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PRELIMINARY ROOST ASSESSMENT

198 Barnsley Road, Denby Dale

Report Reference: BG18.212

May 2018



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1 Summary

- 1.1 Brindle & Green were commissioned by Acumen Designers and Architects Ltd. to undertake a Preliminary Roost Assessment at 198 Barnsley Road, Denby Dale. The purpose of this assessment was to provide an evaluation of the ecological value of the site, and to identify key ecological constraints to the proposed development in relation to bats and birds. The survey was undertaken on 23rd May 2018.
- 1.2 The site is the subject of an outline planning application for the demolition of Buildings 1-5 on-site and the construction of 5 residential dwellings. Site layout plans for the site are presented in Appendix 4 of this report.
- 1.3 Ecological constraints relating bats and birds within the building and surrounding environment were considered during the survey. A full description of the recommendations can be found within Chapter 7 (Page 31), below is a summary of the ecological issues recommended for further consideration as a result of our initial investigations:

Ecological Consideration	Recommendations (e.g. further survey, mitigation)	Timing
Breeding Birds	Buildings 2 and 3 considered suitable for breeding birds – Works to be undertaken outside of breeding birds season, where possible. See Chapter 7 for details.	Breeding Bird season typically runs from March to September, inclusive.
Roosting Bats	Low Suitability buildings and structures (Buildings 2, 3 and the boundary wall) should be subjected to a single bat presence / absence survey	May - August
Foraging and commuting bats	Sensitive lighting scheme to be installed	During and post construction

2 Introduction

- 2.1 Brindle & Green were commissioned by Acumen Designers and Architects Ltd. to undertake a Preliminary Roost Assessment at 198 Barnsley Road, Denby Dale, West Yorkshire. The purpose of this assessment was to provide a preliminary appraisal of the ecological value of the site for bats and birds and to identify key ecological constraints to the proposed development. The survey provides detail on the need for any additional, more detailed protected species surveys, and will allow the development of mitigation, compensation and enhancement measures to be developed, where needed.
- 2.2 The site is located 0.6km south-east of the town of Denby Dale, adjacent to Barnsley Road. The wider landscape is dominated by arable farmland to the east and south and residential developments to the north and west. The project area consists of 5 buildings with a hardstanding curtilage. The site is the subject of an outline planning application for the demolition of Buildings 1-5 and the construction of 5 residential dwellings. Site layout plans for the site are presented in Appendix 4 of this report
- 2.3 The legislation relevant to protected species within the United Kingdom is summarised within Appendix 2.
- 2.4 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, and the results of the desk study and our survey of the site. This report pertains to this information only.

3 Methodology

3.1 Desk Study

Table 1 below lists organisations and/or resources used as part of the desk study process. Data regarding any known statutory or non-statutory sites in addition to any records for protected species were requested from the following sources:

Table 1. Ecological Data Resources

Consultee	Requested Data	Search Radius	Date Requested
Local Ecological Records Centre <i>West Yorkshire Ecology Service</i>	Protected and notable species records Local, National and International Site Designations	2km	10/05/2018
MAGIC Maps	National and International Site Designations Granted EPS Development Licences	2km	30/05/2018

3.2 Surveyors

Survey carried out by John Harvey BA. (Hons.), Assistant Ecologist, Natural England Bat Licence (2018-34117-CLS-CLS).

The survey was overseen by Chris Needham MSc. MCIEEM who holds a Natural England Bat Licence (2015-10292-CLS-CLS) and Great Crested Newt Licence (2015-17910-CLS-CLS).

3.3 Survey Conditions

The survey was undertaken at 11:00am on the 23rd May 2018.

The outside temperature was recorded as 18°C, with dry, sunny conditions, with 1/8 cloud cover recorded.

3.4 Field Survey

The habitats on site were assessed for their suitability to support protected species following standard survey guidance (Appendix 3). It is important to

assess the surrounding habitat, as in some cases the legal protection of a protected species extends to the habitat in which it occupies. Any incidental sightings of field signs were noted at the time of survey. Where evidence of, or the confirmed presence of a Protected Species is identified, further, species specific surveys may be recommended to establish with certainty the presence and extent, or absence of a legally protected species prior to the determination of any planning approval.

3.5 Protected Species

3.5.1 Breeding Birds

The building and immediate vegetation to be impacted from the proposed development have been the subject of a search for active or previously used bird nests, and identification of features considered conducive to breeding birds, alongside noting the activity and behaviour of birds on site during the survey. Following standard techniques, as recommended by Gilbert G, Gibbons DW, Evans J. (1998) *Bird Monitoring Methods: Breeding Bird Survey* (pages 389-393). RSPB.

