



Altrincham Retail Park

Preliminary Roost Assessment

**Report for St James's Place Property
Unit Trust**

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|-------------------|---------------------------------------|-----------------------------------|-------------|
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Summary of Key Issues

The Ecology Consultancy was commissioned by St. James's Place Property Unit Trust in July 2019 to undertake a survey to determine the status of bats and any likely constraints to the proposed development at Altrincham Retail Park. The main findings are as follows:

- The site contained a Homebase building (B1) with associated garden centre and service yard. The building was surrounded by car parking with small areas of amenity grassland, introduced shrubs and planted trees, predominantly around the periphery. A public house (B2) was present in the south-east of the site.
- Building B1 was assessed as providing negligible suitability for roosting bats. It is considered that a roost is likely absent and development works can occur without the need for further bat survey or mitigation on building B1.
- Building B2 was assessed as providing low suitability for roosting bats but will not be affected by the proposed development and no further survey is required under current proposals.
- The site is considered to provide limited commuting and foraging opportunities for bats. Therefore, it is unlikely that the proposed development will impact local bat populations, provided sensitive lighting is employed.
- Bird boxes, buildings, and vegetation including shrubs and trees on site all have potential to support breeding birds. Mitigation measures will be required to avoid, or at least minimise, impacts on active nests.
- Two invertebrate boxes were located between the three bird boxes on the garden centre western boundary fence. Should these require removal, they should preferably be re-sited at appropriate locations within the site and should not be taken off-site or transferred to another site.
- Recommendations to enhance the site for biodiversity include planting that will facilitate an increase in bat prey items; tree planting; the inclusion of bat tubes/boxes to provide additional bat roosting habitat and bird boxes to provide additional bird nesting habitat.

1 Introduction

BACKGROUND TO COMMISSION

- 1.1 The Ecology Consultancy was commissioned by St. James's Place Property Unit Trust in July 2019 to undertake a Preliminary Roost Assessment (PRA) at Altrincham Retail Park, in order to inform a planning application for proposed refurbishment and extension works within the site.
- 1.2 The survey covers all buildings located within the site boundary (hereon referred to as 'the site') as indicated on the plan provided by the client (The Harris Partnership, 2019).

SCOPE OF REPORT

- 1.3 This report provides an assessment of the likelihood that the site supports roosting bats and outlines any avoidance, mitigation, compensation and enhancement measures as may be required to comply with legislation and policy.
- 1.4 The assessment is based on the following sources of information, including that obtained from third parties and the results of surveys:
 - a desk study including:
 - a data search for bat records within a 2km radius of the site;
 - an assessment of the surrounding habitats for their likely importance to bats;
 - the presence of any protected areas cited for their bat populations; and
 - the location and status of any nearby European Protected Species Mitigation (EPSM) licensed sites for bats.
 - a PRA comprising a detailed building inspection.
- 1.5 This assessment has been prepared with reference to best practice guidance published by the Bat Conservation Trust (Collins, 2016) and as detailed in British Standard 42020:2013 *Biodiversity – Code of Practise for Biodiversity and Development* (BSI, 2013).
- 1.6 This report provides supporting information in the appendices with a georeferenced map of the survey results in Appendix 1 and cross-referenced photographs in Appendix 2.

SITE CONTEXT AND STATUS

- 1.7 The proposed development site is 1.8 hectares (ha) in size and is centred on Ordnance Survey National Grid reference SJ 76548932. The site lies in Altrincham, to the south-west of Greater Manchester. It is located within the wider retail park, which extends towards the south-west. The A56 (Manchester Road) and George Richards Way directly border the site to the east and south respectively. Residential areas are present to the north, south and east and contain playing fields, parks and tree-lined streets. Open arable fields and small pockets of woodland are present further to the west. The Bridgewater canal is located approximately 180m to the south of the site and runs east-west.

