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# Preliminary Bat Roost Assessment

Dundas Street, Huddersfield
for:

**KAS Property Management Ltd**

SHF.1304.002.EC.R.001

'Experience and expertise working in union'

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# Preliminary Bat Roost Assessment

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|---|---|
| Project: | Dundas Street, Huddersfield |
| For: | KAS Property Management Ltd |
| Status: | Final |
| Date: | 7th June 2017 |
| Author: | Derek Allan MSc BSc (Hons) MCIEEM – Principal Ecologist |
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# 1 Introduction

## 1.1 Commission

1.1.1 In May 2017 Enzygo Ltd was commissioned by KAS Property Management Ltd to undertake a Preliminary Bat Roost Assessment of 15-17 Dundas Street, Huddersfield, HD1 2 HE. The study will inform full planning permission for conversion of the building.

1.1.2 The proposed works will involve replacement/works to the roof structure and conversion of dwelling/commercial spaces. Refer to Appendix A for proposed site layout.

## 1.2 Aims and Objectives

1.2.1 The aim of the Preliminary Bat Roost Assessment Survey was to:

- Determine the presence/absence of roosting bats or features throughout buildings on site with the potential to support roosting bats (including likely species/roost status/time of year when in use if evidence is present, and which part of the structure bats utilise/likely egress points/environmental conditions);
- Identify likely impacts of the proposed development on roosting bats;
- Recommend measures to avoid, mitigate or compensate for identified impacts to roosting bats, including any requirement to undertake further surveys or obtain a European Protected Species (EPS) licence from Natural England; and
- Recommend enhancements.

1.2.2 This report has been produced with reference to current guidelines for Preliminary Roost Assessment of structures (Collins, 2016), and in accordance with BS42020:2013: Biodiversity – Code of Practice for Planning and Development (BSI, 2013).

1.2.3 This report remains valid for 2 years from the date of publication, or until conditions across the site should substantially alter (although it should be noted that the presence/absence and status of bat roosts can change annually).

## 1.3 Background

1.3.1 There are no known historical ecological reports covering the site.

1.3.2 To date, there has been no known correspondence with the County Ecologist or any third parties.

## 1.4 Site Context

1.4.1 The site consists of a 3-storey building in the centre of Huddersfield. Commercial and residential buildings surround on all apsects.

Figure 1.1: Surveyed Area




Image courtesy of Google Image Pro 7.1.7.2606, 53°38'44.14"N 1°47'09.33"W elev. 113m. Imagery date 6th May 2016. Image accessed 7th June 2017.

# 2 Methodology

## 2.1 Desk Study

2.1.1 Desk study details were obtained from the following sources on the associated dates to provide background on Bat activity in the vicinity of the site. In each case the search included the site and the specified area beyond the site boundary. The search radius was based on the professional judgement of the ecologist leading the appraisal, taking into account the scope of the proposed works and associated potential impacts. Records obtained included:

- European statutory and national statutory sites within a 2km radius, designated for Bats or associated with an important Bat population (Natural England GIS Digital Boundary Database and Natural England Site Designations, on 7th June 2017); and
- Records of existing Bat EPS Licence applications within a 0.5km radius (MAGIC, 7th June 2017).

## 2.2 Field Survey

2.2.1 The Preliminary Bat Roost Assessment was undertaken on the 25th June 2017 by a Principal Ecologist from Enzygo (Derek Allan MCIEEM MSc BSc(Hons)) a licensed bat surveyor (Natural England licence Level 2, 2015-14659-CLS-CLS) trained in the identification of Bat field signs, and who satisfies all necessary field survey competencies as stipulated by the Chartered Institute for Ecology and Environmental Management (CIEEM). Weather conditions on the day of survey were dry with no cloud, no wind, and a temperature of 28°C.

