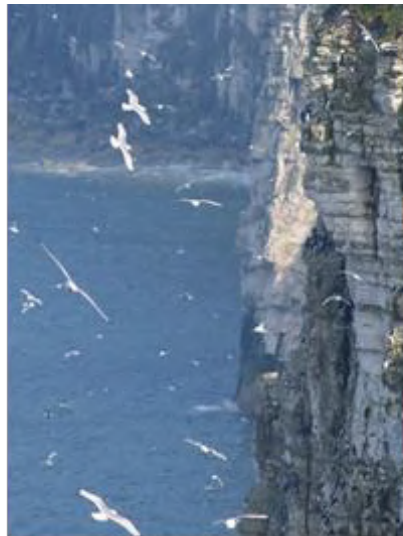




**Preliminary Roost Assessment and
Ground Level Tree Assessment**

Mendalgief Road, Newport

For

LNT Construction Ltd

Report Ref.: LNT001-019-005/001/001

January 2025

London & South East

Compass House
Surrey Research Park
Guildford
GU2 7AG. UK

t: +44 (0)1483 466 000

North East

Unit 4 Carrwood Park
Selby Road
Leeds
LS15 4LG. UK

t: +44 (0)113 518 2121

North West

Kennedy House
31 Stamford St
Ground Floor
Altrincham
Greater Manchester
WA14 4DZ. UK

t: +44 (0)1483 466 000

Wales & South West

Sophia House
28 Cathedral Road
Cardiff
CF11 9LJ. UK

t: +44 (0)292 066 0180

Midlands

605 Holly Court, Holly Farm Business Park
Honiley, Kenilworth
Warwickshire
CV8 1NP. UK

t: +44 (0)121 827 3180

East Anglia

70, 72 The Havens, Ransomes Industrial Estate,
Ipswich, Suffolk
IP3 9BF. UK

t: +44 (0)1483 466 000

Enquiries

e: enquiries@thomsonec.com

w: www.thomsonec.com



PEERS QUALITY
ASSURANCE LTD

ISO 9001:2015



9940



PEERS QUALITY
ASSURANCE LTD

ISO 14001:2015



9940

Project Number	Report No.
LNT001-019-005	001

Revision No.	Date of Issue	Author	Reviewer	Approver
001	10/01/2025	Paul Schofield and Chris Bridge	Laura Meer	Irfaan Junaideen

Disclaimer:

Copyright Thomson Environmental Consultants Limited. All rights reserved.

No part of this report may be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants Limited. If you have received this report in error, please destroy all copies in your possession or control and notify Thomson Environmental Consultants Limited.

This report has been prepared for the exclusive use of the commissioning party and unless otherwise agreed in writing by Thomson Environmental Consultants Limited, no other party may use, make use of or rely on the contents of the report. No liability is accepted by Thomson Environmental Consultants Limited for any use of this report, other than for the purposes for which it was originally prepared and provided.

Opinions and information provided in the report are on the basis of Thomson Environmental Consultants Limited using due skill, care and diligence in the preparation of the same and no explicit warranty is provided as to their accuracy. It should be noted and it is expressly stated that no independent verification of any of the documents or information supplied to Thomson Environmental Consultants Limited has been made.

Contents

1. Summary and Main Recommendations	6
1.1 Summary	6
1.2 Main Recommendations	6
2. Introduction	8
2.1 Overview	8
2.2 Development Background	8
2.3 Ecology Background	8
2.4 The Brief and Objectives	8
2.5 Limitations	9
2.6 Surveyors	10
3. Methodology	11
3.1 Desk Study	11
3.2 Survey Area and Data Collection	11
3.3 Preliminary Roost Assessment of Mendalgief Road	11
3.4 Ground Level Tree Assessment of Mendalgief Road	15
4. Results	19
4.2 Preliminary Roost Assessment of built structures at Mendalgief Road	19
4.3 Ground Level Tree Assessment of Mendalgief Road	21
5. Legal and Planning Policy Considerations	22
6. Recommendations	24
6.1 Mitigation	24
6.2 Further Survey	24
7. Conclusion	25
8. References	26
Appendix 1: Site Layout	27
Appendix 2: British Bats	28
Appendix 3: Full External Assessment	33

Table 1 Habitat suitability for roosting bats (adapted from Collins Ed., 2023)	13
Table 2 Classification of bat roost type definitions (adapted from Collins Ed., 2023)	14
Table 3 Guidelines for assessing the suitability of trees on proposed development sites for bats to be applied using professional judgement (adapted from Collins, J. ed, 2023)	16
Table 4 PRF types that can be exploited by bats and how they form (adapted from Bat Roosts in Trees, (BTHK, 2018)	16
Table 5 Guidelines for assessing the suitability of tree PRFs on proposed development sites for bats, to be applied using professional judgement (adapted from Collins ed 2023)	18
Table 6 Bat species records derived from the desk study	19
Table 7 External assessment of Mendalgief Road	19
Table 8 GLTA Results	21

Figure 1 Site Location

Figure 2 Survey Results of the Preliminary Roost Assessment and Ground Level Tree
Assessment