DEVELOPMENT PROPOSALS

- 1.8 The development proposals involve the refurbishment and extension of the existing Homebase building (B1) to the east and west, and an additional service yard area immediately to the north of the building. The public house (B2) will be unaffected by the current proposed works.

RELEVANT LEGISLATION AND PLANNING POLICY

- 1.9 The following key pieces of nature conservation legislation are relevant to this assessment. A more detailed description of this legislation is provided in Appendix 3.
- The Conservation of Habitats and Species Regulations 2017 (as amended);
 - The Wildlife and Countryside Act 1981 (as amended); and
 - Natural Environment and Rural Communities Act 2006.
- 1.10 The actions that could result in an offence occurring under the above legislation include: the disturbance of bats within a roost; loss or damage of a roost; blocking a roost entrance; or modification of a roost¹. If development proposals are likely to result in an offence, then an EPSM licence must be obtained from Natural England prior to works to provide a derogation from the legislation. Alternatively, where no more than three low conservation significance roosts are present and are used by low numbers of bats of no more than three of the (qualifying) species that EPSM licences are most commonly

¹ These actions are inferred from Section 43.1 and 43.2 of *The Conservation of Habitats and Species Regulations 2017 (as amended)*

applied for, it may be possible to register the site under the Bat Mitigation Class Licence (BMCL) scheme. No like for like bat compensation is required for the majority of the species covered by BMCL.

1.11 The National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2019) requires local authorities to avoid and minimise impacts on biodiversity and to provide net gains in biodiversity when taking planning decisions. In addition, in England, under Section 40 of the Natural Environment and Rural Communities Act 2006, all public bodies are required to have regard to biodiversity conservation when carrying out their functions.

1.12 Other planning policies at the local level which are of relevance to this site include: Trafford Core Strategy (2012).

2 Methodology

DESK STUDY

- 2.1 A desk study was conducted to obtain data relating to bats within a 2km radius of the site, as made available by the Greater Manchester Record Centre (GMRC).
- 2.2 Additional contextual information was compiled from publicly available data sources:
 - MAGIC (<http://www.magic.gov.uk>) – the Government’s on-line mapping service. Information was sought regarding: the presence of ancient semi-natural woodland (ASNW), statutory designated nature conservation sites and extant or historic EPSM licences for bats
 - Ordnance Survey mapping and publicly available aerial photography to determine any features such as: running and standing water, woodland, tree lines, hedgerows, railway corridors and the surrounding landscape uses.

PRELIMINARY ROOST ASSESSMENT – BUILDINGS

- 2.3 The PRA consisted of an external inspection of all sections of the buildings, and an internal inspection where access allowed. The survey and assessment was undertaken by Dr Anna Field BA (Hons) MSc MCIEEM, a Senior Ecologist with nine years’ commercial bat survey experience. Anna possesses a Natural England Level 2 Class Licence for bats (2015-11343-CLS-CLS).
- 2.4 The aim of the surveys outlined below is to establish the suitability of the buildings within the site to support bat roosts. If a roost cannot be ruled out, then in order to determine presence or likely absence and to characterise any roosts that might be found, emergence and re-entry surveys may be required to complete the assessment. The gathered information would then be used to inform an assessment of the potential impacts of the development proposals and to devise an appropriate and proportionate mitigation strategy

Internal and external inspections of buildings

- 2.5 The PRA was carried out on the 8 July 2019 in weather conditions of 15°C, 2/12 Beaufort scale wind, 3/8 cloud cover.
- 2.6 The survey comprised an external inspection of both buildings within the site, involving a detailed search of all accessible architectural features for bat droppings, urine

staining, scratch marks, staining around suitable crevices and feeding remains. Windowpanes and other external surfaces were visually checked for droppings or other secondary evidence. This included external features, such as soffits and fascias, roof lining, brickwork and window casements. Any features that could potentially provide access into internal areas (such as cavity walls) were noted.

