

**THE LODGE, OLD BEDHAMPTON,
HAMPSHIRE**

**PRELIMINARY BAT ROOST
ASSESSMENT**

A Report to: Manor Trust Bedhampton c/o PWP
Architects

Report No: RT-MME-128692-02

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

Report Version	Date	Completed by:	Checked by:	Approved by:
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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 July 2018, Middlemarch Environmental Ltd was commissioned by PWP Architects, on behalf of Manor Trust Bedhampton to undertake a Preliminary Bat Roost Assessment at The Lodge, Old Bedhampton, Hampshire. This assessment is required to inform a planning application associated with the demolition of several small buildings on site and multiple extensions to the main building (particularly on its western aspect).

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 25th July 2018.

The Main Building and the Garage are both considered to have high potential to support roosting bats. One tree on site (T1) was assessed as having high potential to support roosting bats, while other trees were assessed as having low or negligible potential.

The habitat on site is suitable for roosting, commuting and foraging bats and the site has good connectivity to the wider area. The potential for bats being present foraging and commuting within the site boundary and immediate landscape is therefore determined as moderate.

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

R1 The Main Building and the Garage

Both the main building and the separate garage building have been identified as having high potential to support roosting bats. Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016) recommends that for structures with high bat roosting potential at least three dusk emergence and/or dawn re-entry surveys be undertaken during the bat emergence/re-entry survey season to determine the presence/absence of roosting bats within the structures.

R2 Tree T1

Tree T1 has been identified as having high potential to support roosting bats. Due to the extent of the rot hole leading to a cavity, the tree cannot be fully assessed using an endoscope, and as such, to determine the presence/absence of roosting bats within the tree/s, further survey work is required in the form of nocturnal emergence and dawn re-entry surveys.

R3 Trees T2 and T3

Trees T2 and T3 were considered to have low potential for roosting bats. The survey data obtained for the site is valid for 12 months from the survey date.

R4 Lighting

Bats are likely to use trees and hedgerows for foraging and commuting. Therefore, in line with paragraph 125 of the National Planning Policy Framework, the development should aim to limit the impact of light pollution on bats through the careful use of lighting in critical areas only and at a low level with minimum spillage. Any lighting, either temporary or permanent, along the site boundaries should be kept to a minimum and directed away from the boundary features to maintain dark areas and corridors. Materials used under lights, such as floor surfaces, should be materials that have a minimum reflective quality to prevent light reflecting upwards into the sky. This will ensure that bats using the site and surrounding area to roost/forage/commute are not affected by illumination.

R5 Habitat Enhancement

In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. Bat boxes should be installed to provide roosting habitat for species such as pipistrelle. In general, bats seek warm places and for this reason boxes should be located where they will receive full/partial sun, although installing boxes in a variety of orientations will provide a range of climatic conditions. Position boxes at least 3 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, goldenrod, honeysuckle and fleabane.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In Jul 2018, Middlemarch Environmental Ltd was commissioned by PWP Architects, on behalf of Manor Trust Bedhampton to undertake a Preliminary Bat Roost Assessment at The Lodge, 8-10 Lower Road, Old Bedhampton, Havant, Hampshire. This assessment is required to inform a planning application associated with the demolition of several small buildings on site and multiple extensions to the main building (particularly on its western aspect).

In addition, Middlemarch Environmental Ltd has been commissioned to undertake a Preliminary Ecological Appraisal, report number RT-MME-128692-01.

To fulfil the above brief to assess the potential for the existing buildings and trees on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on Wednesday 25th July 2018.

All UK bat species are European 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 is an irregular shaped parcel of land, currently in use as a residential care home, located on Lower Road in Old Bedhampton, Havant, Hampshire. The survey area measures approximately 0.20 hectares and is centred at National Grid Reference SU 70060 06315.

The survey area comprising the existing residential care home with associated hard and soft landscaping, interspersed with scattered trees. A small allotment area is located in the west of the site. Lower Road borders the site from the north and east, whilst residential properties are located to the south and west.

Further afield the landscape is dominated by a mixture of residential housing and open farmland, interspersed with pockets of woodland.

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
5255 1101A Existing Site Plan	PWP Architects
5525 1103 Proposed Site Plan	PWP Architects

Table 1.1: Documentation Provided by Client

2. METHODOLOGY

2.1 DESK STUDY

As part of the Preliminary Ecological Appraisal (Report RT-MME-128692-01) an ecological desk study (which included a search for records of bats) was undertaken within a 1 km radius of the site. The consultee for the desk study was Hampshire Biodiversity Information Centre.

Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided by this organisation. 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 trees 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 were surveyed externally and internally.

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. Trees with features present that are suitable to support roosting bats (high and moderate suitability) are discussed more fully in the report.

A summary of the trees within the survey area without suitable features to support roosting bats (low and negligible suitability) is provided within the report. Due to their negligible potential to support roosting bats, the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) recommend no further survey work is required for these tree classes.

Example of Potential Roost Features	
Buildings	
<u>Externally</u>	• 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.
<u>Internally</u>	• 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.

Trees

- Bat, bird and dormouse boxes on trees;
- Cankers (caused by localized bark death) in which cavities have developed;
- Compression forks with included bark, forming potential cavities;
- Cracks/splits in stems or branches (both vertical and horizontal);
- Crossing stems or branches with suitable space between for roosting;
- Ivy stems with diameters in excess of 50 mm with suitable roosting space behind (or where a roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk);
- Man-made holes (e.g. cavities that have developed from flush cuts);
- Natural holes (e.g. knot holes) arising from naturally shed branches, or cavities created by branches tearing out from parent stems;
- Other hollows or cavities, including rot holes and butt rots;
- Partially detached or loose, platy bark;
- Woodpecker holes; or,
- Other features that offer a place of shelter.

Table 2.1: Potential Roost Features (Adapted from Collins 2016 and BSI 2015)

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. A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
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). A tree 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). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Negligible	Negligible habitat features on site likely to be used by roosting bats.

Table 2.2: Classification of Buildings and Trees 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 on 16 July 2018 by Hampshire Biodiversity Information Centre. 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
Common pipistrelle <i>Pipistrellus pipistrellus</i>	7	2016	400 m south	-	ECH 4, WCA 5, WCA 6, Local
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	7	2016	400 m south	✓	ECH 4, WCA 5, WCA 6, Local
Serotine bat <i>Eptesicus serotinus</i>	4	2017	560 m north-west	-	ECH 4, WCA 5, WCA 6, Local
Unidentified myotis <i>Myotis</i> sp.	4	2011	640 m east	-	ECH 4, WCA 5, WCA 6, Local
Noctule <i>Nyctalus noctula</i>	3	2013	640 m east	✓	ECH 4, WCA 5, WCA 6, Local
Pipistrelle <i>Pipistrellus</i> sp.	3	2015	700 m east	#	ECH 4, WCA 5, WCA 6, Local
Unidentified bat <i>Chiroptera</i> sp.	2	2017	800 m east	#	#, Local
Key: #: Dependent on species. ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. 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. Species of Principal Importance: Species of Principal Importance for Nature Conservation in England. Local: Priority Species on the Hampshire Local Biodiversity Action Plan.					

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

4. SURVEY RESULTS

4.1 INTRODUCTION

The Preliminary Bat Roost Assessment was conducted on by 25th July 2018 by Indre Barsketyte (Principal Ecological Consultant). Drawing C128692-02-01, illustrating the findings of the survey is provided in Chapter 7.

Weather conditions were recorded and are presented in Table 4.1.

Parameter	Conditions
Temperature (°C)	27
Cloud Cover (%)	10
Precipitation	Dry
Wind Speed (Beaufort)	F0

Table 4.1: Weather Conditions During the Preliminary Bat Roost Assessment

4.2 CONSTRAINTS

The garage appears to have a false ceiling, and the potential internal void was not accessed and therefore not fully inspected for evidence of roosting bats or features they could utilise for roosting. One of the loft space within the main building could not be accessed as there was no way to open the lot catch.

4.3 SURVEY RESULTS

4.3.1 Main Building

External Assessment

The main building is a single to two storey rendered building with a mixture of clay tiled mansard, hipped and pitched roofs as well as bitumen flat roofs (Plates 4.1 and 4.2). The windows were double glazed uPVC. Wooden soffit boxes were also present. A single storey rendered extension with a hipped clay tiled roof was present along the eastern elevation.