Figure 3 Photographs of the Site

1. Summary and Main Recommendations

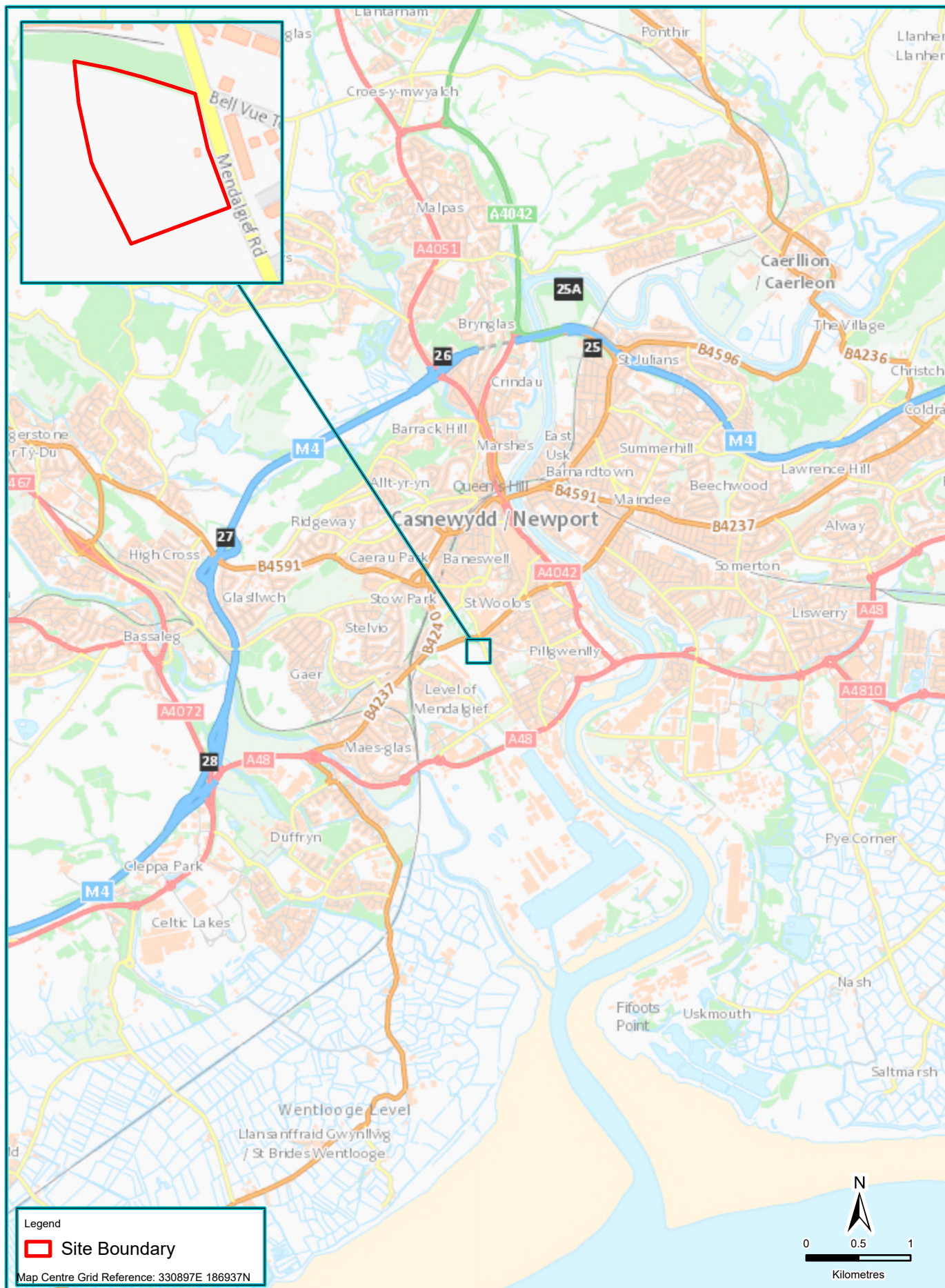
1.1 Summary

- 1.1.1** A Preliminary Ecological Appraisal was carried out on the site during May 2024, Report ref.: LNT001-019-002/001/001. Following a survey recommendation, LNT Construction Ltd commissioned Thomson Environmental Consultants to undertake a Preliminary Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) surveys for bats on two small unused derelict buildings and a multiple stemmed tree, at a site at Mendalgief Road, Newport, South Wales, NP20 2SH. The project proposal is for the construction of a new care home (approx.) 0.69ha in size. The site location is shown on Figure 1.
- 1.1.2** All Potential Roost Features (PRFs) were inspected from ground level only, access allowing, using binoculars, a torch and an endoscope.
- 1.1.3** All bat species and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended) and under the Conservation of Habitats and Species Regulations 2017 (as amended). Several bat species are also listed as a priority species under the Natural Environment and Rural Communities Act 2006 and are local priority species under the local Biodiversity Action Plan of Newport City Council.
- 1.1.4** Without mitigation and licensing, the Proposed Development could contravene the legislation with respect to bats and their roosts due to the demolition works of the two small buildings could destroy a bat roost and could result in disturbance, harm and death of individual bats.

1.2 Main Recommendations

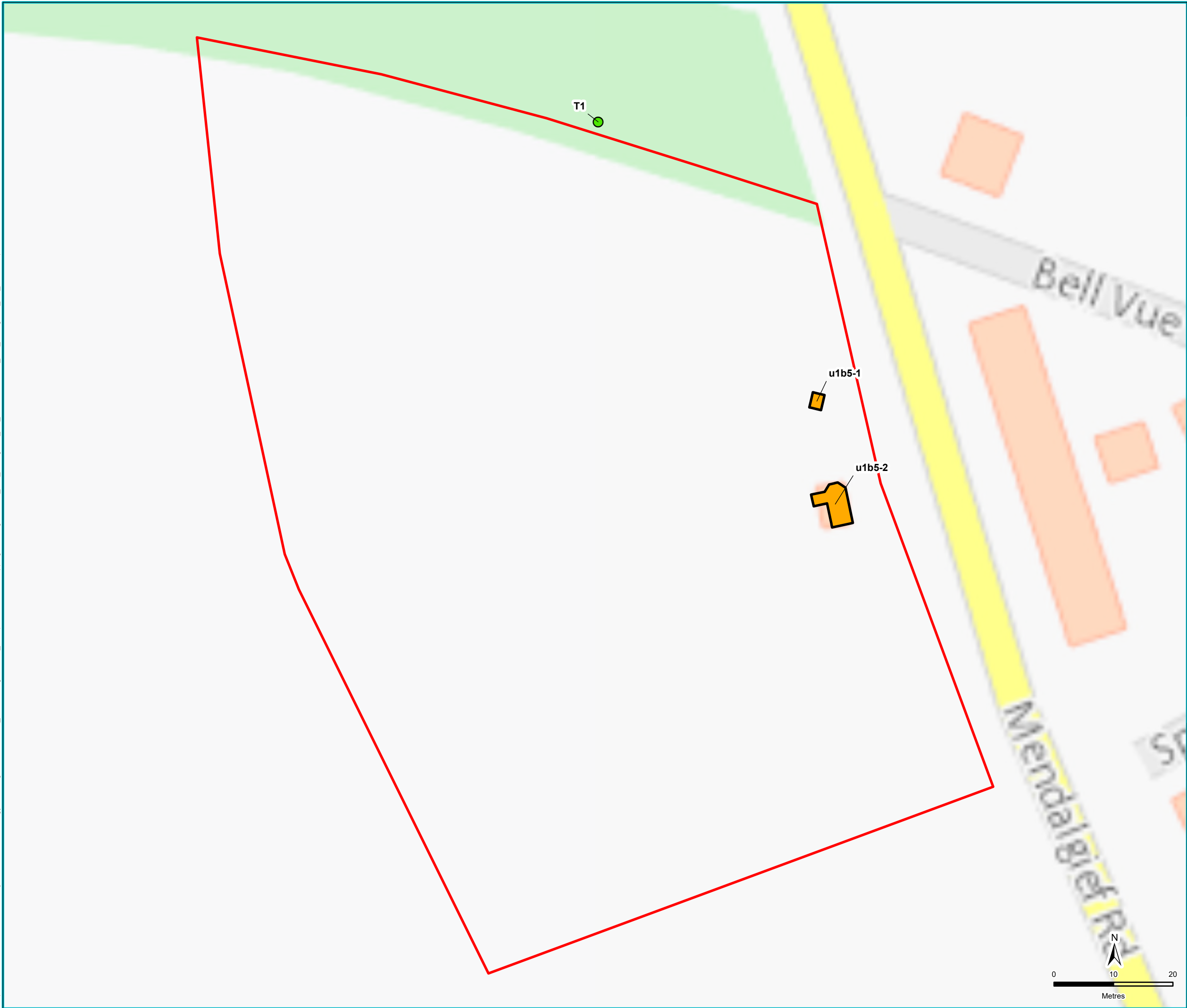
- 1.2.1** The main recommendations are set out below:
- Building (u1b5-1) is unlikely to be utilised for a maternity or traditional hibernation roosting site, however it cannot be completely ruled out as one of the features was too high to be internally inspected and there is no internal access to this structure.
 - Two emergence surveys should be undertaken during the summer (in accordance with the Bat Conservation Trust (BCT) survey guidelines, using a minimum of two surveyors on building u1b5-1. All works which could impact the building should avoid the hibernation period for bats as a precautionary measure.
 - Building (u1b5-2) supports access to an internal cavity wall. Features within a cavity can support maternity and/or hibernation roosts, however the location of the access points in this wall, in combination with the context of the building which is set within a highly disturbed environment makes this unlikely.
 - Two emergence surveys should be undertaken during the summer (in accordance with the Bat Conservation Trust (BCT) survey guidelines, using a minimum of three surveyors on building u1b5-2. All works which could impact the building should avoid the hibernation period for bats as a precautionary measure.
 - T1 represents multiple (four or five) stemmed trees located on Network Rail land outside of the site boundary but in close proximity. These were classified as having potential to support roosting bats and classified as PRF only.

- No further surveys are required for the PRF trees/stems, at present, as a suitable (approx.) 10m zonal disturbance buffer will be implemented during the development. The trees will reside on the boundary of a proposed landscaping area and will be adequately protected with minimal disturbance to potential roosting bats. If any impacts are deemed likely by the works, access should be arranged and a further GLTA conducted. This may lead to further surveys being recommended, such as inspections via a Mobile Elevated Working Platform (MEWP).
- Best practise measures for bats should be followed during and post development works, such as directional lighting, e.g. ensuring all lighting is facing away from the boundary trees/scrub and potential foraging/commuting bats; also aiding in reducing light spill on these habitats. Noise pollution should also be considered, e.g. switching off idling machinery within close proximity (within 10m).



