LAND OFF TATENHILL LANE, BRANSTON
BURTON UPON TRENT, STAFFORDSHIRE

PRELIMINARY BAT ROOST ASSESSMENT

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A Report to: Lioncourt Homes Limited

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MIDDLEMARCH ENVIRONMENTAL

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	14/08/2017	Anna Evans (MSc) (Project Officer) and Charlotte Richardson MSc (Ecological Consultant)	Colin Bundy BSc (Hons), MCIEEM (Associate Director)	Dr Philip Fermor CEnv MCIEEM (Managing Director)

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

Middlemarch Environmental Ltd was commissioned by Lioncourt Homes to undertake a Preliminary Bat Roost Assessment at Numbers 78 and 80 Tatenhill Lane, Branston, Burton-upon-Trent. This assessment is required to inform a planning application associated with the demolition of the buildings in order to facilitate a residential development on site.

To fulfil the above brief to assess the potential for the existing buildings on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 12th July 2017.

Two properties were subject to survey. Property number 78 was a rectangular bungalow with pitched roof and a linked small garage structure. Property number 80 was a rectangular bungalow with a pitched roof and an integrated small garage/office at its north-western end.

The Preliminary Bat Roost Assessment concluded that the buildings on site have potential to support roosting bats.

On property number 78, a gap was present in the soffit box at the south-western corner of the bungalow and light was noted to penetrate into the loft space at the eaves at the same corner. In addition, a number of the roof tiles were found to be lifted around the eaves, and these areas could not be fully inspected. Therefore, the roosting status of the building could not be fully determined, so the building was concluded to hold low bat roost potential.

On property number 80, a number of roof tiles were noted to be lifted and an area of lead flashing was lifted where the chimney met the roof. Internally the gap between the sarking and the roof tiles could not be inspected and thus its roost status could not be fully determined, whilst a small number of bat droppings were recorded at the south-western corner of the loft space. The building was concluded to hold high bat roost potential.

The structures and trees in the gardens of both properties were concluded to hold negligible bat roost potential.

Any works to either building would therefore have the potential to disturb or destroy any roosts present within the features identified; whilst any bats present within the roosts would be at risk or injury or death.

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

R1 **78 Tatenhill Lane:** One survey (consisting of either a dusk emergence survey or a dawn re-entry survey) should be undertaken on this property during the peak season for emergence/re-entry surveys (May to August) to determine the presence/absence of roosting bats within the structure. Should this survey confirm the presence of roosting bats, it will be necessary to undertake additional surveys in order to inform a Natural England licence application.

R2 **80 Tatenhill Lane:** Three dusk emergence and/or dawn re-entry surveys should be undertaken on this property during the bat emergence/re-entry survey season (May to September) to determine the presence/absence of roosting bats within the structure. At least two of the surveys should be undertaken during the peak season for emergence/re-entry surveys (May to 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.

R3 **Bats and Lighting:** The development should aim to limit the impact of light pollution on bats through ensuring the vegetated boundaries abutting the Trent and Mersey Canal to the north-west, Branston Water Park to the south and the woodland strip to the east remain unlit post-development and through the careful use of lighting elsewhere on site.

R4 **Foraging Bats:** Where feasible, any landscaping planting should aim to incorporate trees, shrubs and forbs which are attractive to invertebrates and provide potential invertebrate food sources for bats.

CONTENTS

1. INTRODUCTION

1.1 PROJECT BACKGROUND

In July 2017, Lioncourt Homes Limited commissioned Middlemarch Environmental Ltd to undertake a Preliminary Bat Roost Assessment at the site of a proposed development on land off Tatenhill Lane in Branston, Burton-Upon-Trent. This assessment is required to inform a planning application associated with a proposed residential development on site.

Middlemarch Environmental Ltd has previously carried out the following surveys for Central and Country Developments Limited at this site:

- 78 & 80 Tatenhill Lane, Burton-on-Trent: Extended Phase 1 Habitat Survey (2013). Report RT-MME-113555-01;
- Initial Bat Survey: 78 & 80 Tatenhill Lane (2013). Report RT-MME-113555-02;
- Great Crested Newt Survey (2011). Report RT-MME-109617;
- Phase 1 & Initial Bat Survey, 54 Tatenhill Lane (2011). Report RT-MME-108974.
- Multiple Species Surveys (2010). Report RT-MME-107305-01 to -04; and
- Extended Phase 1 Habitat Survey – Land at Tatenhill (2010). Report RT-MME-107126.