Numerous features were recorded around the building which could be utilised by bats to gain entry into the building and potential roost locations. These features include:

- Gaps under hanging tiles (Plates 4.3 and 4.4);
- Missing, lifted or warped roof tiles (Plates 4.5 and 4.6);
- Lifted lead flashing on the roof (Plates 4.7 and 4.8);
- Gaps between the wall and soffit box (Plates 4.9 and 4.10);
- Gaps at the eaves (Plate 4.11);
- Gaps between the plastic fascia and hanging tiles (Plate 4.12);
- Gaps between the wooden fascia and wall.
- Gaps in the wall where part of the building was demolished, appearing to lead into a cavity wall (Plate 4.13);
- Gap between wall and wooden fascia (Plate 4.14); and,
- Gaps between weatherboarding and roof (Plate 4.15).



Plate 4.1: Main Building



Plate 4.2: Single storey extensions



Plate 4.3: Gaps under hanging tiles



Plate 4.4: Gaps under hanging tiles



Plate 4.5: Gaps under roof tiles



Plate 4.6: Gaps under roof tiles



Plate 4.7: Lifted lead flashing



Plate 4.8: Lifted lead flashing



Plate 4.9: Gap between wall and soffit box



Plate 4.10: Gap at the soffit box



Plate 4.11: Gap at the eaves



Plate 4.12: Gap between plastic fascia and hanging tiles



Plate 4.13: Gap in the wall where part of the building was demolished



Plate 4.14: Gap between the wall and wooden fascia



Plate 4.15: Gap between weatherboarding and roof

It was not possible to inspect the above 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.

Internal Assessment

The main building had two accessible loft spaces, one above the single storey extension (Loft 1) and one above the bay conservatory (Loft 2).

Loft 1

Loft 1 was approximately 3 m at the apex, 6 m wide and 19 m long (Plate 4.16). It was L-shaped, with the second section approximately 10 m long, 3 m wide and 1.7 m at the apex (Plate 4.17). The loft space was pitched and had a ridge beam (Plate 4.18), although the ridge beam was cobwebbed indicating it was currently not in use by bats. At the gable end of the loft space there was a tightly fitted asbestos board with no gaps (Plate 4.19). The loft space also had fibre glass insulation (Plate 4.20). Wooden boarding was present between the roof and rafters, and missing in places, exposing breathable membrane sarking (Plate 4.21).



Plate 4.16: Loft 1



Plate 4.17: Loft 1

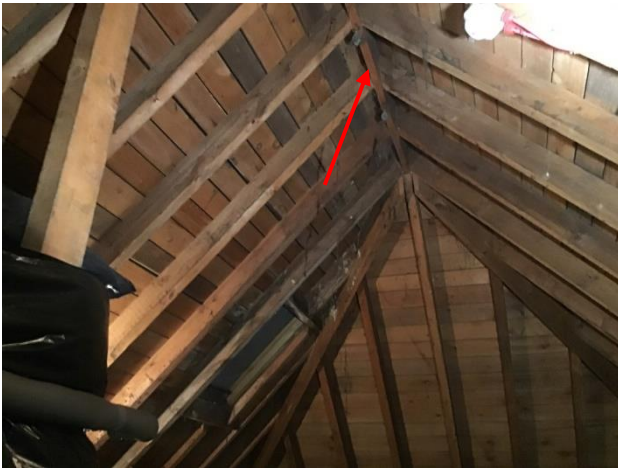


Plate 4.18: Ridge beam



Plate 4.19: Asbestos board



Plate 4.20: Fibre glass insulation



Plate 4.21: Exposed breathable membrane

It was not possible to fully inspect all features within the loft space - the area between the breathable membrane sarking and roof tiles, and behind the wooden boarding - and as such the bat roosting potential of this area could not be determined. Whilst no evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal inspection of the building, not all areas could be fully assessed.

Loft 2

Loft 2 was situated above the single storey section of the building to the west of the bay conservatory. It was approximately 1.5 m high at the apex, 5 m wide and 10 m long (Plate 4.22). Breathable membrane sarking was ripped in places, exposing roof tiles (Plate 4.23). There was also damaged flint at the gable end (Plate 4.24).



Plate 4.22: Loft 2



Plate 4.23: Damaged breathable membrane



Plate 4.24: Damaged flint

Due to the presence of boilers and hot pipes in the loft, it was not possible to fully inspect this roof space. Furthermore, due to the extent of the crevice between the roof tiles and the breathable membrane, it was not possible to fully inspect this feature. As such, the bat roosting potential of this area could not be determined. Whilst no evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal inspection of the building, not all areas could be fully assessed.