Client	LNT Construction Ltd		Drawing Ref	LNT001-019/406741/1	
Figure Number	1		Scale at A4	1:50,000	
Figure Title	Site Location		Drawn	SC	Checked
			Date	16/12/2024	Date
				16/12/2024	

Filepath: \\thomson.int\Data\Live Projects\Terrestrial Ecology\East Anglia\LNT001-019_1 - Mendalgief Road_Newport - PM, CB\Mapping\Working\LNT001_019_BatFigures_SC_161224.aprx



- Legend
- Overall Suitability of Tree to Support Roosting Bats
- PRF
- Overall Potential (whole building) to Support Roosting Bats
- Moderate
 - Site Boundary

Map Centre Grid Reference: 330897E 186937N

Contains Ordnance Survey data
© Crown copyright and database right 2024.

This map must not be copied or reproduced by any means
without prior written permission from Thomson Environmental
Consultants.

Drawing Ref		LNT001-019/406742/1
Scale at A3		1:600
Drawn	ET	Checked AS
Date	24/12/2024	Date 24/12/2024
Client		LNT Construction Ltd
Figure Number		2

Figure Title

Survey Results of the
Preliminary Roost
Assessment and
Ground Level
Tree Assessment



Photograph 1: u1b5-1
Ivy covering the side of the building.



Photograph 2: u1b5-1
Hole in the window boarding.



Photograph 3: u1b5-1
Hole in the brick wall.



Photograph 4: u1b5-2
Broken window as an access point.



Photograph 5: u1b5-2
Damaged masonry (interior).



Photograph 6: u1b5-2
Missing mortar (external).



Photograph 7: u1b5-2
Hole in the brick work into cavity wall.



Photograph 8: T1
Dead trees/stems, loose bark.

Client	LNT Construction Ltd	Drawing Ref		LNT001-019-005/001/001		Thomson environmental consultants www.thomsonec.com enquiries@thomsonec.com
Figure Number	3	Drawn	PS	Checked	CB	
Figure Title	Photographs of the Site		Date			
			10/01/2025			

2. Introduction

2.1 Overview

- 2.1.1 LNT Construction Ltd commissioned Thomson Environmental Consultants to undertake a Preliminary Roost Assessment on two small buildings and a Ground Level Tree Assessment on four to five trees/stems to assess their suitability to support roosting bats, following a Preliminary Ecological Appraisal (PEA) report, August 2024, Report ref.: LNT001-019-002/001/001, within a site near Mendalgief Road, Newport, NP20 2SH. Central grid reference: (ST 30876 86936).

2.2 Development Background

- 2.2.1 LNT Construction Ltd is preparing a planning proposal for the construction of a new care home on an (approx.) 0.69 hectare (ha) site near Mendalgief Road, Newport. The project will require the demolition of two existing unused derelict small buildings and clearance of habitats, such as scrub and sparsely vegetated land that remain on site. The Site Layout can be found in Appendix 1.

2.3 Ecology Background

- 2.3.1 LNT Construction Ltd commissioned Thomson Environmental Consultants to undertake a Preliminary Ecological Appraisal of the site (Thomson, 2024). Report Ref.: LNT001-019-002/001/001. The site visit was completed, and report issued in August 2024, which concluded with the following:

- Two buildings require a Preliminary Roost Assessment (within this report will be referenced as u1b5-1 and u1b5-2).
- Multi-stemmed trees (four to five stems) was classified as having potential for roosting bats.
- Recommendations were made to ensure the development complies with relevant legislation and policy, including further surveys and lighting recommendations for potential foraging/commuting bats.

2.4 The Brief and Objectives

- 2.4.1 LNT Construction Ltd, on 30th September 2024, commissioned Thomson Environmental Consultants to:

- Preliminary Roost Assessment
- External - We will conduct external inspections of the two buildings and structures within the site boundary of Mendalgief Road, Newport. The survey method will be based on Bat Conservation Trust guidelines (4th Edition) (Collins, J (ed), 2023). We will inspect buildings and structures from the ground, using high powered optics and torches where appropriate, to look for potential bat access and egress points, potential roosting sites and signs of bats

themselves. A level of potential to support roosting bats will be assigned to each building and structure to help determine the requirements for further survey.

- Internal - Where access has been arranged and it is safe to do so, we will undertake an internal inspection of buildings which have been identified with the potential to support a bat roost. The survey method will be based on Bat Conservation Trust guidelines (4th Edition) (Collins, J (ed), 2023). We will search inside the buildings for evidence of bats, such as bat droppings. We will classify the potential of each building to support roosting bats as low, medium or high and highlight if any are a confirmed roost at the time of survey. Any internal inspections will be undertaken by two surveyors, for health and safety reasons, at least one of whom will be a licensed bat worker.
- Buildings include the two present on the site; (u1b5-1 and u1b5-2), PEA report, 2024.
- Ground Level Tree Assessment (GLTA)
- We will conduct ground level inspections of all trees within the site boundary of Mendalgief Road, Newport and trees previously identified on the Preliminary Ecological Appraisal (PEA) Report, 2024. The aim of the survey will be to estimate (as far as can be achieved from ground level) which trees are suitable for roosting bats, or require increased survey effort to confirm suitability, informing next phase surveys such as above ground Potential Roost Feature (PRF) inspection. The survey method will be based on Bat Conservation Trust guidelines (4th Edition) (Collins, J (ed), 2023). The survey will be conducted by a Natural England BCT Level 2 Class Survey Licence holder although particularly during winter it is likely that a Natural England Level 2 Class Survey Licence holder will be required to make full assessment of any accessible or identifiable features. All trees identified as suitable for roosting bats will be recorded as necessary to inform further surveys. This survey method is designed to be used between November and March (inclusive), and is therefore sub-optimal and of limited value if conducted outside this period. This method requires clear weather without precipitation or sun glare to be most effective. Trees will be inspected using binoculars and high powered torches where appropriate, to look for PRFs and evidence of use of these by bats. The survey outcome will be the classification of all surveyed trees regarding suitability for roosting bats as follows: 'None', 'Further Assessment Required' and 'Potential Roost Feature' (PRF confirmed). Where possible, ground accessible PRFs will be classified according to their suitability for individual (PRF-I) or multiple (PRF-M) roosting bats.
- Trees of interest include TN1, within the PEA Report, 2024.

2.5 Limitations

- 2.5.1** T1 trees/stems (four to five) could not be fully surveyed due to access issues being on Network Rail land with no authorised access issued on that the day of the survey. Therefore, the survey was undertaken from the construction site side of the fence only. This provided a limited view to the tree, and navigation to perform an endoscope search within features due to access, blocked by fencing and building material.
- 2.5.2** Building u1b5-1 is partially covered in Ivy (*Hedera helix*) and other vegetation, restricting the view of the building that may be hiding other PRFs not visible at the time of survey. No internal inspection was carried out on u1b5-1 as there was no accessible interior at the time of the

survey. To caveat this assessment, this information is based on features visible from ground level only.

2.6 Surveyors

- 2.6.1 Jessica Dangerfield BSc (Hons) Director Natural Resources Wales (NRW) bat survey licence (with handling endorsement) number: S093272-1. Jessica is a full member of the Royal Society of Biology.

3. Methodology

3.1 Desk Study

- 3.1.1 A desk study from the local records centre, South East Wales Biodiversity Records Centre (SEWBRC) was purchased as a part of the original PEA (Thomson, 2024). Results are shown in Table 1 within a 2km radius from the site. Results were received on 19th June 2024.

3.2 Survey Area and Data Collection

- 3.2.1 A survey area was defined that encompassed all land affected by the proposed development within the redline site boundary at Mendalgief Road (Figure 1).

3.3 Preliminary Roost Assessment of Mendalgief Road

- 3.3.1 A Preliminary Roost Assessment (PRA) was undertaken of the Mendalgief Road site to search for Potential Roosting Features (PRFs) for bats and evidence of bats. The survey was conducted according to current best practice guidance (4th Edition) (Collins, J (ed), 2023).

- 3.3.2 Evidence of roosting bats searched for included:

- Bat droppings, feeding remains and corpses (with notes made on quantity, freshness and type);
- Dark staining below an access point that may be caused by bat faeces or urine; and
- Noises made by bats.

- 3.3.3 Any evidence of bats found was recorded together with a note on the location. If any bat droppings were found, their location, spread, approximate number and age were recorded on a GPS enabled mobile mapper or paper form. If necessary for identification, a sample of droppings was collected and retained for later eDNA analysis.