- 2.7 An internal inspection of building B1 was completed, whereby the surveyor walked through the interior of the building in logical progression. No roof void was present but all internal areas were searched, including the Homebase store (ground and mezzanine level) and upstairs staff rooms. All surfaces including floor areas were checked for discarded feeding remains and bat droppings. A high-powered torch was shone along the interior of the roof, where appropriate, to look for bats, staining and droppings.
- 2.8 The survey methodology followed best practice guidelines (Mitchell-Jones & McLeish, 2004; Collins, 2016). Equipment used and at hand during the building inspection included an extendable ladder, close-focusing binoculars, a hand-held LED torch and a high-powered torch.
- 2.9 The criteria used as a framework to assess the potential for structures to support roosting bats are provided in Appendix 5.

EVALUATION AND IMPACT ASSESSMENT

- 2.1 Where sufficient baseline data are available, the site's ecological importance has been evaluated broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) which ranks the nature conservation importance of a site according to a geographic scale of reference: international, national, regional (Greater Manchester), metropolitan, county, vice-county or other local authority-wide area (Trafford); and of importance at the zone of influence of the site only. In evaluating the nature conservation importance of the site the following factors were considered: nature conservation designations; species/habitat rarity; naturalness; fragility and connectivity to other habitats. Where no importance has been assigned this is due to insufficient information.
- 2.2 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2018) only where clear evidence is available to substantiate and justify the findings. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development. Reference is also made to

Section 6² of the Bat Mitigation Guidelines (Mitchell-Jones & McLeish, 2004) and Natural England's standing advice³ and includes a summary of the scale of impact according to roost type and development effect.

- 2.3 Where ecological constraints to development are identified, further survey requirements and/or mitigation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development are described. In addition, in accordance with the NPPF and local/regional planning policies, opportunities to enhance or create benefits for wildlife are provided. These measures may be appropriate for the attainment of net gains in biodiversity, although this assessment does not provide a formal measure of Biodiversity Net Gain.

DATA VALIDITY AND LIMITATIONS

- 2.10 It is important to note that even where data are held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.
- 2.11 Bats are highly mobile animals and can move roost sites both within and between years. Where surveys are not spread throughout the bat active season is possible that they could miss roosts that are occupied earlier or later in the year. However, where undisturbed, evidence of bats inside a building is likely to be detectable throughout the year. The detection of small numbers of crevice dwelling species may remain problematic in some cases, such as where droppings accumulate within an inaccessible void.
- 2.12 The interior of the public house (B2) was not accessed but this building will not be affected by the proposed development. As such, it is considered that the assessment of the bat roost suitability on site is suitably informed.
- 2.13 Data from bat surveys should be considered to be valid for a period of 12-18 months, unless there are any significant changes to the buildings or other habitats within the site (CIEEM, 2019).

⁶ <http://www.floralocale.org>

⁶ <http://www.floralocale.org>

3 Results

DESK STUDY

Data search

- 3.1 The data search returned 61 records of bats from at least four species (11 were roosts/possible roosts and the remainder were field records/grounded bats) and two historic EPSM licences within a 2km radius of the site. A summary of the most pertinent results is presented in Tables 3.1 and 3.2.

Table 3.1: Summary of data search results

| Species | Distance & Orientation | Date of most recent record | Description |
|--|------------------------|----------------------------|------------------------------------|
| Common pipistrelle <i>Pipistrellus pipistrellus</i> | 1.7km south-west | 2007 | Maternity roost |
| Common pipistrelle | 1.7km south | 2014 | Day roost (2 bats) |
| Common pipistrelle | 1km north | 2011 | Day roost (2 bats) |
| Noctule <i>Nyctalus noctula</i> | 900m south | 2011 | Hibernation roost in beech tree |
| Pipistrelle sp. <i>Pipistrellus</i> sp. | 1.7km south-west | 2007 | Mixed roost. Approx. 100 droppings |

Table 3.2: Bat EPSM licences within 2km of the site boundary

| Licence Number | Distance & Orientation | Notes |
|-------------------|------------------------|--|
| EPSM2012-4735 | 1.7km south-west | 2012 licence for destruction of a resting place of common pipistrelle. |
| 2015-9816-EPS-MIT | 1.8km south-south-west | 2015 licence for destruction of a resting place of common pipistrelle. |