4.3.2 Garage

External Assessment

Numerous features were recorded around the building which could be utilised by bats to gain entry into the building and potential roost locations. These features include:

- Damaged brickwork (Plate 4.25);
- Gaps between the ceiling and wall at the back of the garage (Plate 4.26);
- Gaps around the doorway (Plate 4.27); and
- Gaps around wooden window frames (Plate 4.29).



Plate 4.25: Damaged brickwork



Plate 4.26: Gap between wall and the ceiling



Plate 4.27: Gaps around the doorway



Plate 4.28: Gaps around the window frame

Internal Assessment

Internal assessment revealed what appeared to be a false ceiling (Plate 4.29). There were also gaps between the wall and the ceiling (Plate 4.30). no access was possible into the false ceiling and the gaps between the ceiling and the wall were heavily cobwebbed, indicating no recent use by bats or other fauna.



Plate 4.29: False ceiling



Plate 4.30: Gap between the ceiling and the wall

Due to potential presence of the false ceiling, full internal inspection was not possible. As such, the bat roosting potential of this area could not be determined. Whilst no evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal inspection of the building, not all areas could be fully assessed.

4.3.3 Shed

The site also had a single storey wooden shed with a pitched bitumen roof (Plate 4.31). The building was fully inspected internally and externally, and no features were identified that would be suitable for roosting bats, nor was any evidence of bat activity recorded.



Plate 4.31: Shed

4.4 SURVEY RESULTS – TREES

4.4.1 Trees with High or Moderate Potential to Support Roosting Bats

Numerous scattered trees were present on site. An ash *Fraxinus excelsior* tree (T1) located along the eastern boundary of the site had multiple knot holes that did not appear to extend into a crevice and a rot hole on one of the south facing limbs that extended into a crevice (Plate 4.32). Due to location of this rot hole it was not possible to fully inspect it.



Plate 4.32: Rot hole

4.4.1 Trees with Low or Negligible Potential to Support Roosting Bats

A sycamore (T2), located along the eastern boundary of the site and magnolia *Magnolia sp.* tree (T3), located within the western section of the site, did not comprise any potential roosting features visible from the ground level, but were of age and size to support potential roosting features.



Plate 4.33: Tree T2



Plate 4.34: Tree T3

4.5 SITE AND SURROUNDING HABITATS

The surrounding area is a mix of arable land and residential properties with large gardens. At the time of the survey the site was dominated by a tarmac car park to the north and amenity grassland, ornamental shrubs and scattered trees to the south. The extending garden to the west is dominated by an allotment with vegetable patches growing tomatoes and onions.

The site is immediately bordered on all sides by residential properties and their gardens, which provide moderate foraging and commuting habitat. Several large arable fields with mature hedgerows and treelines are located just 40 m south of the site. Parkland, allotment sites and sports grounds are located approximately 200 m west of the site, as are numerous floodplain features such as riverine habitat, ponds, backwaters and ditches. All of the above could provide valuable foraging and commuting habitat for bats.

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

- Residential houses and associated gardens;
- Farm houses and associated agricultural buildings;
- Running water and standing waterbodies;
- Pockets of woodland;
- Agricultural fields with tree and hedge lined boundaries;
- Churches, schools, and associated grounds;
- Golf courses with associated open grassland habitats; and,
- Railway lines with vegetated banks.

A railway line with vegetated banks is also located approximately 200 m south of the site, and this could provide a valuable commuting corridor. However, the nearby major roads (the A3 is located approximately 350 m west and the A27 approximately 420 m south) could provide barriers through light pollution.

5. DISCUSSION AND CONCLUSIONS

5.1 SUMMARY OF PROPOSALS

This assessment is required to inform a planning application associated with the demolition of several small buildings on site and multiple extensions to the main building (particularly on its western aspect).

5.2 ASSESSMENT OF BUILDINGS

The main building is considered to have high potential to support roosting bats due to a variety of features, primarily crevices associated with the tiles and roof features. Features identified which bats could utilise included:

- Gaps under hanging tiles;
- Missing, lifted or warped roof tiles;
- Lifted lead flashing on the roof;
- Gaps between the wall and soffit box;
- Gaps at the eaves;
- Gaps between the plastic fascia and hanging tiles;
- Gaps between the wooden fascia and wall;
- Gaps in the wall where part of the building was demolished, appearing to lead into a cavity wall; and
- Gaps between weatherboarding and roof.