External Inspection of Buildings

- 3.3.4 Where possible to determine, the following information was recorded for each building present within the survey area:

- Type (house, flats, offices, barn, church, etc.);
- Presence of roof void;
- Year built (1960 - present, 1914 - 1960, before -1914 or unknown);
- Aspect (orientation of the front of the building using the eight principal compass points);
- Wall material (brick, block, stone, wood, concrete, metal, sheet materials or other), construction (solid, unfilled cavity or filled cavity) and presence of other materials (rendering, hanging tiles, wooden weather boards, plastic or metal cladding) and their condition;

- Presence and form of roof (absent, pitched (gable end or hipped) or flat), presence of roof void, type of roof covering (tiles, slates, felt or similar, thatched, corrugated sheet GRP, concrete or wood) and condition of roof covering (no, minor, moderate or severe damage/decay/gaps);
- Presence and form of eaves (presence of soffits, fascia boards, barge boards) and condition (no, minor, moderate or severe damage/decay/gaps); and
- Presence and condition of flashing (no, minor, moderate or severe damage/decay/gaps).

3.3.5 The exterior of all buildings was then searched for PRFs and evidence of bats. The search was conducted from the ground with the aid of binoculars and a high-powered torch. PRFs looked for included:

- Presence of loft voids and wall cavities;
- Gaps around windows, doors and lintels;
- Lifted lead flashing;
- Loose or missing roof, ridge or hanging tiles;
- Gaps between stones or bricks where mortar is absent;
- Other gaps or cracks between various elements of the building structure; and
- Potential access points to an internal cavity such as a cavity wall, loft space, eaves or behind cladding (such as hanging tiles and weather boarding).

3.3.6 The search for bats and evidence of bats focused on the following key areas:

- The ground and walls below potential access points and wall cladding;
- Window recesses, especially window sills; and
- Accessible cracks and crevices.

3.3.7 The location of the PRFs and any evidence found were recorded using photographs and or diagrams of the building or structure. Each PRF was given a unique identification code.

3.3.8 Any accessible PRFs were inspected using an endoscope and torch to further assess their potential to support roosting bats.

Categorisation of Results

3.3.9 Following the PRA, each building was assigned a level of potential to support a bat roost as per Table 1. The buildings were classified according to the highest suitability PRF identified during the PRA.

3.3.10 The survey was conducted on behalf of Thomson Environmental Consultants by Director Jessica Dangerfield MRSB on Monday 4th November 2024, according to current best practice guidelines (4th Edition) (Collins, Ed. 2023).

Table 1 Habitat suitability for roosting bats (adapted from Collins Ed., 2023)

Suitability for a Significant Roost	Examples for Buildings
Negligible	Absence of potential roost features (PRFs) or with PRFs of any quality but located in an environment which is not suitable for bats i.e. there is an absence of commuting and foraging habitat.
Low	Buildings which are located near only low or negligible suitability commuting and foraging habitat, or that are exposed to high levels of lighting and disturbance, and which contain one or more PRFs (of any quality). Buildings which are located near moderate or high suitability commuting and foraging habitat, with one or more PRFs, all of which are shallow, small or exposed.
Moderate	Buildings which are not subject to high levels of lighting and disturbance, and which are either (i) located near only moderate suitability commuting and foraging habitat, and which contain multiple, sheltered PRFs of a type and size capable of supporting multiple bats; or (ii) located near moderate or high suitability commuting and foraging habitat and which contain one or more PRFs which are sheltered but not sufficiently large to support a maternity or hibernation roost.
High	Buildings which are located near high suitability commuting and foraging habitat, not subject to high levels of lighting and disturbance, generally traditional built construction, and which contain multiple or large and sheltered PRFs that could support a maternity or hibernation roost.

3.3.11 The potential roost types for each PRF were classified according to the roost definitions set out in Table 2.

Table 2 Classification of bat roost type definitions (adapted from Collins Ed., 2023)

Roost Type	Definition
Day roosts	Where bats shelter as individuals or small groups during the day. This term can be applied in conjunction with other roost types, typically transitional depending on the season and nature of use (see below). Perhaps most commonly applied to males during the summer season when females gather in nursery colonies. Occupancy typically throughout the active season (April - October).
Night roosts	Where bats shelter at night as individuals or a whole colony. These can be located very close to or within the same structure as day roosts. Occupancy typically throughout the active season (April - October).
Feeding roost	Used by individuals or small groups for feeding at night between foraging bouts. These are often in association with night roosts especially for species such as brown long-eared. These can also be very close to or within the same structure as a day roost. Occupancy typically throughout the active season (April - October).
Transitional roost	A roost used by bats between the summer and winter seasons, often (though not always) during a physical movement phase between summer and wintering roosts/geographical locations. This term can be applied to other roost types if they are used only during the transitional period. Indicated mainly by the time of year (typically April - early May, or September - October).
Maternity roost	Mainly dominated by females where they give birth to young and raise these. Maternity roost characteristic preferences differs between species, however, warm conditions are generally favoured, typically larger spaces that are south facing and retain warm temperatures during the maternity season (May - August).
Hibernation roost	Where bats are found individually or in groups during winter. These classically need to have cool temperature and high humidity, although more 'cold hardy' species can be found hibernating singly/in low numbers within day roosts which are used year-round (sometimes referred to as 'winter roosts'). Typically November - March, peak season in December - February.

Roost Type	Definition
Satellite roost	An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

3.3.12 The suitability of potential tree roosting habitat was classified according to the broad categories in Table 3, based on the presence or absence of potential roosting features (PRFs).

3.4 **Ground Level Tree Assessment of Mendalgief Road**

General Approach

3.4.1 A Ground Level Tree Assessment (GLTA) was undertaken of the Mendalgief Road site to search for Potential Roosting Features (PRFs) for bats and evidence of bats. The survey was conducted according to current best practice guidance (4th Edition) (Collins, J (ed), 2023).

3.4.2 All trees identified within the previous survey (Thomson, 2024) as further assessment required (FAR) or with PRFs recorded (and any added to the scope), were inspected in detail from ground level to look for features which could be used by bats for roosting, including using close focusing binoculars and high power torches.

3.4.3 For each structure and tree with a PRF, contextual information was recorded to aid the assessment. The information recorded comprised:

- Distance to nearest hedge;
- Distance to nearest woodland;
- Distance to nearest water;
- Potential commuting corridors;
- Potential foraging corridors;
- Landscape setting;
- Surrounding area habitat quality; and
- The level of disturbance.

Categorisation of Results

3.4.4 During the GLTA, the suitability of trees and PRFs were categorised according to the categories outlined in Tables 4.2 and 6.2 of the Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition (Collins, J (ed), 2023). See below in Table 4.

Table 3 Guidelines for assessing the suitability of trees on proposed development sites for bats to be applied using professional judgement (adapted from Collins, J. ed, 2023)

Suitability	Description
None	Either no PRF's in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRF's are present in the tree
PRF	A tree with at least one PRF present

- 3.4.5** Each PRF was given a unique identification code, and assigned a categorisation of PRF-I, which is a roost that is suitable for individual or a small number of bats or PRF-M, which is suitable for multiple bats. Where a categorisation was cautiously assigned or could not be assigned due to access restrictions or a limited view, the tree was assigned a label of further assessment required (FAR).
- 3.4.6** The trees on site were classified according to the highest suitability PRF identified during the inspection.
- 3.4.7** The GLTA was undertaken on Monday 4th November 2024 during suitable weather: Dry, cloudy with no wind.
- 3.4.8** Trees within the survey area were subject to detailed inspection from the ground, systematically and where possible, visually surveying the tree from all possible aspects, including close to the stem and further from the base (as required). Results were recorded using a GPS enabled mobile mapper, with photographs taken to support results.
- 3.4.9** The survey searched for and recorded any PRFs which could be viewed from the ground. Those which were apparently pointing upwards were included in the assessment, as were seasonally wet features because these factors do not necessarily preclude use without further investigation. Where higher level areas of the tree were viewable from the ground, a high-powered torch was used to search for PRFs.
- 3.4.10** Features searched for included those in Table 4, defined according to Bat Roosts in Trees, (BTHK, 2018).