Surrounding habitat

- 3.2 The majority of the surrounding habitat comprises the retail park and residential areas. The residential areas contain playing fields, parks and tree-lined streets, which would provide suitable roosting, foraging and commuting habitat for bats within an urban setting. The Bridgewater Canal is located approximately 180m to the south of the site, which connects to open arable fields in the west, which contain hedgerows, trees and small pockets of woodland. These habitats are likely to support bat populations in the wider landscape.

FIELD SURVEYS

Overview

- 3.3 No evidence of roosting bats was recorded during the PRA undertaken at any of the buildings on site.

Preliminary Roost Assessment

- 3.4 The building inspection covered two buildings, as detailed below. A site plan is provided in Appendix 1 and supporting photographs of key features in Appendix 2.
- 3.5 *Building B1 (Homebase)*: This was a large brick building with a corrugated metal and plastic roof, which contained a pitched area towards the centre. There was a slight boxed-out overhang where the walls met the roof and metal pillars along the exterior (Photograph 1, Appendix 2). A metal-framed, open shelter, with a single skin pitched plastic roof was present to the west of the building.
- 3.6 Within the interior, the roof was open to the pitch and metal supports to the building were evident. No roof void was present, but staff offices and rest rooms were located to the south. The interior was in good, clean condition, being in current use as a Homebase store. Most of the store operated at ground level but a mezzanine was present to the north. The northern extension comprised a working warehouse, which linked to the outdoor service area to the north west.
- 3.7 *Results*: No evidence of roosting bats was recorded during the internal or external survey. The exterior of the building was in good condition with no gaps noted within the brickwork or roof overhang. No Potential Roosting Features (PRFs) for bats were present.
- 3.8 *Assessment*: Building B1 was assessed as providing **Negligible** suitability for roosting bats.
- 3.9 *Building B2 (The Railway Public House)*: A two-storey brick building with two adjoining slate pitched roofs and a single-storey extension to the west, with a single-pitch slate roof (Photograph 2, Appendix 2). Three chimneys were present within the easternmost roof. The eastern aspect contained a soffit box.

3.10 The interior of the building was not accessed but this building will not be affected by the development proposals.

3.11 *Results:* No evidence of roosting bats was recorded during the external survey. The bargeboards on the southern gable end was slightly lifted and a small gap was present at the southern end of the soffit box on the eastern aspect. There were small sections of missing mortar on the ridge tiles to the western extension but the tiles remained largely close-fitting. The remainder of the building was in good condition with no PRFs identified within the brickwork or exterior of the roof. The noise and light levels created by the immediately adjacent A56 (Manchester Road) to the west and George Richards Way to the south, reduce the likelihood of roosting bats being present within the building.

3.12 *Assessment:* Building B2 was assessed as providing **Low** suitability for roosting bats, during the active season.

Other Fauna

3.13 Four disused bird nests were identified on the ledge at the top of the brick-wall exterior of Building B1. Two were present on the northern aspect and two on the western aspect (Photograph 3, Appendix 2).

3.14 Three bird boxes and two invertebrate boxes were located on the western side of the fence along the western boundary of the garden centre area, to the west of Building B1 (Photograph 4, Appendix 2).

4 Evaluation and Impacts

EVALUATION

Roosting bats

- 3.15 No evidence of roosting bats was recorded during the building inspections.
- 3.16 Building B1, provided negligible suitability for roosting bats and therefore, no further bat survey is required to facilitate the refurbishment or extension as part of the proposed development. Building B2 provided low suitability for roosting bats but will not be affected by the development proposals. As such, no further survey of building B2 is recommended under current development proposals
- 3.17 Roosting bats are not considered further as part of the impact assessment.