In addition, Middlemarch Environmental Ltd has been commissioned by Lioncourt Homes Limited to undertake the following assessments:

- A Preliminary Ecological Appraisal (Report Number RT-MME-125808-01).
- A Great Crested Newt Habitat Survey Index Assessment (RT-MME-125808-03).

To fulfil the above brief to assess the potential for the existing buildings on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 12th July 2017.

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 development site is located approximately 200 m south-west of the B5018/A38 road junction in Branston, to the south-west of Burton-Upon-Trent, Staffordshire, at National Grid Reference SK 217 212. The site includes the properties and gardens of 78 and 80 Tatenhill Lane at its northern end, extending to approximately 0.2 ha and comprising houses and outbuildings surrounded by areas of hardstanding, amenity grassland, ornamental planting and mixed formal boundaries of wooden fences, ornamental hedgerows and brick walls. To the south of this is a poor semi-improved grassland field with occasional scrub and tall ruderal vegetation extending to approximately 2.4 ha and bounded by fencing, hedgerows, scattered trees and a dry ditch.

Further residential properties and Tatenhill Lane are located immediately adjacent to the northern and north-eastern boundary of the site; to the south-east is a narrow strip of woodland with adjacent area of light industrial usage, with the A38 and Branston beyond and to the south-west is Branston Water Park, a former area of gravel extraction now reinstated as a general amenity area for the public, whilst to the immediate west is the Trent & Mersey canal with farmland present beyond this. The River Trent is also located approximately 700 metres to the south-east at its closest point.

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
BRTL_01_02A – Site Plan	Lioncourt Homes Ltd
BRTL_01_02A – Site Plan CLR	Lioncourt Homes Ltd

Table 1.1: Documentation Provided by Client

2. METHODOLOGY

2.1 DESK STUDY

As part of the Preliminary Ecological Appraisal (Report RT-MME-125808-01) an ecological desk study (which included a search for records of bats) was undertaken within a 1 km radius of the site. The consultees for the desk study were Derbyshire Wildlife Trust and Staffordshire Ecological Record.

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

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

2.2 FIELD SURVEY

In line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), a Preliminary Bat Roost Assessment of the buildings 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 however internal access was not possible.

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

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

Example of Potential Roost Features
Buildings Externally • Access through window panes, doors and walls; • behind peeling paintwork or lifted rendering; • behind hanging tiles; • weatherboarding; • eaves; • soffit boxes; • fascias; • lead flashing; • gaps under felt (even including those of flat roofs); • under tiles/slates; • existing bat and bird boxes; and, • any gaps in brickwork or stonework permitting access into access to cavity- or rubble-filled walls. Internally • behind wooden panelling; • in lintels above doors and windows; • behind window shutters and curtains; • behind pictures, posters, furniture, peeling paintwork; • peeling wallpaper, lifted plaster and boarded-up windows; • inside cupboards and in chimneys accessible from fireplaces. • within attic voids: • the top of gable end or dividing walls; • the top of chimney breasts; • ridge and hip beams and other roof beams; • mortise and tenon joints; • all beams (free-hanging bats); • the junction of roof timbers, especially where ridge and hip beams meet; • behind purlins; • between tiles and the roof lining; and, • under flat felt roofs.

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

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

Table 2.2: Classification of Buildings 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

Records of bat species within a 1 km radius of the survey area provided by the local record centres are summarised in Table 3.1. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance?	Legislation / Conservation Status
Mammals (Bats)					
Common pipistrelle *Pipistrellus pipistrellus*	8	2012	350 m north-west	-	ECH 4, WCA 5, WCA 6
Unidentified bat *Myotis sp.*	5	2012	350 m north-west	*	*
Noctule *Nyctalus noctula*	7	2012	350 m north-west	✓	ECH 4, WCA 5, WCA 6
Soprano pipistrelle *Pipistrellus pygmaeus*	4	2012	350 m north-west	✓	ECH 4, WCA 5, WCA 6
Pipistrelle bat *Pipistrellus sp.*	6	2012	630 m south	*	ECH 4, WCA 5, WCA 6

Key:
* Species dependent.
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.
Note. This table does not include reference to the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats), the Bonn Convention on the Conservation of Migratory Species of Wild Animals or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

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

3.3 PREVIOUS BAT SURVEYS

A previous survey of the buildings undertaken by Middlemarch Environmental in March 2013 (Report Number RT-MME-113555-02) identified the presence of virtually no features considered to provide potential access points into suitable roosting locations within the buildings. The buildings were therefore concluded to hold negligible bat roost potential and no further surveys were recommended.