The garage is also considered to have high potential to support roosting bats, mostly due to the presence of a potentially suitable enclosed void behind the false ceiling which appears accessible to bats. Features identified which bats could utilise included:

- Gaps between the ceiling and wall;
- Gaps around the doorway;
- Gaps around wooden window frames; and
- Damaged brickwork.

Due to location and extent of some of these features, a full inspection during the preliminary bat roost assessment was not possible and as such, there is insufficient evidence to conclude whether the buildings are utilised by roosting bats at this time. Therefore, further bat work in a form of nocturnal emergence and dawn re-entry surveys have been recommended in Chapter 6.

The shed on site was assessed as having negligible potential to support roosting bats due to an absence of suitable features.

5.3 ASSESSMENT OF TREES

An ash tree (T1) was identified as having high roosting potential for bats due to a rot hole extending into a crevice. Due to its location, this feature could not be fully inspected during the preliminary assessment and as such further survey work have been recommended in Chapter 6.

A sycamore (T2) and magnolia tree (T3) were deemed to have low potential to support roosting bats due to their size and age.

All other trees on site were assessed as having negligible potential to support roosting bats due to an absence of suitable features.

5.4 POTENTIAL IMPACTS ON BATS

If a bat roost is found to be present within the building, the proposed works could potentially result in killing or injuring individual bats and /or destruction of the roost. Furthermore, the increase in noise, vibration and lighting during the construction phase could result in disturbance to bats, if present.

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 The Main Building and the Garage

Both the main building and the separate garage building have been identified as having high potential to support roosting bats. Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016) recommends that for structures with high bat roosting potential at least three dusk emergence and/or dawn re-entry surveys be undertaken during the bat emergence/re-entry survey season to determine the presence/absence of roosting bats within the structures. The bat emergence/re-entry survey season extends from May to September. At least two of the surveys should be undertaken during the peak season for emergence/re-entry surveys between May and August and one of the three surveys should be a dawn re-entry survey. If a roost is discovered during these surveys, a Natural England licence application may be required.

R2 Tree T1

Tree T1 has been identified as having high potential to support roosting bats.

Due to the extent of the rot hole leading to a cavity, the tree cannot be fully assessed using an endoscope, and as such, to determine the presence/absence of roosting bats within the tree/s, further survey work is required in the form of nocturnal emergence and dawn re-entry surveys.

Bat Survey: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016) recommends that for trees with high bat roosting potential at least three nocturnal emergence and/or dawn re-entry surveys be undertaken during the bat activity season to determine the presence/absence of roosting bats within the tree. The bat activity season extends from May to September. At least one of the surveys should be a dawn re-entry survey, and at least two of the surveys should be undertaken between May and August. If a roost is discovered during these surveys, a Natural England licence application may be required.

R3 Trees T2 and T3

Trees T2 and T3 were considered to have low potential for roosting bats. The survey data obtained for the site is valid for 12 months from the survey date. If proposed site works have not commenced within this timeframe it will be essential to update the survey effort to establish if the trees have developed features that could be used by roosting bats in the interim. In the unlikely event that a bat is found during works to the trees all works must immediately cease and a suitably qualified ecologist should be contacted.

R4 Lighting

Bats are likely to use trees and hedgerows for foraging and commuting. Therefore, in line with paragraph 125 of the National Planning Policy Framework, the development should aim to limit the impact of light pollution on bats through the careful use of lighting in critical areas only and at a low level with minimum spillage. Any lighting, either temporary or permanent, along the site boundaries should be kept to a minimum and directed away from the boundary features to maintain dark areas and corridors. A lighting strategy should be designed and implemented on site to avoid impacting bat usage of the site and wider area. The strategy should be designed in accordance with the principles of 'Landscape and urban design for bats and biodiversity' as published by the Bat Conservation Trust (Gunnell *et al*, 2012). Materials used under lights, such as floor surfaces, should be materials that have a minimum reflective quality to prevent light reflecting upwards into the sky. This will ensure that bats using the site and surrounding area to roost/forage/commute are not affected by illumination.