3.5.2 Roosting Bats

3.5.2.1 Structures on site were assessed for their suitability to support roosting bats following Collins, J (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, (3rd edition), Bat Conservation Trust, London. The potential suitability of each structure and the resulting survey effort to establish confidence in a result is summarised within Table 2.

During the external and internal (where possible) assessment of the structure potential roosting features (PRF's) such as slipped or missing roof tiles, gaps in brickwork, points in roof timbers and the presence of suitable soffits and fascia boards were recorded to evaluate the potential suitability of a structure to support roosting bats. Evidence of bat presence was also recorded including feeding remains, bat droppings and staining around potential access points. Bats often use different roosting sites at different times of the year, and the absence of evidence does not always equate to the absence/ or lower suitability of a structure to support a bat roost.

3.5.2.2 If bats are discovered emerging or re-entering any structure, the survey schedule should be appropriately adjusted to increase the survey effort so that

sufficient information for roost characterisation can be collected to advise the planning application or EPS development licence.

Table 2. Classification of roosting habitat within structures (Buildings and trees), to be applied to each structure using professional judgement. Adapted from Collins J (2016)

Category	Description of roosting habitat	Number of presence / absence surveys required
Negligible Suitability	Suitable cavities may exist, but these are less than ideal.	None
Low Suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. The feature and surrounding habitat do not provide enough shelter, conditions* space for larger roost types such as a maternity or hibernation roost. A tree of sufficient size and age to support roosting bats, but with no features observed from the ground, or the features only have a limited potential to support roosting bats.	One survey between May and August Trees – No further surveys required
Moderate Suitability	A structure or tree considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species conservation status, which is established after presence is confirmed).	Two surveys between May and September (with at least one survey undertaken between May and August) One Dusk emergence and One Dawn re-entry survey to ideally be undertaken at least two weeks apart.
High Suitability	A structure or 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.	Three surveys between May and September (with at least two surveys undertaken between May and August) One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn, undertaken at least two weeks apart.
Confirmed	This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.	

(* in this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc)

3.5.3 Foraging and Commuting Bats

Habitat features on site were assessed for their suitability to support foraging and commuting bat populations. This assessment was independent from the suitability of the site to support roosting bats, and provides information on the likeness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration. The suitability of the sites commuting and foraging habitat was assessed and evaluated against the proposed impacts to the site and Table 3 (below) to allow categorisation of the habitat.

Table 3. Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins J (2016)

Category	Description of commuting and foraging habitat	Survey effort to establish the value of commuting and foraging habitat**
Negligible Suitability	Negligible habitat features on site likely to be used by commuting or foraging bats.	None
Low Suitability	Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment. Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.	Transect /spot count/ timed search survey: One survey visit per active season AND Static automated surveys: One location per transect, over a five-night period, per season. In weather conditions conducive to finding bats.
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens. Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.	Transect /spot count/ timed search survey One survey visit per month At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys: Two locations per transect, over a five-night period, per month (April to October) In weather conditions conducive to finding bats.
High Suitability	Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge	Transect /spot count/ timed search survey Up to two survey visit per month (April to October)

	High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland. Site is close to and connected to known roosts.	At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period. AND Static automated surveys: Three locations per transect, over a five-night period, per month (April to October) In weather conditions conducive to finding bats.
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*(** This is only a guide for survey effort required, the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site by site basis).*

3.6 Limitations

- 3.6.1 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. The protected species assessment provides a preliminary view of the likelihood of these species occurring on site, based upon the suitability of the habitats, known distribution of the species in the local area and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group.
- 3.6.2 It should be noted that large sections of the external roof were not able to be assessed due to a lack of suitable ground vantage points.

3.7 Report Lifespan

Given the transient nature of the subject we would consider the survey results contained to be accurate for 2 years.

4 Site Context

4.1 Site Description

The application site can be found at Grid Ref. SK 23104 08049. The site is located within the outskirts of Denby Dale, West Yorkshire, immediately adjacent and to the south of A635 (Barnsley Road). The surrounding landscape is dominated by arable land to the south and east with residential developments to the north and west. Several isolated areas of woodland are recorded within close proximity to the application site, including Tanner Wood 50m to the north-east and Ash Well Shrogg 185m to the south-west. linear features such as mature hedgerows and treelines and a railway embankment approximately 100m to the south provide connectivity to optimal foraging habitat in the wider environment.

4.2 Zone of Influence

The zone of Influence is used to describe the geographic extent of potential impacts of a proposed development in relation to the target species, in this case bats and breeding birds. Due to the scale and nature of the proposals, it is not considered that the impacts of the proposed works would extend beyond the scheme footprint and its immediate surroundings.