In addition, previous nocturnal and dawn bat surveys of the small field to the south of the properties were undertaken by Middlemarch Environmental in May/June 2010 (Report Number RT-MME-107305-02). These identified the presence of four bat species using the area: common pipistrelle, soprano pipistrelle, Daubenton's bat *Myotis daubentonii* and noctule. Branston Water Park LNR to the immediate south of the field and the strip of woodland along the south-eastern boundary were the main focus of activity during the surveys, with foraging and commuting recorded. Minor bat activity was also recorded along the Trent and Mersey canal to the west of number 80 Tatenhill Lane.

4. SURVEY RESULTS

4.1 INTRODUCTION

The Preliminary Bat Roost Assessment was conducted on 12th July 2017 by Charlotte Richardson MSc (Ecological Consultant; Bat Licence Number 2015/9325-CLS-CLS), Emily Wordley BSc (Hons) (Ecological Project Officer) and Archie Bird (Ecological Project Officer).

Weather conditions were recorded and are presented in Table 4.1.

Parameter	Conditions
Temperature (°C)	16
Cloud Cover (%)	20
Precipitation	Dry
Wind Speed (Beaufort)	F3

Table 4.1: Weather Conditions During the Preliminary Bat Roost Assessment

4.2 CONSTRAINTS

Full internal and external access was gained to both properties, meaning that a thorough inspection was able to be conducted. However, it was not possible to fully inspect some of the potential roost features (i.e. lifted roof tiles) due to the height at which they were located.

4.3 SURVEY RESULTS

Two buildings were subject to survey, these being the properties of numbers 78 and 80 Tatenhill Lane; and the results of the survey are detailed below.

4.3.1 78 Tatenhill Lane

External Assessment
Property number 78 (Plate 4.1) was a rectangular bungalow with pitched roof and a linked small garage structure.

The bungalow was largely of brick construction with the front elevation and chimney breast feature on the western elevation clad with decorative stone. All elevations of the bungalow possessed glazed window panes set into a mixture of wooden and uPVC frames (Plate 4.2). The brickwork was noted to still be in excellent condition, with minimal loss of mortar and no features present that could be exploited by bats as access points into potential roosting locations. The window frames, sills and lintels were similarly still in an excellent state of repair and provided no means of access for bats.

The upper section of the front elevation of the building was clad in wavy-edged wooden boarding which largely tight fitting. Some of the boards had warped slightly meaning that gaps were now present, however, these were largely cobwebbed, with only a small number of sections free of debris. The soffit areas were boxed and constructed from uPVC/asbestos sheeting and were still largely in a good state of repair, although the gap was still present on the south-western corner of the bungalow and this could not be fully assessed due to the height at which it was located.

The pitched roof was covered in large concrete roofing tiles and although well weathered and covered with moss/lichen, they were noted to be in good condition. However, some lifted tiles were noted around the guttering on the north-western roof elevation (Plate 4.3), and these could not be fully inspected due to the angle at which they were located.

No evidence of bat presence was recorded during the external inspection of the bungalow.

Attached to the residential property on its eastern side was a garage structure also constructed from brick and with a flat roof covered in tight-fitting felt with wooden edge boarding, the latter still closely-fitted to the

brickwork and offering no means of access for bats into the building. The front of the garage possessed a metal 'up and over' door which again provided no means of access into the structure.

Located within the rear garden of number 78 Tatenhill Lane were two small sheds and a greenhouse. The larger shed on the northern side of the garden was a wooden panelled structure with a shallow pitched corrugated roof set on a wooden framework. Gaps were still frequent at the junction of the wooden side walls and corrugated roofing and these provided a direct access point into the shed however no direct evidence of bat presence or usage was identified at these potential access points during the survey.

On the eastern side of the garden was a further small wooden shed with a pitched roof covered in close-fitting felt (Plate 4.4). This structure, though weathered, was considered to offer negligible bat roost potential.