Foraging and commuting habitats for bats

- 3.18 The planted trees and introduced shrub present mainly around the periphery of the site but also within the car parking areas, provide limited foraging and commuting opportunities for bats. The site is located in a built-up residential area and does not contain strong links to the more suitable roosting and foraging and commuting habitat present in the wider landscape.
- 3.19 The site is assessed as important for bats at Site level. This is due to the limited roosting opportunities present for bats and low-quality bat foraging and commuting habitat that the site provides.

Other fauna

- 3.20 Building B1 provides nesting opportunities for breeding birds on the ledges present above the exterior brickwork. Three bird boxes were also present on the western side of the garden centre's western boundary fence. Two invertebrate boxes were also located on this fence. Existing planted trees and shrubs within the site, also provide potential breeding habitat for birds.
- 3.21 The site is assessed as important for breeding birds at the Site level. This is due to the nesting opportunities provided by building B1 and on-site planted trees and scrub.
- 3.22 Further precautions with regards to birds and invertebrates are recommended below.

IMPACT ASSESSMENT

Foraging/Commuting Bats

- 3.23 The site is considered to provide sub-optimal foraging and commuting opportunities for bats. Therefore, it is unlikely that the proposed works would have a negative impact on the ability of bats to move safely across of the site. Whilst impacts are considered to be non-significant, lighting (both during the refurbishment and construction phase, and operational lighting post-development) should be designed sensitively to avoid impacting bats using the site or more suitable habitats within the wider landscape surrounding the site.

5 Summary and Recommendations

SUMMARY

- 5.1 No evidence of roosting bats was recorded within any of the buildings on site during the PRA.
- 5.2 The refurbishment and extension of Building B1 is unlikely to impact foraging/commuting bats using the site. However, sensitive artificial lighting should be employed during the construction and operational phase of development so as to minimise indirect impacts and improve lighting conditions for bats, as recommended below.
- 5.3 Evidence of breeding birds was found on building B1 and bird boxes are present on the western garden centre fence. Breeding birds would be impacted should works to extend/refurbish building B1, or to remove any bird boxes/shrub/tree vegetation, be undertaken during the main breeding bird season (March-September inclusive).

RECOMMENDATIONS

- 5.4 For each constraint identified, all mitigation options provided follow the established Mitigation Hierarchy as set out in Section 5.2 of BS42020:2013. 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. The measures set out below will address no net loss of biodiversity, although no formal calculation of losses and gains has been carried out.

Bats and lighting

- 5.5 While different species of bat react differently to night time lighting, research has found that bats overall are sensitive to artificial lighting. Excessive and/or poorly directed lighting may delay bats in emerging from their roosts; shortening the time available for foraging, as well as causing bats to move away from suitable foraging grounds, movement corridors or roosting sites, to alternative dark areas (Jones, 2000).
- 5.6 To minimise indirect impacts from lighting associated with the demolition and construction works it is recommended that artificial lighting is only directed where necessary for health and safety reasons and not exceed existing levels. Lighting should not illuminate any retained trees on-site or features identified during the PRA on building

B2 and should only be used for the period of time for which it is required (Jones, 2000). Additional details are provided in Appendix 5.

Breeding Birds

- 5.7 With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to intentionally kill, injure or take any wild bird, intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built and intentionally take or destroy an egg of any wild bird.
- 5.8 Whilst impacts to birds are considered to be non-significant, where the proposed works will affect the ledge around the exterior of building B1, and/or will require the removal of bird boxes, shrubs or trees with potential to support breeding birds, this must be carried out September to February inclusive, to avoid any potential offences relating to breeding birds during their main bird breeding season (Newton *et al.*, 2011).
- 5.9 If site clearance during the breeding season is unavoidable, potential nesting habitat must be inspected by a suitably experienced ecologist a maximum of 48 hours before work commences to identify active birds' nests. Should they be present, the nest and a suitable buffer of habitat around it must be retained until the young have left the nest.