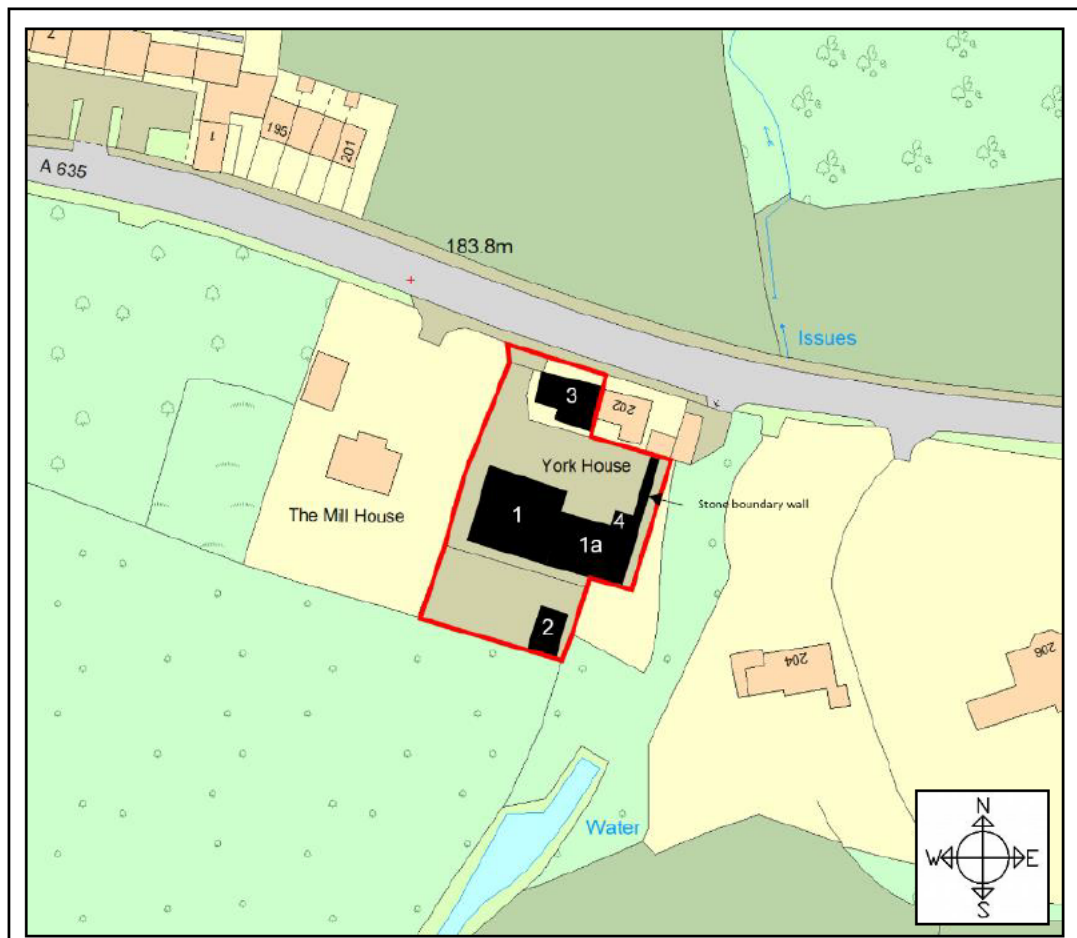


Figure 1. OS Map of the project site and surrounding area.

Redline boundary depicts application site. The survey buildings and structures are depicted in black.

5 Results

5.1 Desk Study

5.1.1 Designated Sites

The site was subjected to a search for designated sites within a 2km radius of the site using data supplied by the Local Records Centre (West Yorkshire Ecology Service (WYES)) and the online desk-based resource MAGIC.

5.1.2 The data supplied by WYES was received on the 16/05/2018 and is summarised within Table 4. The search revealed two statutory sites and four non-designated sites within 2km of the site.

5.1.3 A search of the online resource Magic Maps found no additional sites with statutory designations within the 2km radius search.

Table 4. Summary of Designated Sites with a 2km radius of the application site

Site Name	Grid Ref	Status	Approximate distance from site
Denby Delf	SE 217 075	Local Wildlife Site / Site of Scientific Interest	1.3km SW
High Bridge Wood	SE 242 097	Local Wildlife Site	2.0km NE
Hob Royd Shrogg and Miry Greaves Shrogg	SE 237 097	Local Wildlife Site	1.9km NE
Turpin Hill	SE214 084	Local Wildlife Site / Site of Scientific Interest	1.7km W
Oakcliff Hill Knoll	SE 218 096	Kirklees Site of Wildlife Significance	2.0km NW
Wither Wood	SE 228 091	Kirklees Site of Wildlife Significance	0.9km N

5.1.4 Protected Species

Data supplied by WYES also included records of protected species. Maps of the data are presented in Appendix 5 of this report. A summary of the closest or most relevant records can be seen in Table 5 below. Magic maps also provides details of granted EPS licences within 2km from the application area. A single common pipistrelle bat roost was located approximately 1.8km west which was granted in 2015 and which allows for the destruction of a resting place.