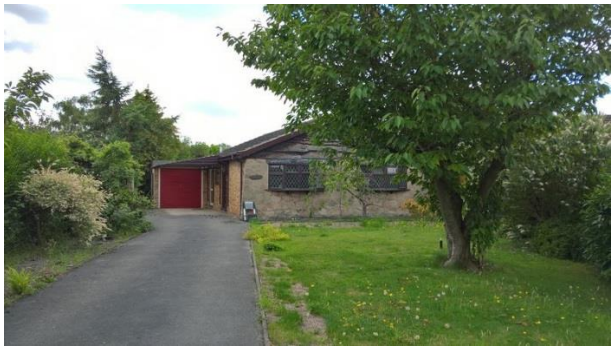

Plate 4.1: No. 78 Tatenhill Lane.

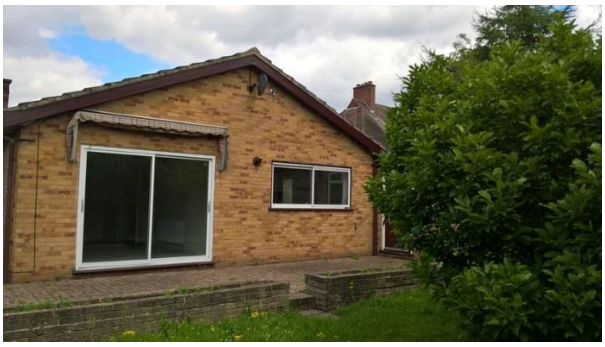

Plate 4.2: South-western Elevation of No. 78 Tatenhill Lane.

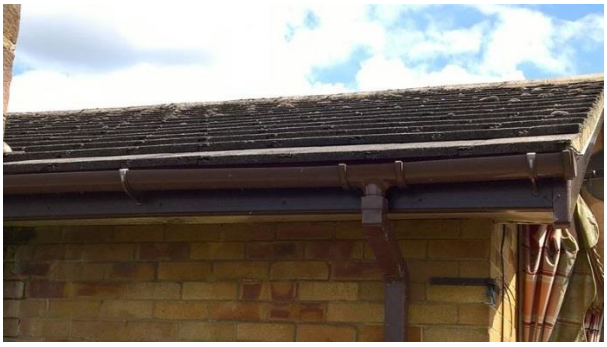

Plate 4.3: Raised Roof Tiles on Northern Elevation of No. 78 Tatenhill Lane.

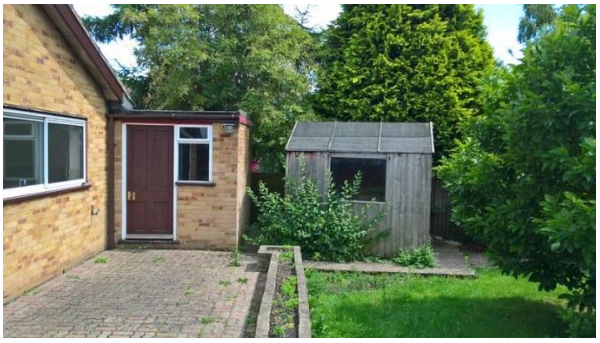

Plate 4.4: Shed to the South-east of No. 78 Tatenhill Lane.

In summary, a small number of features were recorded around the building which could be utilised by bats to gain entry into the building and potential roost locations. These features comprised a gap in the soffit boxing at the south-western corner of the bungalow and lifted tiles to the north-west where the guttering met the roof. It was not possible to fully inspect these features due to the enclosed nature of the soffit box and the angle at which the roof tiles 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.

Internal Assessment
The residential dwelling possessed a series of ground floor rooms that were all sealed to external areas and offered no roost or access potential for bats (Plate 4.5).

A large loft space ran the whole length of the bungalow and extended to approximately 1.8 m in height (Plate 4.6). The internal configuration of the loft comprised a cluttered modern wooden truss structure. The underside of the roof area was clothed in felt sarking which was mostly very well sealed, making the roof space very dark, however gaps were observed at the eaves towards the south-west of the building, though these were noted to be very cobwebbed, indicating that they had not recently been used by bats to access the internal loft space.

The gable end walls of the loft space were constructed from breeze block with the end wooden trusses attached and projecting into the brickwork. Gaps and apertures were present around the wall tops but upon inspection these appeared to possess no access to exterior areas and were clothed internally with dirt, dust and debris. No evidence of bat presence, such as bat droppings attached to brickwork, was identified within the vicinity of these features.

A thick layer of fibre glass insulation material covered the sections of the loft floor space between the wooden joists and either side of the central walkway and this extended down into the eave spaces.