Terrestrial Invertebrates

- 5.10 Whilst impacts to terrestrial invertebrates are considered to be non-significant, if they require removal, the invertebrate boxes located on the garden centre western boundary fence should preferably be re-sited at appropriate locations (buildings or trees in full sun) within the site at the time of removal. They should not be taken off-site or transferred to another site, as this risks introducing local invertebrate populations to areas where they may not already be present.

ENHANCEMENTS

- 5.11 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect. Measures set out below can be used to achieve a net gain in biodiversity. Please note, however, that no formal calculations have been provided in this instance.

5.12 The following measures would be suitable for integration into the site's design:

Planting to enhance the site for bats

5.13 To enhance the biodiversity potential of site it is recommended that post development landscaping plans include plants of known benefit to insects. This would encourage bats to use the site for foraging purposes. See the Bat Conservations Trusts Landscape and Urban Design for Bats and the Royal Horticultural Society's Plants for Bats list: <https://www.rhs.org.uk/advice/pdfs/plants-for-bats>.

Tree planting

5.14 There should be a net gain in the number of trees on site post development if feasible. Species planted should include common lime, alder, ash, pedunculate oak and wild cherry. Tree planting will provide an additional resource for invertebrates and if designed to create green corridors throughout the site, will provide linear features for use by foraging and commuting bats as well as roosting, breeding and foraging birds.

5.15 Planting notes for the landscape plan should state that all plant stock will originate from the UK. It is best practice to use British native stock for tree planting and the above scheme should also follow guidance given in the Forestry Commission Practice Note 8a (Herbert et al., 1999) where possible. A list of reputable suppliers is available from the Flora Locale website⁶.

5.16 New tree planting could be under-planted with shade tolerant shrubs to improve structure and cover for wildlife. The tree species planted should be continually assessed to make sure they are suitable in terms of legislation updates and pathogen impacts.

Provision of bat roosting opportunities

5.17 Where feasible, bat tubes should be installed within the building extension to increase roosting opportunities for bats. Externally mounted bat boxes can be used as an alternative. Woodcrete designs are recommended as long-lasting durable designs with high occupancy rates. Bat tubes/boxes should be located at least 5m above ground level to allow for clear flight paths. Both tubes and boxes should be facing southeast – southwest in a location that will not be lit by artificial lighting.

⁶ <http://www.floralocale.org>

Provision of bird nesting opportunities

- 5.18 The provision of bird boxes would be appropriate at this site and can be building or tree mounted. Many different designs are available including boxes to support colonial species such as house sparrow. Woodcrete bird boxes (Schwegler, 2019) are recommended as they are long lasting compared to wooden boxes, insulate occupants from extremes of temperature and condensation and are available in a broad range of designs.