Table 4 PRF types that can be exploited by bats and how they form (adapted from Bat Roosts in Trees, (BTHK, 2018)

Disease/Decay Formed PRFs	Damaged formed PRFs	Association formed PRFs
Woodpecker holes Squirrel holes	Lightning strikes Hazard beams	Fluting Ivy

Knot holes	Subsidence cracks	
Pruning cuts	Shearing cracks	
Tear outs	Transverse snaps	
Wounds	Welds	
Cankers	Lifting bark	
Compression forks	Desiccation fissures	
Butt rots	Frost cracks	

3.4.11 All trees with identified PRFs and requiring further assessment were photographed, numbered and the following information recorded:

- GPS coordinates;
- Species, height, condition (alive, dead etc); and
- Approximate diameter at breast height.

3.4.12 Where PRFs were identified, they were recorded including PRF type, location on tree (stem or limb), height above ground and compass direction on the tree. Any evidence confirming or indicating use of a PRF was also recorded, including:

- Bat droppings, feeding remains and corpses (with notes made on quantity, freshness and type);
- Staining around a hole that may be caused by the natural oils in bat fur; and
- Noises made by bats.

3.4.13 If any bat droppings were found, their location, spread and approximate number and age were recorded.

3.4.14 For any PRFs that were accessible to investigate directly, they were classified according to the following categories in Table 5, based on their internal conditions and dimensions:

Table 5 Guidelines for assessing the suitability of tree PRFs on proposed development sites for bats, to be applied using professional judgement (adapted from Collins ed 2023)

Suitability	Description
None	No potential space to support roosting bats.
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used for a maternity colony.

4. Results

4.1.1 The results from the desk study described in the PEA (Thomson 2024) are outlined specifically for bats below in Table 5.

Table 6 Bat species records derived from the desk study

Common Name	Scientific Name	CHSR ¹ Schedule 2 or 5	WCA ² Schedule 1, 5 or 8	National Priority Species ³	Local Priority/ BAP Species	Year	Grid Ref.	Distance from Site (m)
Serotine	<i>Eptesicus serotinus</i>	Schedule 2	Schedule 5			2023	ST 3047 8722	526
Myotis sp.	<i>Myotis sp.</i>	Schedule 2	Schedule 5	✓		2018	ST 30881 87866	928
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Schedule 2	Schedule 5	✓	✓	2023	ST 3050 8723	507
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Schedule 2	Schedule 5	✓ ⁴	✓	2023	ST 3050 8723	507
Noctule	<i>Nyctalus noctula</i>	Schedule 2	Schedule 5	✓	✓	2023	ST 3050 8723	507

4.2 Preliminary Roost Assessment of built structures at Mendalgief Road

4.2.1 No bats or evidence of bats were found in either of the buildings (u1b5-1 or u1b5-2) during this survey.

4.2.2 A summary of the external assessment of Mendalgief Road can be found in Table 7 below, and detailed results can be found in Table 6 in Appendix 3. Pictures from the external assessment are shown in Photographs 1-7 on Figure 3.

Table 7 External assessment of Mendalgief Road

Attribute	Building 1	Building 2
Type	Single storey red brick structure	Single storey red brick structure
Age	Unknown	Unknown

¹ Conservation of Habitats and Species Regulations 2017, as amended.

² Wildlife and Countryside Act 1981, as amended.

³ Species of Principal Importance within the relevant country of the United Kingdom.

⁴ Wales only, based on the list in Section 7 of the Environment (Wales) Act 2016 and Section 42 of the NERC Act 2006.

Construction	Red brick with cavity	Red brick with cavity
Description of building	The structure is not in use and appears to have been unused for some time. The structure is situated within an active construction site	The structure is not in use and appears to have been unused for some time. The structure is situated within an active construction site
Description and summary of potential roost features	Damaged masonry, window, mortar and brickwork all provide access to interior and wall cavity.	Hole in brickwork and damaged window boarding
Setting	Active construction site	Active construction site
Confirmed roost?	No	No
Evidence of bats if confirmed	N/A	N/A
Bat roost type (if classification is possible (based on Table E))	N/A	N/A
Overall roosting suitability	Moderate potential	Moderate potential
Potential Roost Type	Day/Night/Occasional roosts	Day/Night/Occasional roosts

Internal Inspection of Buildings

4.2.3 An internal inspection was carried out on u1b5-2 only (Figure 3). Features identified comprised:

- A smashed window on the northern elevation which offers an access point into the building (Figure 3, Photograph 4), approximately 30cm x 40cm at 1.5m tall;
- Access into the cavity wall on the western elevation (Figure 3, Photograph 7) at approx. 1m tall (potentially access into further walls and roof spaces). Despite being inspected with an endoscope, this feature was significantly larger than the endoscope was able to search but measured approx. 5cm wide and 5cm tall and the internal space assumed to be at least the height x width of the wall and approx. 3cm to 4cm internal depth;
- Damage to masonry around window fitting (Figure 3, Photograph 5) in interior is approx. 2cm tall by 10cm wide and the entrance that goes in is approx. 6cm, closing to a wedge.

4.2.4 No internal access was available for u1b5-1, therefore no internal inspection was carried out.

Overall Assessment of Buildings for Bats

4.2.5 Following the exterior inspection of u1b5-1 and u1b5-2, both buildings were assessed as having moderate roosting suitability for bats due to the level of disturbance within the immediate surrounding area; a construction site and situated on a main road. Both buildings could support a large amount of bats but given the context of the site, location of access points and the fact it is deemed likely the features in both buildings would suit individual crevice dwelling bats only and are unlikely to hold potential for maternity or hibernation roosts. Without further survey, the

presence of roosting bats cannot be completely ruled out as there could be a hidden PRF in the roof that was not visible on the day of the survey.

4.2.6 Building u1b5-1 holds moderate potential for roosting bats due to the number of features present within the structure, rather than the quality of these features. See Appendix 3 for all features that were identified.

4.2.7 The requirement for further survey regarding Mendalgief Road is outlined in Section 6.

4.3 Ground Level Tree Assessment of Mendalgief Road

4.3.1 A total of (approx.) four to five trees/stems were identified outside of the survey area as having potential to support roosting bats (T1, Figure 3). Multiple lifted bark features on these dead trees/stems were classified to hold PRF for bats. No bats or evidence of bats were found in the trees/stems during this survey and that without aerial assessment we cannot determine the overall roost potential of the trees.

4.3.2 The full results are provided in Table 7, below. For photographs of the PRFs identified during the GLTA, refer to (Photograph 8, Figure 3).

Table 8 GLTA Results

Attribute	T1
Tree species	Unknown
Life stage and condition	Dead trees
Type of PRF 1	Multiple Flaking bark features
Endoscope inspection (Yes or No)	No
Main habitat	Railway corridor
Setting	Within woodland corridor. adjacent to active construction site and railways.
Overall Tree suitability	PRF

4.3.3 No further surveys are required due to the proposed zonal disturbance buffer (approx.) 5m to 10m. See Appendix 2 for the Site layout.

5. Legal and Planning Policy Considerations

5.1.1 As set out in Appendix 2, all bats and their roosts receive protection under:

- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside Rights of Way Act 2000 (which amends the Wildlife and Countryside Act 1981); and
- The Natural Environment and Rural Communities (NERC) Act 2006 (which amends the Wildlife and Countryside Act 1981).

5.1.2 Taken together, this legislation in combination makes it an offence to deliberately capture, injure, kill or disturb a bat. It is also an offence to damage, destroy and intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat.

5.1.3 In addition, bats are listed as Newport City Council's priority species, as well as being listed as national priority species. Bats are therefore part of the local Biodiversity Action Plan and are protected under sections 41 (England) and 42 (Wales) of the NERC Act 2006. In addition to the seven bat species listed in section 41 of the NERC Act 2006, Wales also includes common pipistrelle as a priority species, as listed in section 42, as well as section 7 of the Environment (Wales) Act 2016. Four of the five bat species recorded in the desk study from the PEA (Thomson, 2024) and listed in Table 5 of this report are priority species; common and soprano pipistrelle, noctule and *Myotis* sp. which includes Bechstein's (*Myotis bechsteinii*).