Table 5. Summary of relevant protected and priority species records

Species	Grid ref. (nearest)	Date	Description
Birds			
Common swift (<i>Apus apus</i>)	SE 226 083	2003	Single field record 0.4km W
Barn swallow (<i>Passer domesticus</i>)	SE 220 082	1970 – 2002	3 field records, 1.0km W
Tree sparrow (<i>Passer montanus</i>)	SE 224 070	1970 – 2012	3 field records, 1.1km S
Redstart (<i>P. phoenicurus</i>)	SE 220 082	2008 - 2017	2 field records, 1.0km W
Bats			
Myotis species (<i>Myotis spp.</i>)	SE 24905 08219	2013	Single record returned 1.0km E
Noctule bat (<i>Nyctalus noctula</i>)	SE 2268 908578	2009 – 2013	4 records returned, 0.5km W
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	SE 232 085	2001 – 2014	19 records returned, 0.4km N
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	SE 231 087	2013- 2015	2 records returned, 0.6km N
Bat species (<i>Vespertilionidae</i>)	SE 2294 0850	1985 – 2011	6 records returned, 0.4km N

5.2 Field Survey

The application site pertained to hardstanding, with occasional ephemeral herbs emerging within cracks and verges. The application site and the immediate adjoining habitats offered no ecological value to the site or surrounding landscape.

5.3 Protected Species

5.3.1 Breeding Birds

No evidence of breeding or nesting birds was recorded during the day time assessment of the structures within the application area. The data search returned 9 records of barn swallow, swift, tree sparrow and redstart, the nearest record being for a common swift approximately 0.4km to the west of the application area. Buildings 1, 1a and 4 provided negligible suitability to support breeding birds due to a lack of suitable nesting features within the exterior of the building and the constant disturbance of the internal industrial activity. Building 3 supported limited features to support nesting and breeding birds, such as a western facing gable end featuring barge boards and overhanging eaves which may be used by birds species such as barn swallow and house martin (*Delichon urbicum*). Building 2 also featured an overhanging porch on the western elevation which may be used barn swallow and house martin as nesting and breeding habitat.

5.3.2 Roosting Bats

No evidence of roosting bats was discovered during the internal / external assessment of the structures onsite. The ecological datasearch returned 11 roost records within 2km radius of the site, the nearest being 0.4km north of the site for a single bat species roosting within a building. Buildings 1 and 1a were assessed to have negligible suitability for roosting bats due to a lack of exterior features, no suitable micro-climate and constant day-time disturbance from industrial machinery. Building 4 was also assessed to have negligible suitability due to a lack of features within the building. Buildings 2 and 3 were assessed to have low suitability due to several external PRFs present. A stone wall with a large internal cavity and numerous entrance points was located on the eastern boundary of the site which was awarded low suitability to support roosting bats. The main structural features of the buildings and structures onsite, and their suitability for supporting roosting bats are summarised below (Table 6), associated figures can be found with Section 5.4.

5.3.3 Foraging and Commuting Bats

The ecological datasearch returned 20 records of bat activity within a 2km radius of the site, the nearest being for a noctule approximately 0.5km north of the site. The application site was located within a landscape highly conducive

to supporting both foraging and commuting bats. Mature hedgerows, treelines, waterbodies and woodland are found within 100m radius of the site which heightens the suitability of the features on site to support foraging and commuting bats. However, the dominant habitat found within the application boundary pertains to hardstanding which is not considered suitable habitat for bat activity, the chance therefore, of the site being used as a constant source of foraging or navigation is considered to be negligible.

Table 6. Summary of Bat Roost potential and evidence found within each of the buildings/structures on site (Supporting Figures within Section 5.4).