2.2.2 In accordance with current guidance (Collins, 2016), a systematic thorough search of the exterior and interior of all building was undertaken, where access was available. This included: roof spaces, cellars, and unoccupied rooms. Equipment used to aid the survey included: ladders, low/high-powered torches, binoculars, an endoscope, and basic personal protective equipment (PPE). Crawl boards and specialised PPE for confined spaces/asbestos were not utilised. Notes were made on the following:

- Type, construction and age of building (particularly if traditional materials have been used or the presence of specialist bat roosting features);
- Presence/absence of potential roost features throughout the interior (i.e. uncluttered isolated roof voids, warm and dark undisturbed spaces, gaps around ridge beams, exposed beam joints, gaps within traditional bituminous felt/wooden sarking boarding etc);
- Presence/absence of potential roost features throughout the exterior (i.e. raised ridge tiles, hanging tiles, raised/missing tiles or lead flashing that would allow access beneath roofing structures, crevices behind soffit boxing/barge boarding/ship-lap boarding, gaps around window frames and doors, boarded up windows, gaps within mortar or brickwork, access into wall cavities etc);
- Presence/absence of potential hibernation features (i.e. underground spaces or rooms that would provide an isolated stable temperature and moist conditions during the winter period etc);
- Environmental factors that would increase the probability of bat presence (i.e. dark zones with no/limited exterior lighting, south/west facing aspects, good quality foraging/commuting habitat nearby particularly prominent linear features) and those

that would decrease the probability of bat presence (high light levels, dense urban areas, recent works, modern Breathable Roofing Membranes (BRMs) or other modern tight fitting roofing materials, recent timber treatment or pest control, ultrasonic rodent deterrents, draughty/exposed conditions, high levels of noise or vibration or human disturbance, poor quality foraging/commuting habitat etc); and

- Type and location of any roosting bat evidence (i.e. presence of live or dead bats, audible squeaking, droppings, feeding remains, urine stains, grease marks etc).

2.2.3 Additionally, where bat droppings are identified, an assessment of these is undertaken (i.e. measurement and characteristics recorded) in accordance with current guidance (Stebbings, 2007), and a sample taken for later eDNA analysis, where requested.

## 2.3 Assessment

2.3.1 Based on the findings of the survey, each building/structure has been classified into one of the following categories in accordance with current guidance (Collins, 2016). The assessment is made irrespective of species conservation status, which is established after presence is confirmed/following further surveys:

- Known or confirmed roost – Structure with evidence of bat use or bat presence;
- High Suitability – 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;
- Medium Suitability – 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;
- Low Suitability – 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 large numbers of bats (i.e. unlikely to be suitable for maternity or hibernation); or
- Negligible Suitability – Negligible features likely to be used by roosting bats.

2.3.2 Where roosts are identified, likely status (irrespective of species conservation status) has been categorised as follows in accordance with current guidance (Collins, 2016):

- Transitional roost (April-September/October) – used by a few individuals or occasionally small groups of bats on waking from hibernation or in the period prior to hibernation;
- Maternity roost (May-August) – used by breeding females, where babies are born and raised to independence. Adult males rarely found here;
- Satellite roost (May-August) – used by a few individuals to small groups of breeding females as alternative roost sites in close proximity to maternity roosts;
- Mating roost (September-November) – established by males of some species to display/call to females to mate;
- Hibernation roost (October-March) - where bats may be found during the winter. They vary greatly in terms of the number of individuals and diversity of species using them;

- Night roost (March-November) – used by bats as roosts other than traditional day roosts to rest in during the night. May be used by a single individual on occasion or regularly by an entire colony;
- Day roost (March-November) – used by bats during the day to rest in, often by males. Bats may regularly use a number of days' roosts or the same site for several weeks;
- Feeding roost (May-November) – can be occupied by a single bat or a few individuals to an entire colony to feed, shelter from the weather or to rest temporarily; and
- Swarming sites (August-November) – where large numbers of bats from several species gather, generally around caves and mines.