Large amounts of cobwebbing were recorded within the loft space, suggesting that no bats had recently been flying around within the internal area. Very dense cobwebs were also recorded in eave areas.

No evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal inspection of the bungalow however the area between the roof tiles and the felt sarking could not be fully surveyed and light was present at the south-western eaves, near to the location of the damaged external soffit boxing, indicating access into the roof space was possible.

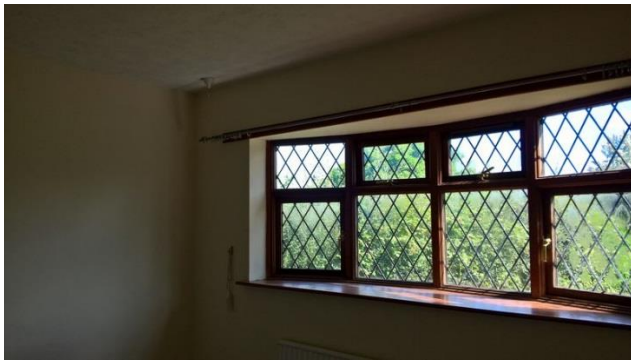

Plate 4.5: One of the Ground Floor Rooms of No. 78 Tatenhill Lane.

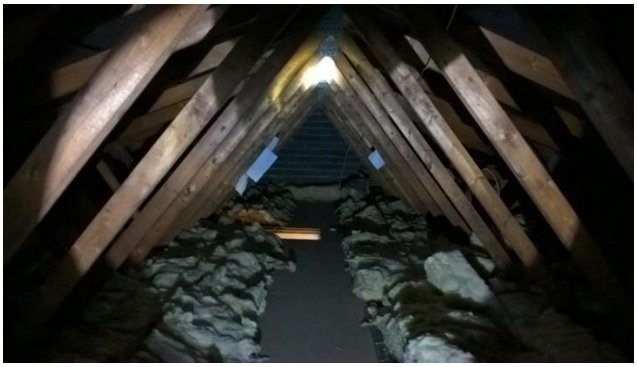

Plate 4.6: Loft Space of No. 78 Tatenhill Lane.

An internal inspection of the two sheds within the rear garden failed to reveal any evidence of bat presence and both structures were considered to be sub-optimal as potential roosting locations.

The internal walls of the attached garage were still in good condition, with no gaps present that were considered to offer any bat roost potential. The ceiling of the garage comprised plasterboard attached to a wooden framework. A small section of the plasterboard had been removed revealing the framework beneath and roofing felt. Inspection of this area revealed no evidence of bat presence/usage, the internal void being extensively covered with cobwebs, dirt and debris. No evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal inspection of the garage and all areas could be fully surveyed.

4.3.2 80 Tatenhill Lane

External Assessment
Property number 80 was a rectangular bungalow with a pitched roof and an integrated small garage/office at its north-western end (Plate 4.7).

The walls were of brick construction and covered by render which was still in excellent condition and possessed no significant cracks, gaps or apertures that could provide either bat roosting locations or access into internal areas for roosting purposes. The front of the attached garage comprised sections of irregularly-shaped stone, as did the external chimney feature present at the south-eastern end of the building. The area of stone around the garage did not have any features which could be exploited by bats, however, a gap was present between the stone chimney stack and the lead flashing which was considered large enough to facilitate bat access to the building. This gap was inspected with an endoscope, but due to the slight narrowing of the feature internally, it was not possible to fully inspect it.

Neither section of stonework provided any features that could be exploited by bats. The modern uPVC window frames which were still in excellent condition, as was the surrounding brickwork, offering no gaps or crevices within the sills or lintels that could be exploited by bats. No bat droppings were discovered attached to the external render, glazed panes or window sills.

The uPVC and asbestos soffit boxes were still in excellent condition and tight-fitting to the external brickwork, providing no access points into potential roosting areas for bats.

The pitched roof was covered in concrete tiles and a number of tiles along the south-western elevation (around the guttering) were now noted to be lifted (Plate 4.8), creating access points into potential roost locations which could not be fully inspected due to the height at which they were located.

The lead flashing around the base of the small flue on the rear elevation of the roof was still noted to be in excellent condition however a potential gap was noted under the flashing on the eastern side of the chimney breast feature, where it was attached to the bungalow (Plate 4.9). This gap could not be fully inspected due to the height at which it was located.