High Moderate Low Negligible None				
Building Number	Description	Bat evidence / Potential Roosting Features (PRFs)		Roost Suitability
B1	Building 1 (Figure 2 & 3) was an occupied, 1-storey office / warehouse building located to the west of the application site. The building was constructed with stone walls on all elevations, which were well sealed. Windows and doors were located on all elevations of the building, with the frames showing signs of rot. The building featured a flat roof which was covered in a roof felt lining which was well sealed to the parapet walls and coping stones. The building featured a small roof void measuring approximately 25cm in height. However, no access to the roof void was recorded on the building's exterior.	A single crack in a stone lintel on the southern elevation (Figure 4), however no evidence of recent bat usage was recorded, reducing the buildings suitability. No evidence of previous bat activity was recorded during the assessment.		Negligible
B1a	Building 1a (Figure 5) was an occupied single-storey industrial unit which was subject to constant 24hr disturbance due to internal machinery. The building was positioned adjacent to the eastern elevation of Building 1. Similarly, to B1, the building was constructed with stone which was well sealed and did not feature any gaps. The building featured a corrugated aluminium pitched roof which had been constructed within the past 10 years. The building featured an uncluttered, insulated roof void, measuring 1.5m in height which was supported by machine cut timber trusses (Figure 6).	Gaps leading into a cavity between the aluminium roof covering and an internal MDF layer was recorded along the length of the northern and southern elevations. However, the cavity did not provide a suitable microclimate to support roosting bats. No evidence of previous bat activity was recorded during the assessment.		Negligible

Building Number	Description	Bat evidence / Potential Roosting Features (PRFs)	Roost Suitability
B2	Building 2 (Figure 7) was a disused outbuilding located to the south of B1a. The building was constructed with single leaved breeze block walls with stone rendering on the western elevation. Windows and doors were recorded on the western elevation, underneath an overhanging porch. Overhanging roof sheeting was recorded on the northern and southern gable ends of the building. Plastic guttering was recorded on the western elevation. The external roof was constructed with corrugated aluminium sheeting sitting on a pitched roof structure. Ridge beams were missing along the length of the building. An MDF roof lining (Figure 8) was recorded within the interior of the building, creating a cavity within the entirety of the roof.	- Overhanging roof sheeting on the northern and southern elevation was free of cobwebs and leads to a cavity within the roof structure (Figure 9). - Roof cavity was accessible underneath eaves on the western elevation. No evidence of previous bat activity was recorded during the assessment.	Low
B3	B3 (Figure 10) was a single-storey, disused residential, semi-detached bungalow situated to the north of the application area. The building was constructed with stone walls. The building featured a flat roofed section on the southern elevation. Windows and door was located on the northern and southern elevations. The walls of the building were found to be in good condition featuring few gaps. Timber fascia boards were recorded on the northern and southern elevations with timber barge boards on the western elevation. The roof was constructed with a slate roofing material and a slate ridge beam, a chimney with flashing was recorded to the east of the building.	- Gaps underneath timber fascia boards on the northern elevation (Figure 11) - Gaps in stonework on southern elevation (Figure 12) - Several slipped roof tiles (Figure 13) No evidence of previous bat activity was recorded during the assessment.	Low
B4	B4 (Figure 14) was a storage unit positioned to the north of B1a which was cluttered and subject to daytime disturbance. The building was constructed with single layered breeze block walls with pebbledash rendering, timber fascia boards and a flat roof.	No potential roosting features were recorded in the buildings interior or exterior. No evidence of previous bat activity was recorded during the assessment.	Negligible

Building Number	Description	Bat evidence / Potential Roosting Features (PRFs)	Roost Suitability
Boundary wall	A stone boundary wall (Figure 15) was recorded to the east of the application site, to the north of B4. The wall measured approximately 7-10m in length and featured an internal cavity which was accessible by several points within the exterior of the building	The wall featured a large cavity which may provide roosting habitat for numerous individual bats. (Figure 16) No evidence of previous bat activity was recorded during the assessment.	Low

5.4 Site Photographs

Photographs were taken to provide evidence of the survey findings and support the classification of a buildings potential to support protected species.

Figure 2:

B1 Exterior

Building 1 was used as an office at the time of survey



Figure 3:

B1 Exterior

The walls of the building were well sealed.



Figure 4:

B1 PRFs

A single crack was recorded in the stone lintel of a window on the southern elevation, however, no evidence of usage by bats was recorded.

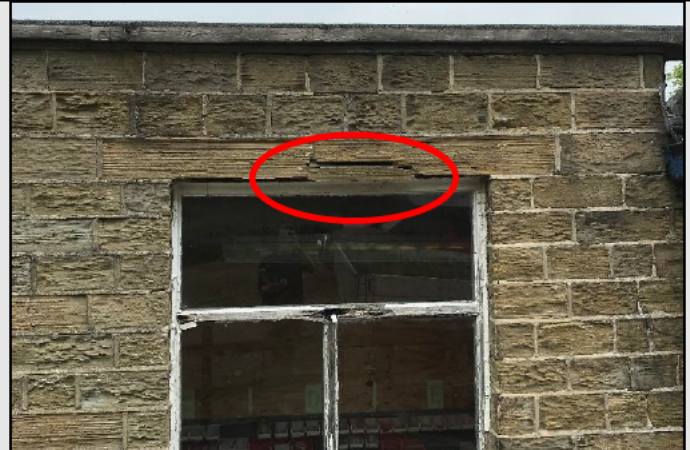


Figure 5:

B1a Exterior

The building was subject to constant daytime disturbance due to industrial machinery, the walls of the building were in good condition.