2.3.3 Following the framework for valuing bats in Ecological Impact Assessment set out by Wray et al. (2007), bat roosts are assigned a value, based on roost type and species rarity (as detailed within Table 2.1), using a geographic frame of reference as shown in Table 2.2.

Table 2.1: Categorisation of Bats by National Rarity

| Rarity within Range | England | Wales | Scotland | Northern Ireland |
|---|---|---|---|---|
| Common (population over 100,000) | Common Pipistrelle Bat (*Pipistrellus pipistrellus*), Soprano Pipistrelle Bat (*Pipistrellus pygmaeus*), Brown Long-eared Bat (*Plecotus auritus*) | Common Pipistrelle Bat, Soprano Pipistrelle Bat | Common Pipistrelle Bat, Soprano Pipistrelle Bat | Common Pipistrelle Bat, Soprano Pipistrelle Bat |
| Rarer (population 10,000-100,000) | Lesser Horseshoe Bat (*Rhinolophus hipposideros*), Whiskered Bat (*Myotis mystacinus*), Brandt's Bat (*Myotis brandtii*), Daubenton's Bat (*Myotis daubentonii*), Natterer's Bat (*Myotis nattereri*), Leisler's Bat (*Nyctalus leisleri*), Noctule Bat (*Nyctalus noctula*), Nathusius' Pipistrelle Bat (*Pipistrellus mathusii*), Serotine Bat (*Eptesicus serotinus*) | Lesser Horseshoe Bat, Daubenton's Bat, Natterer's Bat, Brown Long-eared Bat | Daubenton's Bat, Natterer's Bat, Brown Long-eared Bat | Daubenton's Bat, Natterer's Bat, Leisler's Bat, Nathusius' Pipistrelle Bat, Brown Long-eared Bat |
| Rarest (population under 10,000) | Greater Horseshoe Bat (*Rhinolophus ferrumequinum*), Bechstein's Bat (*Myotis bechsteinii*), Alcathoe Bat (*Myotis alcathoe*), Barbastelle Bat (*Barbastelle barbastellus*), Grey | Greater Horseshoe Bat, Whiskered Bat, Brandt's Bat, Bechstein's Bat, Alcathoe Bat, Noctule Bat, Nathusius' Pipistrelle Bat, | Whiskered Bat, Brandt's Bat, Alcathoe Bat, Noctule Bat, Nathusius' Pipistrelle Bat, Leisler's Bat | Whiskered Bat |

| Rarity within Range | England | Wales | Scotland | Northern Ireland |
|---|---|---|---|---|
| | Long-eared Bat (*Plecotus austriacus*) | Serotine Bat, Barbastelle Bat | | |
| *Vagrant species and occasional visitors | Greater Mouse-eared Bat (*Myotis myotis*), Parti-coloured Bat (*Vespertilio murinus*), Kuhl's Pipistrelle Bat (*Pipistrellus kuhlii*), Savi's Pipistrelle Bat (*Hypsugo savii*), Pond Bat (*Myotis dasycneme*), Notch-eared Bat (*Myotis emarginatus*), Northern Bat (*Eptescicus nilssoni*) | | | |

Table 2.2: Roost valuation system

| Geographic Frame of Reference | Roost Types |
|---|---|
| District, Local or Parish | Feeding Perches (common species), individual bats (common species), small numbers of non-breeding bats (common species), mating sites (common species) |
| County | Maternity sites (common species), small numbers of hibernating bats (common and rarer species), feeding perches (rarer/rarest species), individual bats (rarer/rarest species), small numbers of non-breeding bats (rarer/rarest species) |
| Regional | Mating sites (rarer/rarest species) including well-used swarming sites, maternity sites (rarer species), hibernation sites (rarest species), significant hibernation sites |
| National/UK | Maternity sites (rarest species), Sites of Special Scientific Interest (SSSI) |
| International | Special Areas of Conservation (SAC) |

2.3.4 Potential ecological constraints to development have been identified from desk study and field survey data using current development proposals (see Appendix A).