5.1.4 Future Wales - the National Plan 2040 states the following:

5.1.5 *"Outcome 10 focuses on places with biodiverse, resilient and connected ecosystems. As such, the variety of flora and fauna found across Wales make Wales a special place. Biodiversity underpins the functioning of healthy, resilient ecosystems and the multiple benefits they provide. While biodiversity has declined in recent decades, we will reverse these losses and enhance the resilience of ecosystems. The planning system will ensure wildlife is able to thrive in healthy, diverse habitats, both in urban and rural areas, recognising and valuing the multiple benefits to people and nature."*

5.1.6 *"Policy 9 concerns Resilient Ecological Networks and Green Infrastructure. To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:"*

- *"identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and"*
- *"identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being. Planning"*

authorities should include these areas and/or opportunities in their development plan strategies and policies in order to promote and safeguard the functions and opportunities they provide. In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment. Diligence in the development with respect to bats will ensure the development remains in line with local planning policy.”

- 5.1.7** Without mitigation and licensing, the Proposed Development could contravene the legislation with respect to bats and their roosts. Demolition of the two small buildings will be required to facilitate the development which could destroy a bat roost and could result in disturbance, harm and death of individual bats. Therefore further surveys are required to establish the extent to which the site may be in use by roosting bats. Recommendations have been provided in Section 6 with respect to bats.

6. Recommendations

6.1 Mitigation

6.1.1 The below mitigation measures have been recommended to safeguard the two buildings on this site in respect to roosting bats, but also for foraging/ commuting bats.

6.1.2 It is best practice to:

- Ensure noise levels are kept to a minimum during all site works, such as turning idling machinery off, and in particular, whilst working within close proximity to both buildings;
- Minimise light pollution around both buildings and boundary vegetation, as best as is practically possible which will minimise the disturbance and the impact to foraging and commuting bats. Utilising directional light alongside hoods and cowls to limit light spillage.

6.1.3 (T1), with multiple trees/stems will require a zonal disturbance buffer of 10m to limit the amount of disturbance. Noise disturbance should be kept to a minimum during the works. Examples of this are as follows: turning off idling machinery and generators when not in use.

6.1.4 Should any works be conducted at night using artificial lighting, a sympathetic lighting regime should be adopted. Lighting should be task orientated and positioned downwards, to avoid impacts to potential commuting and foraging bats. Narrow spectrum light sources should be used wherever possible, and lights should only be in operation when necessary. For other potential solutions for reducing the impacts of lighting the development on bats, please refer to the BCT's and Institute of Lighting Professionals' (ILP) guidance note 08/23 "Bats and Artificial Lighting at Night" (ILP, 2023).

6.1.5 Any works which are anticipated around the buildings should avoid the hibernation period (October to March) for bats as a precaution.

6.2 Further Survey

6.2.1 It is recommended that building u1b5 -1 is subject to further surveys in order to establish the presence/likely absence of bats and their roosts within the building. Two emergence surveys should be carried out according to best practice guidance. This is due to limited access into the building at the time of the PRA. Two surveys to be completed between May to September with at least one survey between May to August (and surveys to be spaced a minimum of 3 weeks apart). A minimum of two surveyors should be used to cover all potential exit/entry points of the building.

6.2.2 It is also recommended that building u1b5 -2 is subject to further surveys in order to establish the presence/likely absence of bats and their roosts within the building. Two emergence surveys should be carried out according to best practice guidance. Two surveys to be completed between May to September with at least one survey between May to August (and surveys to be spaced a minimum of 3 weeks apart). A minimum of three surveyors should be used to cover all potential exit/entry points of the building.

7. Conclusion

- 7.1.1** An initial Preliminary Ecological Appraisal (Thomson 2024) was carried out on the site during May 2024. Following a recommendation, LNT Construction Ltd commissioned Thomson Environmental Consultants to undertake a Preliminary Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) surveys for bats of two small unused derelict buildings and a multi stemmed tree, at a site at Mendalgief Road, Newport, South Wales.
- 7.1.2** The project proposal is for the construction of a new care home.
- 7.1.3** Without mitigation and licensing, the Proposed Development could contravene the legislation with respect to bats and their roosts. Demolition of the two small buildings will be required to facilitate the development which could destroy a bat roost and could result in disturbance, harm and death of individual bats.
- 7.1.4** Further emergence surveys have been recommended on buildings u1b5-1 and u1b5-2. An appropriate zonal disturbance buffer of 10m is proposed on the trees/stems (T1).

8. References

BTHK (2018) Bat Roosts in Trees - A guide to identification and assessment for tree-care and ecology professionals. Pelagic Publishing, Exeter

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020) The UK Habitat Classification User Manual Version 1.1 at <https://ukhab.org/>.

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020) UK Habitat Classification - Habitat Definitions V1.1 at <https://ukhab.org/>.

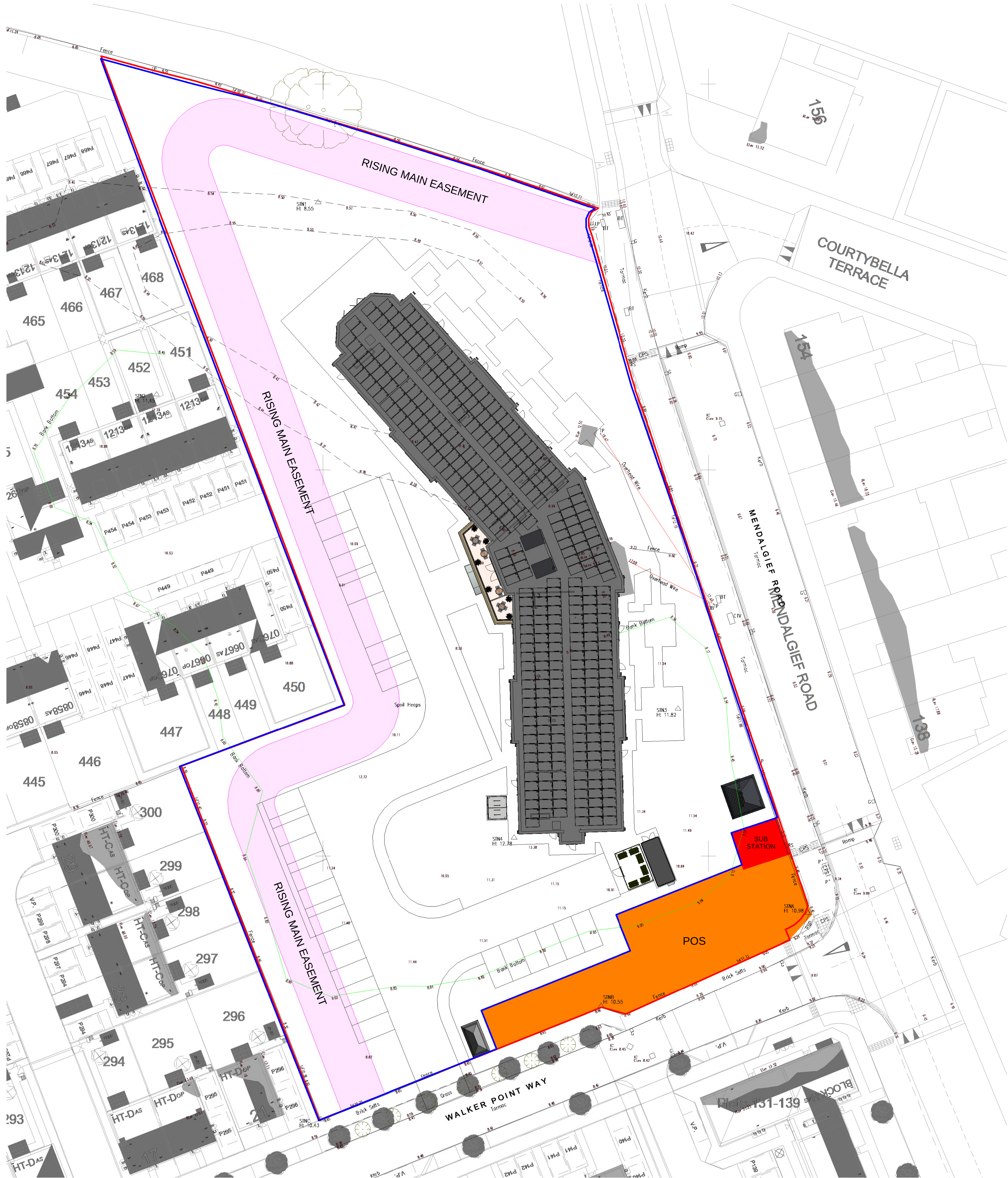
Collins, J. (Ed.). (2023) Bat surveys for professional ecologists: good practice guidelines 4th Edition. Bat Conservation Trust.