Figure 6:

B1a Interior

A roof void was recorded which supported no evidence of roosting bats.



Figure 7:

B2 Exterior

Building 2 was located to the south of Building 1a and was awarded with low suitability



Figure 8:

B2 Interior

The internal roof was lined with MDF boards, the interior of the building was largely undisturbed and uncluttered.



Figure 9:

B2 PRFs

Lifted roof sheeting was recorded on the northern elevation of the building which may be used by small numbers of individual bats.



Figure 10:

B3 Exterior

The building was a single-storey disused bungalow



Figure 11:

B3 PRFs

Fascia boards were recorded on the northern and southern elevations which may provide roosting habitat for low numbers of individuals



Figure 12:

B3 PRFs

Gaps were recorded in the stone walls of the building.



Figure 13:

B3 PRFs

The building featured several points of entry for bats within the external slate roof



Figure 14:

B4 Exterior

No features suitable for roosting bats were recorded within the interior or exterior of Building 4.



Figure 15:

Boundary Wall

A stone boundary wall was recorded on the eastern boundary of the application site which features a large cavity.



Figure 16:

Boundary wall PRFs

Several small gaps and cracks in the wall was recorded which would lead to the internal cavity of the wall.



Figure 17:

Immediate surroundings

The application area was positioned within a rural landscape with mature trees and linear features connecting the site to habitats in the wider environment.



6 Evaluation

6.1 Development Proposals

The site is the subject of an outline planning application for the demolition of Buildings 1-5 to facilitate the construction of 5 residential dwellings. Site layout plans for the site are presented in Appendix 4 of this report.

6.2 Desk Study Impacts

Direct impacts on nearby designated sites as a result of the proposed development are considered unlikely. Two statutory and four non-statutory sites were located within 2km of the application site, with the nearest statutory site being Turpins Hill 1.7km west. The reasons for its designation are related to the quality of the grassland habitats, rather than the assemblage of fauna, and there are no perceived pathways of impact to this SSSI. The extent of the development is to be contained within the application boundary. On the basis that the proposed development is to have no effect on vegetative habitats within the application site boundary, the likelihood of indirect impacts to designated sites is considered negligible.

6.3 Breeding Birds

6.3.1 All wild birds, their eggs and nests are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure, or take any wild bird whilst nesting, or take, damage or destroy the nest of any such bird while in use or being built. In addition, species listed on Schedule 1 of the Wildlife and Countryside Act 1981 or their dependant young are afforded additional protection from disturbance whilst they are at their nests.

6.3.2 A limited number of features suitable for use by breeding or nesting birds were recorded during the buildings and structures onsite. Building 2 featured an overhanging porch which may be used by swallows or house martins. Building 3 featured barge boards on the western facing gable end which may also be used by bird species. The recommendations section of this report sets out important guidance on measures to avoid impacts on this species group.

6.4 Bats

6.4.1 All bat species are protected under the Wildlife and Countryside Act (1981) and Habitat Regulations (2017) making it an offence to, intentionally kill, injure, or take any species of bat, intentionally or recklessly disturb bats, intentionally or recklessly damage destroy or obstruct access to bat roosts.

6.4.2 *Roosting bats*

Two buildings, (Buildings 2 and 3) and a stone boundary wall were considered to provide low suitability to support roosting bats. Building 2 featured overhanging roof sheets on the northern and southern elevations which may provide roosting opportunities for bat species. Building 3 featured slipped tiles and gaps in stonework which may also be used by roosting bats. The boundary wall to the east of the application site featured an open cavity with several points of entrance. Buildings 1, 1a and 4 were each considered to provide negligible suitability to support roosting bats due to a lack of external or internal features. Gaps into the roof cavity were provided within B1a, however no suitable micro-climate for roosting bats was recorded due to the roofing material and large cavity with no suitable gaps for crevice dwelling species. The proposed plans depict the demolition of all buildings within the application area and likely disturbance to the boundary wall to the east of the application area. If the development was to continue as planned, it may lead to the destruction of a roosting site of a protected species, and increased disturbance, injury or harm to individual bats and/or their young. The recommendations section of this report sets out important guidance on measures to avoid impacts on this species and measures to support its conservation status through ecological enhancement.