References

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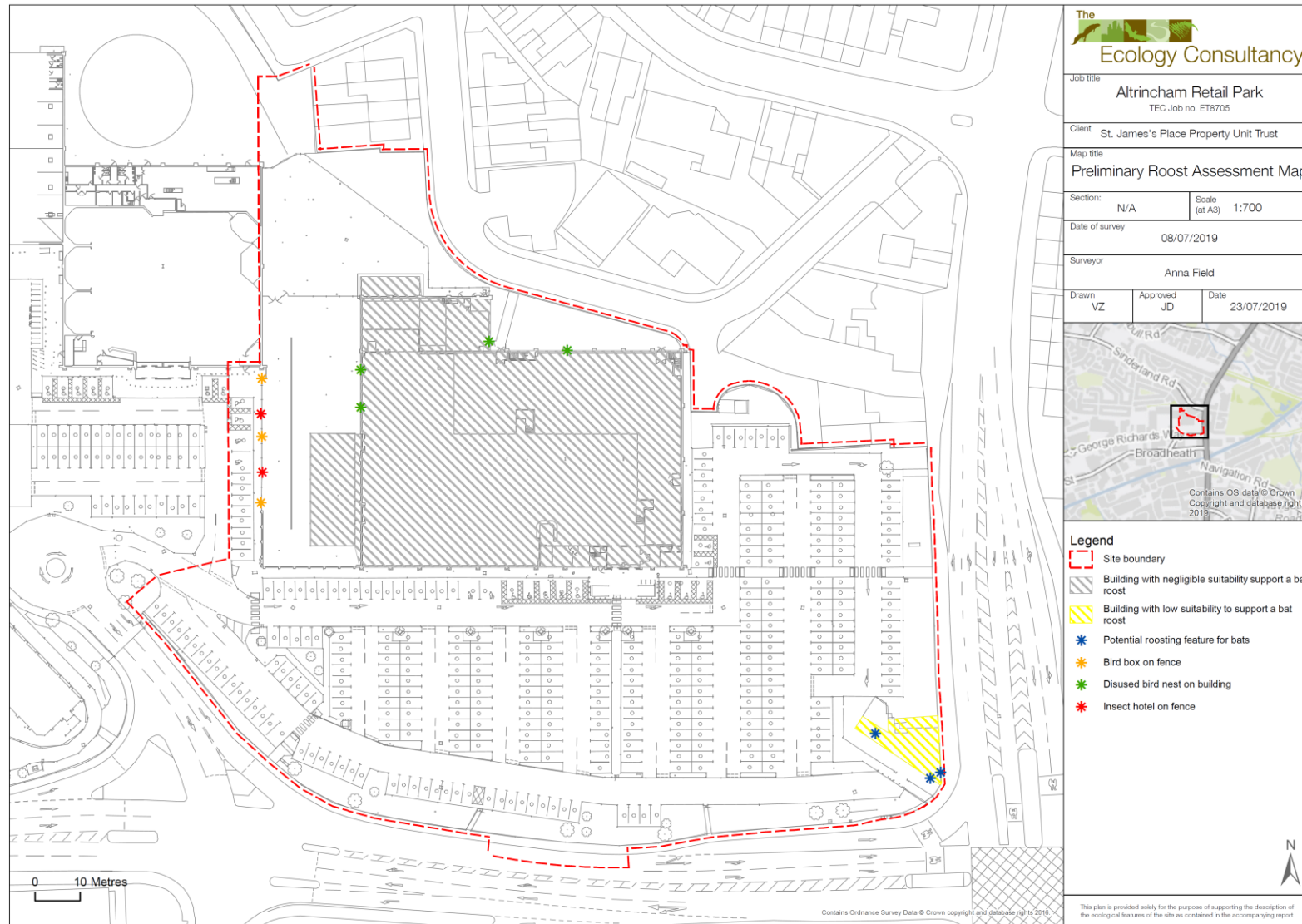
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<https://www.trafford.gov.uk/planning/strategic-planning/local-plan/core-strategy.aspx>

Appendix 1: Survey Map

Map 1: Preliminary Roost Assessment Map



The Ecology Consultancy

Job title
Altrincham Retail Park
TEC Job no. ET8705

Client
St. James's Place Property Unit Trust

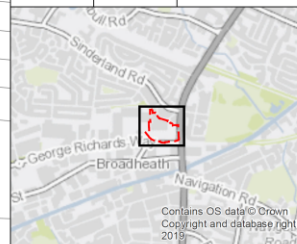
Map title
Preliminary Roost Assessment Map

Section: N/A Scale (at A3): 1:700

Date of survey
08/07/2019

Surveyor
Anna Field

Drawn: VZ Approved: JD Date: 23/07/2019



- Legend**
- Site boundary
 - Building with negligible suitability support a bat roost
 - Building with low suitability to support a bat roost
 - ✱ Potential roosting feature for bats
 - ✱ Bird box on fence
 - ✱ Disused bird nest on building
 - ✱ Insect hotel on fence



This plan is provided solely for the purpose of supporting the description of the ecological features of the site as contained in the accompanying report

Appendix 2: Photographs

Photograph 1

Building B1. This building is due to be renovated and extended. View looking north-west.