The external inspection of the bungalow did not reveal any bats, or evidence of bat activity (in the form of droppings, feeding remains, grease marks, scratch marks or urine).

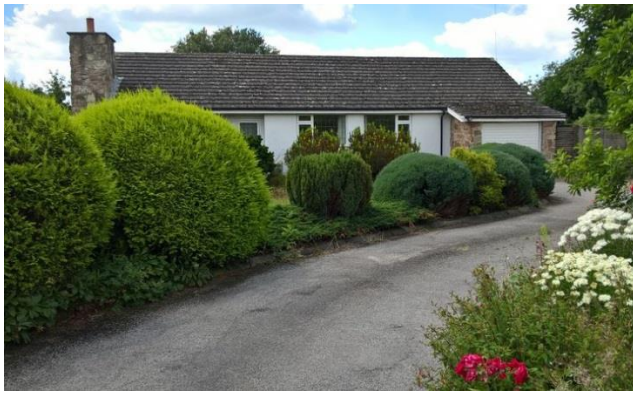

Plate 4.7: North-eastern Elevation of No. 80 Tatenhill Lane.

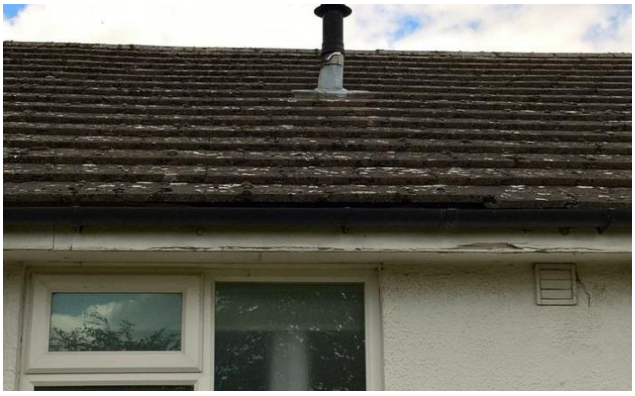

Plate 4.8: Lifted Tiles Around Guttering on the South-western Elevation.

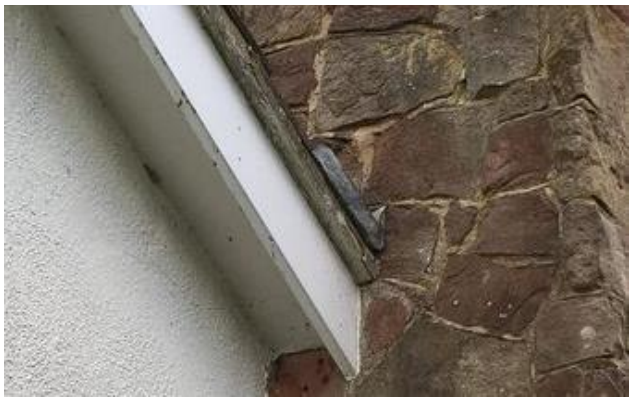

Plate 4.9: Gap Between Chimney Stack and Lead Flashing.

Several small structures encompassing a greenhouse, garden shed and workshop were still present within the garden of the property. The greenhouse provided no features that could be exploited by roosting bats whilst the small wooden shed was still concluded to hold negligible bat roost potential.

The workshop was a rectangular, single-storey structure with a flat roof. The walls were constructed from breeze blocks which had been painted with white masonry paint and were noted to still be in good condition, possessing no gaps, cracks or apertures that could provide access points for bats. The wooden framed windows and doorway still also offered no access or roosting potential for bats. The tops of the walls were still covered by close-fitting edge boarding and the roof was covered by roofing felt which was still in good

condition and provided no potential for bats to access interior areas. The workshop was concluded to hold negligible bat roost potential.

In summary, a small number of features were recorded around the bungalow which could be utilised by bats to gain entry into the building and potential roost locations. These features comprised lifted roof tiles and lifted lead flashing where the chimney breast met the main roof. It was not possible to fully inspect these features due to the height at which they were located, and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying.

All of the other structures within the property were concluded to hold negligible bat roost potential.

Internal Assessment
The residential dwelling possessed a series of ground floor rooms that were all sealed to external areas and offered no roost or access potential for bats (Plate 4.10).

The bungalow possessed a large loft space that ran the entire length of the void and which possessed a height to the central ridge beam of approximately 2.5 m. The ridge beam was noted to be very cobwebbed during the survey.