ILP (2023) Guidance Note Bats and Artificial Lighting At Night, GN08/23

Thomson Environmental Consultants (2023a) Preliminary Ecological Appraisal for Mendalgief Road, Newport. Report Ref.: LNT001-019-002/001/001

Welsh Government, (2021) Future Wales: the national plan 20:40. Retrieved from <https://gov.wales>

Appendix 1: Site Layout



CONSTRAINTS OVERLAY
1 : 200

REV	DATE	DETAILS OF AMENDMENTS	DRAWN
REVISIONS			



LNT CONSTRUCTION LTD
UNIT 2, HELIOS 47
ISABELLA ROAD
GARFORTH
LS25 2DY
Tel: 0113 385 3858
Fax: 0113 385 3859

CLIENT
LNT CARE DEVELOPMENTS

SITE
MENDALGIEF ROAD
NEWPORT
NP20 2NW

TITLE
CONSTRAINTS OVERLAY

SCALE @A0	1 : 200	DATE	15/08/2024 10:34:55
DRAWN	L-JL	DWG NO.	NP20 2NW CP-06

FOR INFORMATION ONLY			
CHECKED BY		DATE	
APPROVED BY		DATE	

Appendix 2: British Bats

Introduction

A summary of the biology of British bats and the legislation and policy that protects them is provided below.

Biology

There are 18 British species of bats, belonging to two families: the horseshoe bats (*Rhinolophidae*) and vesper bats (*Vespertilionidae*). Of the 18 species, two species are horseshoe bats and belong to the genus *Rhinolophus*, the remaining 16 species are vesper bats and are sub-divided between six genera; *Myotis*, *Eptesicus*, *Nyctalus*, *Pipistrellus*, *Plecotus* and *Barbastella*. Whilst there are many differences in the biology of the different species, all share certain characteristics, and these are described below.

Roosting

Bat species utilise roost sites of varying character; some preferring tree roosts whilst others are thought to be almost entirely dependent on built structures. Most bats will have a number of available roosting sites within their range, which they move between throughout the year. They are generally faithful to their roosts and a colony of bats may use the same roost site(s) year after year.

Bats hibernate during the winter and will often gather to hibernate communally, remaining in the same hibernation roost from November to February/March. Hibernation roost sites typically have a constant low temperature and high humidity levels. Sites include caves, mines, thick walled buildings and hollow trees. With the arrival of spring, the ambient temperature and day length increase, and bats begin to leave their hibernation roosts, either moving immediately to summer roost sites or occasionally, to a transitional roost.

By June, breeding females will begin to congregate in maternity roost sites where they will give birth to and nurture their young. Male bats are also occasionally found roosting in maternity roosts but during this period they mostly roost alone. Maternity roost sites include hollowed out trees, buildings and bridges. Male bats may use similar sites but also cracks and crevices in trees, under loose tiles or even amongst dense ivy growth during the summer period. Similar sites may be used by bats for brief periods during the night when they are resting or feeding on recently caught prey. In autumn, male bats establish mating roosts and are visited by females. A variety of roost sites may be used until the bats return to their hibernation roosts.

Foraging

All British bat species feed on invertebrates, with flies, beetles, moths and other insects making up much of their diet. Areas with an abundance of insect prey, such as woodlands, scrub, wetlands, river corridors and flower rich grasslands are therefore favoured foraging sites for bats. Habitats such as intensively farmed arable land, and amenity grassland support a much lower invertebrate abundance and are therefore less favoured foraging habitats for bats.

Commuting

Bats favour roost sites in close proximity to suitable foraging habitat, however, given variation in prey availability, land-use change, and competition with other bats, for at least part of the year bats must commute between their roosts and foraging habitat.

Commuting routes tend to follow linear features in the landscape such as hedgerows, woodland edges, rivers and other watercourses, particularly when crossing areas of less favourable habitat. The distance that bats commute between roost sites and foraging areas is dependent on local geography and also the species of bat. Some species will travel up to 18km, though shorter distances are more typical.

Site Designation

All bat roosts in the UK receive protection under the following legislation:

- Conservation of Habitats and Species Regulations 2017 as amended (which replaces the Conservation (Habitats &c) Regulations 1994 as amended)
- Wildlife and Countryside Act 1981, as amended;
- The Countryside and Rights of Way Act 2000 (which amends the Wildlife and Countryside Act); and
- Natural Environment and Rural Communities Act 2006 (which amends the Wildlife and Countryside Act).

This is described in more detail under 'Species Protection' below. In addition, the most important sites for certain bat species in the UK receive further statutory protection through designation of Special Areas of Conservation (SACs) and/or Sites of Special Scientific Interest (SSSIs).

Four UK bat species, the greater and lesser horseshoe, barbastelle and Bechstein's bats, are included on Annex II of the European Community Directive of the Conservation of Natural Habitats and of Wild Fauna and Flora, referred to as the Habitats Directive. The Habitats Directive was transposed into UK law by the Conservation of Habitats and Species Regulations 2017 as amended. The Habitat Regulations, amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, now form stand-alone legislation for England and Wales, independent of the Directive. This legislation requires that areas are designated as Special Areas of Conservation (SACs) to protect populations of these 4 bat species. These sites for part of the National site network and are considered to be of international importance for the bat populations they support.

Sites designated under the Wildlife and Countryside Act 1981 (WCA) are known as Sites of Special Scientific Interest (SSSIs). SSSIs received further protection under the Countryside and Rights of Way Act 2000 (CRoW) and the Natural Environment and Rural Communities (NERC) Act 2006.

Some SSSIs are designated for the population(s) of bats that they support. The criteria for selecting SSSIs on the basis of their bat populations are provided in Guidelines for the Selection of Biological SSSIs (NCC, 1989):

- Greater horseshoe bat - all main breeding roosts and all winter roosts with 50 or more adult bats;

- Lesser horseshoe bat - all main breeding roosts containing 100 or more adult bats and all winter roosts containing 50 or more bats;
- Barbastelle, Bechstein's and grey long-eared bats - any traditional breeding roosts;
- Natterer's, Daubenton's, whiskered, Brandt's, serotine, noctule and Leisler's bats - only exceptionally large breeding roosts or those with a long history of use; and
- Mixed Roost sites - all hibernacula containing four or more species and more than 50 individuals or three species and 100 or more individuals or two species and 150 or more individuals, though these criteria may be lower in some parts of the UK.

Sites that qualify as SSSIs for the bat populations they support are considered to be of at least national importance.

Sites designated for nature conservation at the county level may also include bat populations as part of the site qualifying criteria, although the criteria used may vary from county to county. Such sites are protected through the planning system and there is generally a presumption against development that affects such sites in local authority development plans.

Planning Policy

The National Planning Policy Framework (NPPF) 2021, gives further direction with respect to biodiversity conservation and land use change / development. The NPPF encourages local planning authorities to identify, conserve and restore, ecological networks, which should benefit bats, and it also states that planning permission should be refused if significant harm to biodiversity cannot be avoided, mitigated or compensated. In addition, the Government Circular 06/05, which relates to biodiversity conservation, states that all protected species, such as bats, are a material consideration for the planning authority when considering proposed developments.