2.3.5 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2016) only where clear evidence is available to substantiate and justify the findings. This covers construction and operational impacts and includes (but is not limited to): short-term impacts: disturbance; long-term impacts: modification, loss, and fragmentation/ isolation; and post-development interference impacts. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development.

2.3.6 Where ecological constraints to development are identified, further survey requirements and/or avoidance, mitigation, compensation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed works are described. In addition, in accordance with the NPPF, opportunities to enhance or create benefits to wildlife are explored alongside the hierarchy of aforementioned measures.

## 2.4 Nomenclature

2.4.1 The English names of flora and fauna species are given in the main text of this report. Scientific names are used alongside the English name where this first occurs. Vascular plants and Charophytes follow the nomenclature of The Botanical Society for the British Isles database (BSBI, 2007) with all other flora and fauna following the National Biodiversity Network (NBN) Gateway (NBN, 2014).

## 2.5 Limitations

2.5.1 Data held by consultees may not be exhaustive. The absence of evidence, does not indicate evidence of absence.

2.5.2 Enzygo cannot take responsibility for the accuracy of external data sources and as such discrepancies and inaccuracies may occur.

2.5.3 Some dwelling spaces were occupied and could not be surveyed and as such evidence of roosting bats may have gone unobserved.

# 3 Results and Evaluation

## 3.1 Desk Study

3.1.1 A description of desk study findings relevant to Bat is presented in Table 3.1. Along with predicted impacts and their effect on Bat, determined following guidelines set out by CIEEM (CIEEM 2016), in the absence of mitigation.

**Table 3.1: Desk Study Findings**

| Name (distance/direction from works) | Details and Ecological Value | Potential Constraint |
|---|---|---|
| *Statutory Sites Designated or Associated with Bats* | | |
| None | - | - |
| *EPS Licence applications* | | |
| None | - | - |

## 3.2 Field Survey

3.2.1 A description of each structure, and corresponding Bat category, where it was possible to determine this from the evidence found, is presented in Table 3.2. Along with predicted impacts and their effect on Bats, determined following guidelines set out by CIEEM (CIEEM 2016), in the absence of mitigation.

3.2.2 The entire site is comprised of (and surrounded by) habitats which offer negligible/very low suitability for commuting/foraging bats (i.e. urban centre of Huddersfield), which will decrease the probability of bat presence in the area (Collins, 2016). The site is also well lit, contains several dwelling/commercial spaces, and is subject to human disturbance all of which significantly decreases the probability of bat presence.

3.2.3 In summary 15-17 Dundas Street provides negligible roosting potential and no bat roosts were identified.

Table 3.2: Preliminary Bat Roost Assessment and Winter Hibernation Survey Results

| Reference | Description | Assessment | Potential Constraint |
|---|---|---|---|
| 15-17 Dundas St | Brick and stone built 3-storey terraced building with a shallow pitched slate roof.   The building offers negligible/very limited roosting potential for individual bats, including: minor gaps from missing mortar in bricks & slightly raised slates (no cavity beneath). Roof spaces appear sealed with slate tight against felt bitumen. No hibernation features were identified (basement has sealed doors and windows with no potential entry points identified). No evidence of roosting bats was identified.   | Negligible | No |

# 4 Relevant Legislation and Policy

## 4.1 Legislation

4.1.1 Wildlife legislation and policy relevant to the proposed works, based on the findings of the desk study and field survey are set out below. This legal information is a summary only, and the original legal documents should be consulted for definitive information.