The loft was of a wooden rafter construction resulting in a relatively cluttered space (Plate 4.11). The floor was boarded and a layer of fibre glass insulation was present either side of a central walkway, extending down into the eaves. The underside of the roof was covered by felt sarking and the roof was well-sealed, with no external light penetrating into the loft space.

The gable end walls were a mixture of brick and breeze block and possessed features at the junction of wall tops and roof that provided potential bat roosting locations, though no evidence of bat presence was recorded associated with these features.

A small number of bat droppings (5/6) were recorded towards the central section of the loft space walkway whilst mouse droppings were also recorded.

The workshop building was sealed to the outside and no evidence of bat presence was located within this structure.

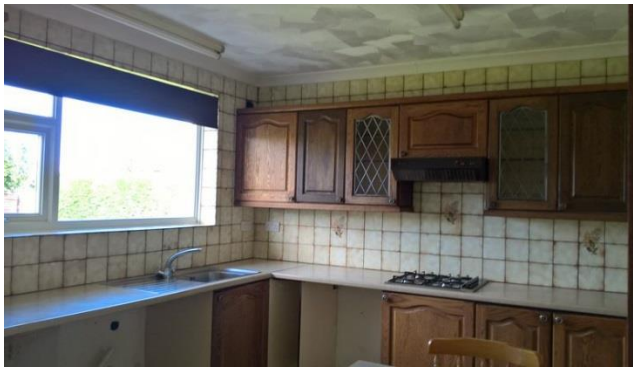

Plate 4.10: One of the Ground Floor Rooms of No. 80 Tatenhill Lane.

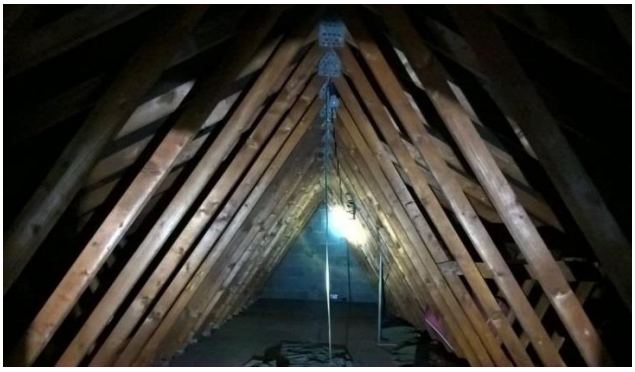

Plate 4.11: Loft Space of No. 80 Tatenhill Lane.

4.3.3 Additional Features

Scattered trees and shrubs were still present in the front and rear gardens of both properties. In the previous survey most trees were considered to be of insufficient age or size to have developed any features that could be utilised by bats for roosting purposes and this was still considered to be the case. However, a single specimen of false acacia within the front garden of number 80 Tatenhill Lane was previously noted to possess some minor features which were examined and were found to be of no significant depth and were considered unsuitable to support bat roosts. Again this was considered to be the case during the current survey.

4.4 SITE AND SURROUNDING HABITATS

The properties surveyed are surrounded by gardens which offer potential foraging habitat as well as routes away from the properties into the local landscape. This includes the Trent and Mersey canal, which is located immediately to the north-west of property number 80 and provides a potentially high value commuting and foraging route away from the site into the local landscape, including open countryside to the north and west. To the south of the properties is a small grassland field bounded by hedgerows and linear trees and beyond this field lies Branston Water Park, an area of mixed habitats including open water, scrub and pockets of woodland which again provides potentially high value foraging habitat. To the east of the properties is a small area of residential development bordered by a strip of scrub/woodland sandwiched fringing the western side of the A38 road.

The boundaries with Branston Water Park, the woodland strip and the canal were found to be a focus of bat activity during previous surveys undertaken in 2010 and thus are considered to provide high value roosting, foraging and commuting resources for a range of bat species.

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

- Residential houses and associated gardens;
- The Trent and Mersey Canal corridor;
- Branston Water Park;
- Pockets of woodland;
- Farmhouses and associated agricultural buildings;
- Agricultural fields with tree and hedge lined boundaries;
- The River Trent and adjacent Drakelow Nature Reserve; and
- Railway lines with vegetated banks.