Species Protection

Legislation

All bat species are protected by the Conservation of Habitats and Species Regulations 2017 as amended. The Regulations make it an offence, with very few exceptions, to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat in such a way as to be likely:
 - to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
 - to impair its ability to hibernate or migrate; or
 - to affect significantly the local distribution or abundance of the species to which they belong.
- Damage or destroy a breeding site or resting place of a bat; or
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

In addition to the protection given to bats under the Conservation of Habitats and Species Regulations 2017 as amended already described, bats are also partially protected in England under the Wildlife and Countryside Act 1981 (as amended), which adds the following offences (with certain exceptions):

- Disturbance while it is occupying a structure or place which it uses for shelter or protection; or
- Obstructing access to any structure or place used for shelter or protection.

A roost is any structure or place used by bats for shelter or protection. As bats tend to re-use the same roosts year after year, the roost is protected whether bats are present or not, at the time.

In this context of the legislation, 'damage' would include such operations as treatment of wood with toxic preservatives or use of rodenticides near roosting bats while 'disturbance' includes any work in or affecting a bat roost.

If proposed actions, such as redevelopment of an existing building may lead to an offence under the above legislation, appropriate mitigation which seeks to avoid these impacts should be devised and implemented under licence from Natural England to allow the activity to proceed legally.

In addition to the above legislation, all bats are protected under the Bonn Convention, within which the Agreement on the Conservation of Bats in Europe (1991) or EUROBAT, establishes a mechanism for international collaboration to conserve bats and their habitats, including foraging habitats. All European bat species are covered under Appendix II of the Conservation of Migratory Species of Wild Animals (CMS).

The Hedgerow Regulations 1997 provide for the conservation of 'important' hedgerows and their constituent trees. The presence of a protected species such as bats is included in the assessment of whether a hedgerow is considered 'important' and applications to remove such hedgerows must be made to the planning authority.

UK Post-2010 Biodiversity Framework and Species of Principal Importance

Published by the Joint Nature Conservation Committee (JNCC) and the Department for Environment, Food and Rural Affairs (Defra) in July 2012, the UK Post-2010 Biodiversity Framework identifies UK-scale activities and priority works that are required to deliver the EU Biodiversity Strategy. Following a process of devolution, the framework is underpinned by country level strategies which are now largely responsible for continuing the work carried out under the former UK Biodiversity Action Plans (UK BAP). JNCC guidance dictates that UK BAP background information on priority species and habitats still remains relevant and it now forms the basis of country specific priority lists, which for England, are specified under Section 41 of the Natural Environment and Rural Communities Act 2006 (the NERC Act). Targets for England's biodiversity strategy 'Biodiversity 2020': A strategy for England's wildlife and ecosystem services, are informed by this list.

Seven species of bats (Barbastelle, Bechstein's, greater and lesser horseshoe, brown long-eared, noctule and soprano pipistrelle) have been adopted as Species of Principal Importance for the Conservation of Biodiversity in England. This places a duty on all government departments to have regard for the conservation of these species and on the Secretary of State to further, or promote others

to further, the conservation of these species. Furthermore, the NPPF states that local planning authorities should promote the protection and recovery of priority species populations linked to national and local targets, which presumably means those listed under the Section 41 of the NERC Act, the former UK BAP and on Local or Regional priorities species lists.

References

Altringham, J. (2003) British Bats. New Naturalist Series No. 93.

Entwistle, A. C., Harris, S., Hutson, A., Racey, P., Walsh, A., Gibson, S., Hepburn, I., and Johnston, J. (2002) Habitat management for bats: A guide for land managers, land owners and their advisors. JNCC, Peterborough.

Her Majesty's Stationery Office (HMSO) (2017). The Conservation of Habitats and Species Regulations 2017 as amended. <https://www.legislation.gov.uk/ukxi/2017/1012/contents/made>

Her Majesty's Stationery Office (HMSO) (2019) Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Her Majesty's Stationery Office (HMSO) (1981). Wildlife and Countryside Act 1981. Chapter 69. <https://www.legislation.gov.uk/ukpga/1981/69>

Her Majesty's Stationery Office (HMSO) (2006). Natural Environment and Rural Communities Act 2006. <https://www.legislation.gov.uk/ukpga/2006/16/introduction>

Highways Agency (1999 et seq) Design Manual for Roads and Bridges, Volume 10 Environmental Design and Management, Section 3 The Good Roads Guide- Nature Conservation, Part 6 Nature Conservation Management Advice in Relation to Bats.

Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines. (4th Edition). Bat Conservation Trust, London.

JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). (2012). UK Post-2010 Biodiversity Framework. Available from: <http://jncc.defra.gov.uk/page-6189>.

Mitchell-Jones, A.J. & McLeish, A.P. (1999). Bat Workers' Manual (2nd Edition). Joint Nature Conservancy Committee, Peterborough

NCC (1989) Guidelines for Selection of Biological SSSIs. Nature Conservancy Council, Peterborough

Office of the Deputy Prime Minister (2005) Planning Policy Statement 9; Biodiversity and Geological Conservation.

Russ, J. (1999). The Bats of Britain and Ireland. Alana Ecology, Shropshire.

Appendix 3: Full External Assessment

Attribute	Building 1	Building 2
Type	Disused building	Disused building
Presence of roof void	No	No
Year built	1960-Present	1960-Present
Aspect	N/A	N/A
Building height	Unknown	Unknown
Building width	Unknown	Unknown
Wall type	Brick with cavity	Brick with cavity
Wall construction	Brick	Brick
Presence of other wall materials	N/A	N/A
Condition of other wall materials	N/A	N/A
Presence and form of roof	Flat	Flat
Presence of roof void	N/A	N/A
Type of roof covering	Unknown	Unknown
Condition of roof covering	Unknown	Unknown
Presence and form of eaves	Unknown	Unknown
Eaves condition	Unknown	Unknown
Presence of flashing	Unknown	Unknown
Condition of flashing	Unknown	Unknown

Attribute	Building 1	Building 2
Window frame type	Unknown	Unknown
Number of storeys	1	1
Building description	Derelict building	Derelict building
Habitat description	Active construction site	Active construction site
Number of roosts confirmed	0	0
Evidence of bats	No	No
PRF 1 Type	Hole in brick work	Hole in brick work
PRF 1 Description	Missing mortar/ gap between bricks	Large hole in brickwork penetrating building.
PRF 1 Position	Unknown	Unknown
PRF 1 Aspect	South East	West
PRF 1 Exposure	Unknown	Unknown
PRF 1 Size of PRF	Unknown	Unknown
PRF 1 Roost Suitability	Low. Day/Night/Occasional Roosts	Moderate. Day/Night/Occasional Roosts
PRF 2 Type	Window boarding	Damaged masonry
PRF 2 Description	Damaged masonry around windows in building interior	Damaged masonry around windows in building interior.
PRF 2 Position	Unknown	Unknown
PRF 2 Aspect	South West	West
PRF 2 Exposure	Unknown	Unknown

Attribute	Building 1	Building 2
PRF 2 Size of PRF	Unknown	
PRF 2 Roost Suitability	Low. Day/Night/Occasional Roosts	Moderate. Day/Night/Occasional Roosts
PRF 3 Type	Ivy	Gaps in window
PRF 3 Description	Ivy growing around the building may hide further PRFs	Smashed windows granting access to building interior
PRF 3 Position	Unknown	Unknown
PRF 3 Aspect	North	West
PRF 3 Exposure	Unknown	Unknown
PRF 3 Size of PRF	Unknown	Unknown
PRF 3 Roost Suitability	Low. Day/Night/Occasional Roosts	Moderate. Day/Night/Transitional roosts
PRF 4 Type	N/A	Missing mortar
PRF 4 Description	N/A	Some small gaps comprising missing mortar fillets on exterior
PRF 4 Position	N/A	Unknown
PRF 4 Aspect	N/A	West
PRF 4 Exposure	N/A	Unknown
PRF 4 Size of PRF	N/A	Unknown
PRF 4 Roost Suitability	N/A	Low. Day/Night/Occasional roosts

Attribute	Building 1	Building 2
Distance to hedge	Unknown	Unknown
Distance to woodland	Unknown	Unknown
Distance to water	Unknown	Unknown
Setting	Active construction site	Active construction site
Surrounding area habitat quality	Unknown	Unknown
Level of disturbance/lighting	Unknown	Unknown
Current use of structure	Disused	Disused
Overall roosting suitability	Moderate	Moderate