6.4.3 *Foraging and Commuting Bats*

Despite suitable foraging and commuting habitat such as linear features leading to woodland, waterbodies and other foraging sources within the close proximity to the application area, features within the application boundary were limited only to the walls of the buildings and boundary features for navigation. The development will likely see the inclusion of gardens and green features which increases the net suitability of the site for foraging and commuting bats. As a result, the impact of development works on foraging and commuting bats is not considered a constraint to the application. However, the usage of high intensity lighting during and after construction may interfere with established

flight paths and foraging sites within close proximity to the site. Chapter 7 of this document sets out important recommendations to safeguard habitats used by bats upon completion of the works.

7 Recommendations

As with all development sites; efforts should be made to support National and Local Biodiversity Action Plans, and seek opportunities to incorporate ecological enhancement schemes within the proposed development. Such site enhancements should be viewed positively in light of the NPPF (2012) which seeks biodiversity enhancements and net gain through the planning process.

7.1 Breeding Birds

Breeding Birds	Timing
Recommendations	
Although no evidence of breeding or nesting birds was recorded within or on the building, limited features on Buildings 2 and 3 were recorded. a) Demolition of the Buildings 2 and 3 should be undertaken outside of the breeding bird season, between the months of October and February where possible. b) If works between the months of March and September is unavoidable, the building should be subjected to a search for active birds' nests no more than 24 hours prior to commencement of works. This should confirm whether all or some clearance is achievable. c) In addition to a pre-works check, the clearance of structures between the months of March and September should be supervised by a suitably experienced ecologist	Works to be undertaken outside of the breeding bird season October to February.

7.2 Roosting Bats

Roosting Bats	Timing
Recommendations	
According to Bat Conservation Trust Guidelines, as Buildings 2, 3 and the boundary wall have been assessed to as having low suitability for roosting bats; one dusk emergence or dawn re-entry survey should be carried out in order to establish the presence or likely absence of bats within the building or structure.	May - August
Enhancement Prescriptions	
In light of the need for additional surveys, enhancement prescriptions would be set out within a Bat Emergence Survey Report as a separate document.	

7.3 Foraging and Commuting Bats

Foraging and commuting bats	Timing
Recommendations	
Features within the immediately surrounding area may be suitable to support commuting and foraging bats. The extent of disturbance should be reduced where possible by employing a sensitive lighting scheme during and post construction works.	During and Post Construction

Appendix 1. General References

Bat Conservation Trust's 'Good Practice Survey Guidelines' (Rev 2012).

Bell, S. McGillivray, D. (2006) *Environmental Law*. 6^h ed. Oxford University Press.

Byron, H (2000) *Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes*. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy.

Collins, J (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, (3rd edition), Bat Conservation Trust, London

Gilbert G, Gibbons DW, Evans J. (1998) *Bird Monitoring Methods: Breeding Bird Survey* (pages 389-393). RSPB.

Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*.

Mitchell-Jones A.J. McLeish, A.P. (2004) *Bat Workers Manual* (3rd Edition). Joint Nature Conservation Committee.

Mitchell-Jones A.J. *Bat Mitigation Guidelines* 2004. English Nature.

Sutherland, W.J. (1996) *Ecological Census Techniques*. Cambridge University Press.

Treweek, J. (1999) *Ecological Impact Assessment*. Blackwell Science.