5. DISCUSSION AND CONCLUSIONS

5.1 SUMMARY OF PROPOSALS

It is understood that the proposed works will involve the development of the site into residential housing comprising 55 units. The entrance to the site will be through the existing properties of No. 78 and No. 80 Tatenhill Lane and the access road will run parallel to the canal along the north-western boundary of the poor semi-improved grassland field, with a buffer of greenspace maintained between the canal and the access road. It is understood that the hedgerows and scattered trees present on the site boundaries will be retained, however other habitats will be lost to the development.

5.2 ASSESSMENT OF BUILDINGS

5.2.1 78 Tatenhill Lane

The Preliminary Bat Roost Assessment concluded that this property has the potential to support roosting bats. A small number of features were recorded during the survey that could provide access into the bungalow or into potential roost features, comprising a gap in the soffit box at the south-western corner of the bungalow and the presence of light penetrating into the loft space at the eaves at the same corner. In addition, lifted tiles were recorded to the north-west where the guttering met the roof. It was not possible to fully inspect these features due to the enclosed nature of the soffit box and the angle at which the roof tiles were located. Although no evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded, the roosting status of the building could not be fully determined. Overall the building was concluded to hold low bat roost potential.

Although access points into the larger shed were recorded, a full inspection of the internal areas was possible and no evidence of bats, or any potential roost features were recorded. The shed was therefore concluded to hold negligible bat roost potential.

The other structures held no potential bat roost features and were concluded to hold negligible bat roost potential.

5.2.2 80 Tatenhill Lane

The Preliminary Bat Roost Assessment concluded that this property also has the potential to support roosting bats. A small number of external features were recorded during the survey that could provide access into the bungalow or into potential roost features, comprising lifted roof tiles and lifted lead flashing where the chimney breast met the main roof. These features could not be fully inspected due to the height and angle at which they were located. Internally, the gap between the felt sarking and the roof tiles could not be fully inspected and a small number of bat droppings were recorded towards the middle of the central walkway of the loft space. Overall, the building was concluded to hold high bat roost potential.

The workshop, shed and greenhouse were fully inspected and were concluded to hold negligible bat roost potential.

5.4 POTENTIAL IMPACTS ON BATS

As the buildings on site have been assessed as having bat roost potential, any works to these buildings would have the potential to disturb or destroy any roosts present within the features identified during the Preliminary Bat Roost Assessment; whilst any bats present within the roosts would be at risk or injury or death. As such, further survey work will be required in order to fully assess the potential impacts of the proposed development on bats. A recommendation in relation to this is therefore made in Chapter 6.

The habitats immediately surrounding the properties are concluded to be of high value to commuting and foraging bats and previous activity surveys identified activity focused along the boundaries of the grassland field to the south, particularly where the site abuts Branston Water Park to the south, the woodland strip to the east and the Trent and Mersey Canal to the north-west. It is understood these boundaries will be retained under the proposed plans however they could be impacted by any additional lighting required as part of the proposals.

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. When the proposals are finalised, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

R1 78 Tatenhill Lane

This building has been identified as having low potential to support roosting bats. Bat Surveys: Good Practice Guidelines, published by the Bat Conservation Trust (Collins, 2016), recommends for structures with low bat roosting potential that at least one survey (consisting of either a dusk emergence survey or a dawn re-entry survey) be undertaken during the peak season for emergence/re-entry surveys (May to August) to determine the presence/absence of roosting bats within the structure/s.

Should this survey confirm the presence of roosting bats, it will be necessary to undertake additional surveys in order to inform a Natural England licence application. In addition, should the survey identify the presence of significant levels of bat activity at the site, it may be necessary to undertake further survey visits to comprehensively assess the value of the site to bats.

R2 80 Tatenhill Lane

This building has 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 structure/s. 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.

R3 Bats and Lighting

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 ensuring the vegetated boundaries abutting the Trent and Mersey Canal to the north-west, Branston Water Park to the south and the woodland strip to the east remain unlit post-development and through the careful use of lighting elsewhere on site, in critical areas only and at a low level, with minimum spillage. Lighting should be designed using guidance from 'Landscape and urban design for bats and biodiversity' (Gunnell et al, 2012, Bat Conservation Trust).

R4 Foraging Bats

Where feasible, any landscaping planting should aim to incorporate trees, shrubs and forbs which are attractive to invertebrates and provide potential invertebrate food sources for bats.

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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 2010, as amended (Habitats Regulations 2010, as amended). 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 2010 (as amended), 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 2010 (as amended) 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.

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*. Noctule, common pipistrelle and soprano pipistrelle are also priorities in the Staffordshire Biodiversity Action Plan.

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.