**Table 4-1: Legislation Protection Afforded to Sites/Habitats that could Potentially be Affected by the Proposed Works**

| Designated Site/Habitat | Legal Status |
|---|---|
| None | - |

**Table 4-2: Legislation Protection Afforded to Species that could Potentially be Affected by the Proposed Works**

| Species | Legal Status |
|---|---|
| European Protected | |
| Bats | These animal species and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species (Amendment) Regulations 2012, which makes it illegal to:<br>• Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs;<br>• Deliberately disturb such an animal;<br>• Damage or destroy a breeding site or resting place of such an animal.<br>European Protected Species (EPS) licences can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed:<br>• The development is for reasons of overriding public interest;<br>• There is no satisfactory alternative; and<br>• The favourable conservation status of the species concerned will be maintained and/or enhanced.<br>Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a legal duty to 'have regard to the requirements of the EC Habitats Directive in the exercise of their functions'. This means that they must consider the above 3 tests when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed. |
| Nationally Protected | |
| Bats | These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to:<br>• Intentionally kill, injure or take any such animal;<br>• Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and<br>• Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection. |

4.1.2 Section 40 of the Natural Environment and Rural Communities Act 2006 (the NERC Act) places a legal duty on public bodies, including planning authorities, to 'have regard' to the conservation

of biodiversity when carrying out their normal functions, which includes consideration of planning applications.

4.1.3 In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principal importance for conserving biodiversity in England under the UK Post-2010 Biodiversity Framework. This is known as the list of Habitats and Species of Principal Importance (HPI/SPI), of which there are 56 habitats and 943 species. The HPI/SPI list is used to guide planning authorities in implementing their duty under the NERC Act. Seven bat species are listed as SPI including: Barbastelle Bat, Bechstein's Bat, Noctule Bat, Soprano Pipistrelle Bat, Brown Long-eared Bat, Greater Horseshoe Bat, and Lesser Horseshoe Bat.

## 4.2 National Planning Policy

4.2.1 The NPPF set out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined.

4.2.2 The NPPF states that:

*'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:*

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest (SSSI) likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites: potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC); listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on European sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.'

4.2.3 Under the NPPF, the Planning Authority has a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and

recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan.

4.2.4 Also under the NPPF the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

# 5 Discussions and Recommendations

## 5.1 Further Survey

5.1.1 No further surveys have been deemed necessary.

## 5.2 Mitigation

5.2.1 For each potential constraint identified, all mitigation options provided follow the established mitigation hierarchy as set out in BS42020:2013 (BSI, 2013). This seeks as a preference to avoid impacts, then to mitigate unavoidable impacts, and as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. All recommended surveys and mitigation measures follow current best practice guidance as identified by CIEEM (CIEEM, 2014), and is proportionate to the level of impact identified and to the nature and scale of the proposed works. A clear and valid justification of methods has been provided where necessary. Where necessary, proposed mitigation should refer to the Construction (Design and Management) Regulations 2015 (CITB, 2016).

5.2.2 No avoidance, mitigation or compensation measure have been deemed necessary.

## 5.3 Biodiversity Enhancement

5.3.1 Opportunities for biodiversity enhancement (above and beyond those required to mitigate for any identified impacts) have been determined through consideration of: Ecological Features identified on site and within the zone of influence; Historical records of protected species/habitats present within the locality; National and Local planning policy including UK BAP SPI/HPI and Local BAP species/habitats; Local Development Plan including consideration of Green/Blue Infrastructure Resource; Consultation with third parties/stakeholders where applicable; and Other influencing factors such a Geology/Hydrology, intended operational activities, and existing disturbance activities within the locality. Where necessary, proposed enhancements should refer to the Construction (Design and Management) Regulations 2015 (CITB, 2016):

- The client should consider the incorporation of new roosting features within the converted building i.e. raised roofing tiles above traditional bitumen (not Modern Breathable Roofing Membranes (BRMs) which are known to cause bat fatalities).

# 6 Conclusion

6.1.1 Works throughout 15-17 Dundas Street can proceed with no significant residual impact to protected species.

# 7 References


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# Appendix A – Proposed Site Layout

**Enzygo specialise in a wide range of technical services:**

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