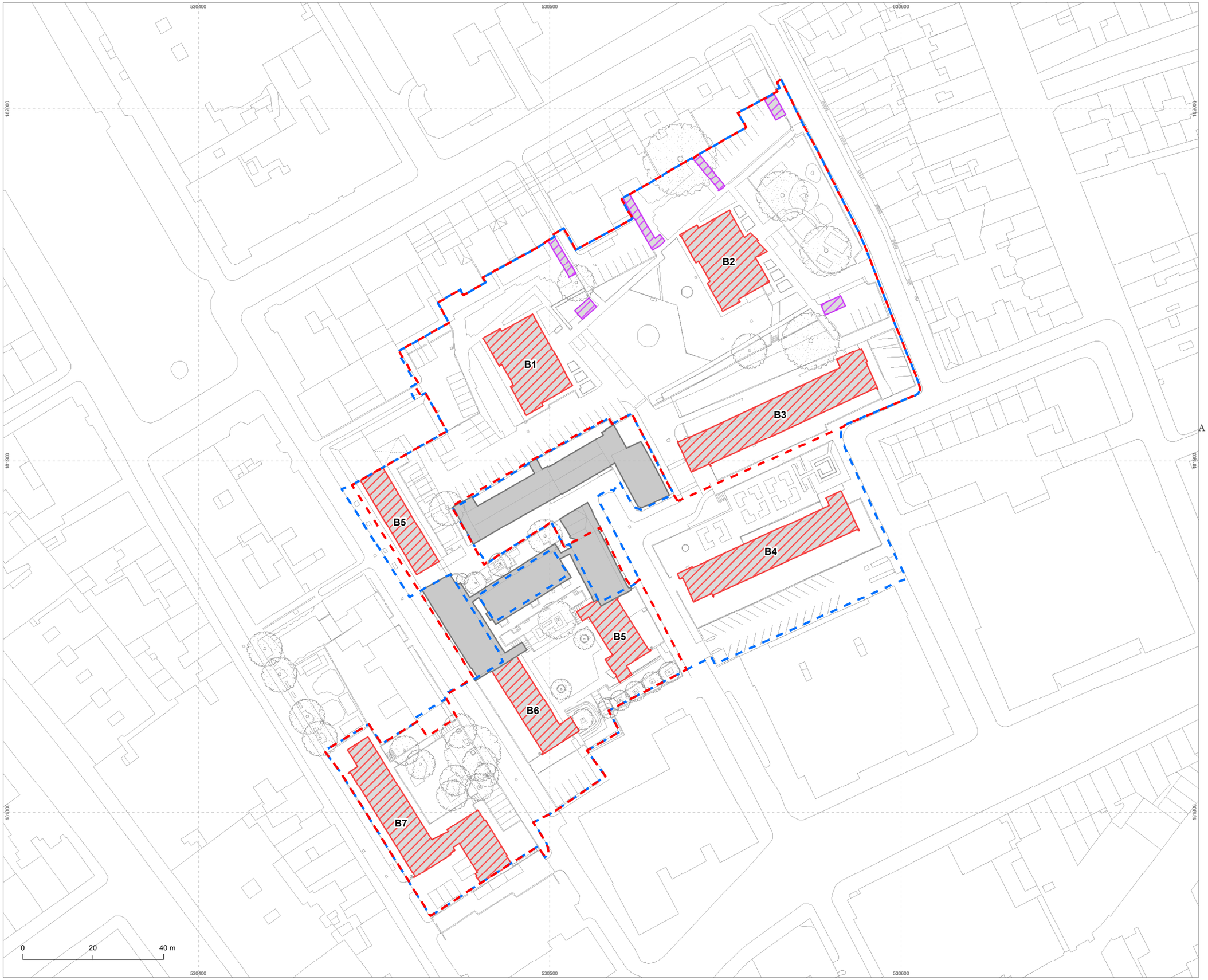
- Avoiding the installation of new lighting in proximity to key ecological features, such as scattered trees and hedgerows.
- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. 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.

R4 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 planting of species which attract night flying insects is encouraged as this will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, wild carrot *Daucus carota*, goldenrod *Solidago virgaurea*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.

7. DRAWINGS

Drawing C154667-05-01- Rev A – Preliminary Bat Roost Assessment



C154667-05-01-RevA

Legend

- Planning application site area
- Tybalds Estate site
- Building not surveyed
- High bat roost potential
- Negligible bat roost potential

N

Project	Tybalds Estate, Camden, London
Drawing	Preliminary Bat Roost Assessment of Buildings/Structures
Client	The London Borough of Camden
Drawing Number: C154667-05-01-RevA	Revision: Rev A
Scale @ A3: 1:1000	Date: June 2021
Approved By: RS	Drawn By: CD/RP

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The Conservation of Habitats and Species Regulations 2017.

APPENDIX 1

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.

ECOLOGY

At present, 18 species of bats are known to live within the United Kingdom, of which 17 species are confirmed as breeding. All UK bat species are classed as insectivorous, feeding on a variety of invertebrates including midges, mosquitoes, lacewings, moths, beetles and small spiders.

Bats will roost within a variety of different roosting locations, included houses, farm buildings, churches, bridges, walls, trees, culverts, caves and tunnels. At different times of the year the bats roosting requirements alter and they can have different roosting locations for maternity roosts, mating roosts and hibernation roosts. Certain bat species will also change roosts throughout the bat activity season with the bat colony using the site to roost for a few days, abandoning the roost and then returning a few days or weeks later. This change can be for a variety of reasons including climatic conditions and prey availability. Bats are known live for several years and if the climatic conditions are unfavourable at a particular roost, they may abandon it for a number of years, before returning when conditions change. Due to the matriarchal nature of bat colonies, the locations of these roosts can be passed down through the generations.

Bats usually start to come out of hibernation in March and early April (weather dependent), when they start to forage and replenish the body weight lost during the hibernation period. The female bats then start to congregate together in maternity roosts prior to giving birth and a single baby is born in June or July. The female then works hard to feed her young so that they can become independent and of a sufficient weight to survive the winter before the weather gets too cold and invertebrate activity reduces. Males generally live solitary lives, or in small groups with other males, although in some species the males can be found living with the females all year. The mating season begins in the autumn. During the winter bats hibernate in safe locations which provide relatively constant conditions, although they may venture outside to forage on warmer winter nights.