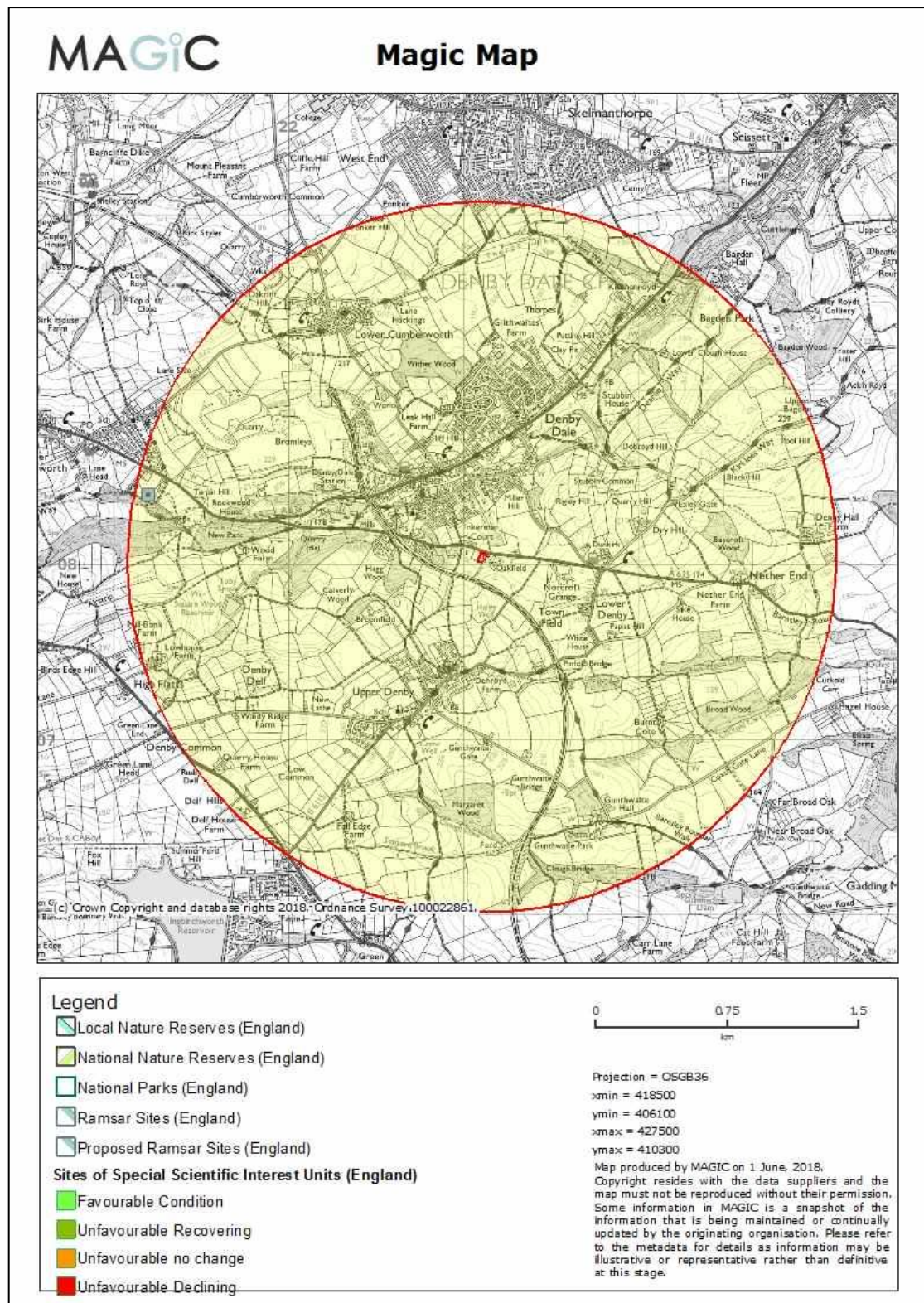
Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

Appendix 2. Legislation and Guidance Sources

Articles of British wildlife and countryside legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Department for Communities and Local Government. National Planning Policy Framework. March 2012
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- National Parks and Access to the Countryside Act 1949
- The Protection of Badgers Act 1992
- Land Drainage Act 1991
- The Countryside and Rights of Way Act 2000
- The Natural Environment and Rural Communities Act 2006
- The United Kingdom Biodiversity Action Plan 2006
- Hedgerow Regulations 1997
- Town and Country Planning Act 1990
- Local Biodiversity Action Plan (LBAP).

Appendix 3. MAGIC Maps Search



01/06/2018

Site Check Report generated on Fri Jun 01 2018
You selected the location: Centroid Grid Ref: SE231080
The following features have been found in your search area:

Granted European Protected Species Applications (England)

Case reference of granted application	2014-5044-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	C-PIP
Site county of licence	West Yorkshire
Licence Start Date	08/01/2015
Licence End Date	30/09/2020
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	N
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown

Areas of Outstanding Natural Beauty (England)
No Features found

Local Nature Reserves (England) - points
No Features found

Local Nature Reserves (England)
No Features found

National Nature Reserves (England) - points
No Features found

National Nature Reserves (England)
No Features found

National Parks (England)
No Features found

Ramsar Sites (England) - points
No Features found

Ramsar Sites (England)
No Features found

Proposed Ramsar Sites (England) - points
No Features found

Proposed Ramsar Sites (England)
No Features found

Sites of Special Scientific Interest Units (England) - points
No Features found

Sites of Special Scientific Interest Units (England)
No Features found

Sites of Special Scientific Interest (England) - points
No Features found

Sites of Special Scientific Interest (England)
No Features found

Special Areas of Conservation (England) - points
No Features found

Special Areas of Conservation (England)
No Features found

Possible Special Areas of Conservation (England) - points
No Features found

Possible Special Areas of Conservation (England)
No Features found

Special Protection Areas (England) - points
No Features found

Special Protection Areas (England)
No Features found

1/2

01/06/2018

Possible Special Protection Areas (England) - points
No Features found

Possible Special Protection Areas (England)
No Features found

2/2

Appendix 4. Site layout plans