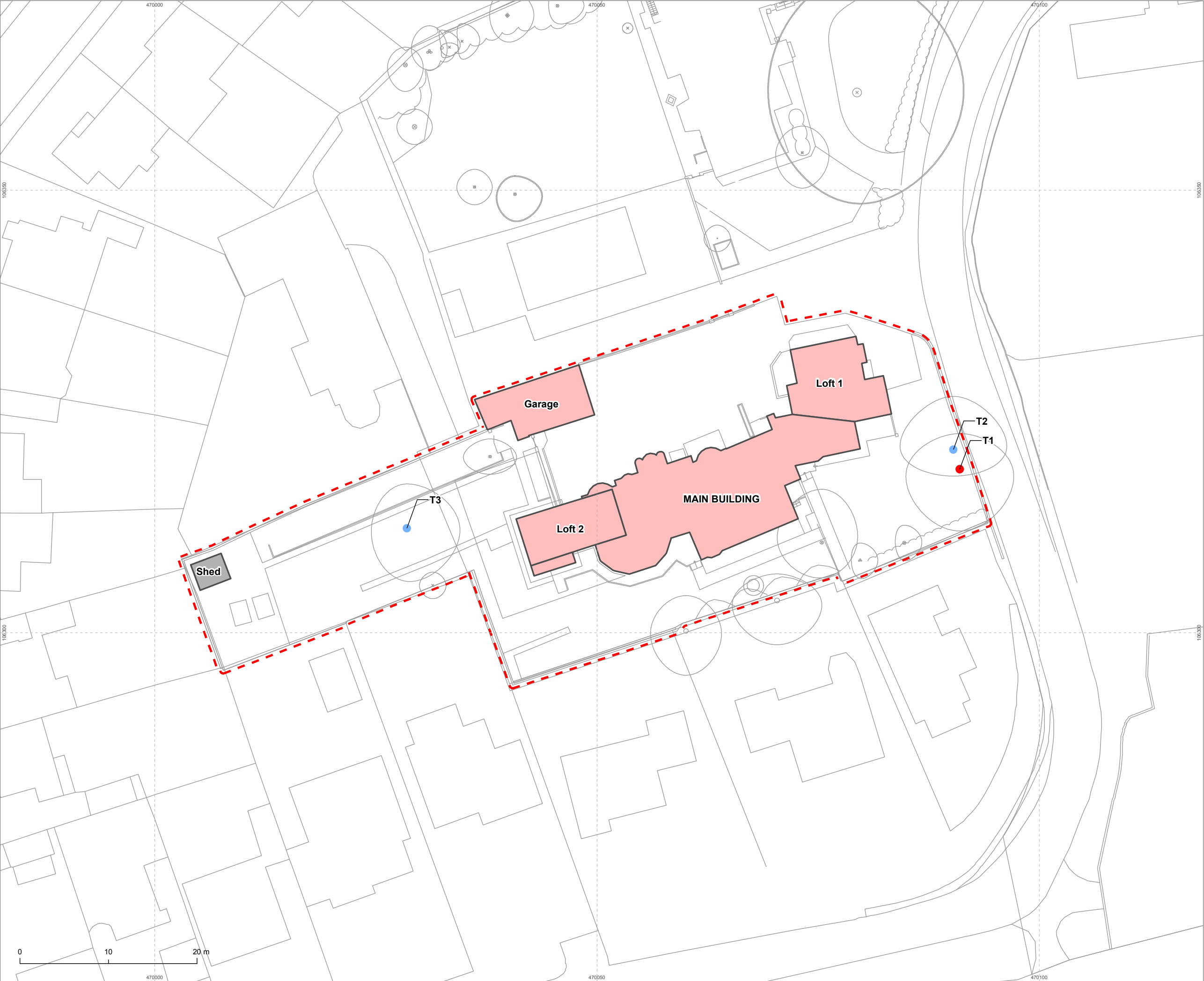
R5 Habitat Enhancement

In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. Bat boxes should be installed to provide roosting habitat for species such as pipistrelle. In general, bats seek warm places and for this reason boxes should be located where they will receive

full/partial sun, although installing boxes in a variety of orientations will provide a range of climatic conditions. Position boxes at least 3 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*, goldenrod *Solidago virgaurea*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.

7. DRAWINGS

Drawing C128692-02-01 – Preliminary Bat Roost Assessment



C128692-02-01

Legend

Tree with high bat roosting potential

Tree with low bat roosting potential

Building/section with high bat roosting potential

Building with negligible bat roosting potential

Site boundary

Project

8-10 Lower Road, Old Bedhampton

Drawing

Preliminary Roost Assessment

Client

Balfour Beatty

Drawing Number

C128692-02-01

Revision

00

Scale @ A3

1:400

Date

August 2018

Approved By

IB

Drawn By

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 European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). 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.

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.

For England:

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*.

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

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.