Photograph 2

Building B2. This building will not be affected by the proposals. View looking north-east.



Photograph 3

Disused bird nest on the western aspect of building B1. View looking north-east.



Photograph 4

Bird and invertebrate boxes on garden centre western boundary fence. View looking south-east.



Appendix 3: Legislation

Important Notice: This section contains details of legislation applicable in Britain only (i.e. not including the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive⁷ is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (as amended).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife and Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CROW) Act 2000 (as amended).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991;
- Countryside and Rights of Way Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds, hazel dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2017 (as amended) (which includes smooth snake, sand lizard, great crested newt and natterjack toad), all bat species, otter, hazel dormouse and some plant

⁷ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

species) are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.
- The Conservation of Habitats and Species Regulations 2017 (as amended) does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.
- In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (all bats).
- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate³
 - b) to affect significantly the local distribution or abundance of the species.
- Damage or destruction of a breeding site or resting place.
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also currently protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level).

- Intentional or reckless obstruction of access to any place of shelter or protection.
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

A European Protected Species Mitigation licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to ensure appropriate mitigation measures be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost⁸.

Breeding Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy an egg of any wild bird: and
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

⁸ Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. 150. The Mammal Society, Southampton.

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young; and
- Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird breeding season which typically runs from March to August⁹. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the breeding season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

⁹ It should be noted that this is the main breeding period. Breeding activity may occur outwith this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

Appendix 4: Assessment Criteria for Preliminary Roost Assessments

ASSESSMENT CRITERIA – PRELIMINARY ROOST ASSESSMENT – STRUCTURES

The potential for structures to support roosting bats, ranging from negligible to the presence of a confirmed roost, is assessed using the findings of the survey and the desk study. The following criteria were used to determine the level of potential of the buildings for roosting bats:

- **Negligible** – While presence cannot be absolutely discounted there were no significant visible features that could be used by bats for roosting.
- **Low** – Small number of potential roosting features such as could be utilised by individual opportunistic roosting bats. Site situated within isolated habitat that could be used by foraging bats but which is not connected by prominent linear features such as woodland edge, hedgerows and tree lines.
- **Moderate** – Several potential roosting features in the buildings or other structures. There is surrounding habitat such as woodland, scattered trees, hedgerows suitable to support foraging and roosting bats. The site is connected to the wider landscape by linear features such as woodland edge, hedgerows and tree lines that could be used by commuting bats.
- **High** – Buildings or other structures, such as mines, caves, tunnels, ice houses and cellars, with numerous features of potential significance for roosting bats. Surrounding landscape has high value habitat for roosting, foraging and commuting that is contiguous with on-site habitats. The site is connected to the wider landscape by strong linear features and may be close to known roosts or other potentially valuable habitat resources.
- **Confirmed roost** – Evidence indicates a building or other structure is used by bats, for example:
 - bats seen roosting or observed flying from a roost or freely in the habitat;
 - droppings, carcasses, feeding remains;
 - bats heard ‘chattering’ inside on a warm day or at dusk.

Appendix 5: Standard Guidance for Sensitive Lighting for Bats

Bats and Lighting

While different species of bat react differently to night time lighting, research has found that bats overall are sensitive to artificial lighting. Excessive and/or poorly directed lighting may delay bats in emerging from their roosts; shortening the time available for foraging, as well as causing bats to move away from suitable foraging grounds and drinking resources, movement corridors or roosting sites, to alternative dark areas (Jones, 2000). Artificial lighting is also thought to increase the chance of predation, as many avian predators will hunt bats (Institution of Lighting Professionals, 2018).

To minimise indirect impacts from lighting associated with the proposed development it is recommended that artificial lighting is only directed where necessary for health and safety reasons. Lighting should not illuminate any features of value to bats, or suspected or confirmed bat roosting sites. Habitats which are likely to support bats and which could be affected by newly proposed lighting include woodland, mature trees, hedgerows, scrub, ponds, lakes, ditches, streams, canals, rivers, rough grassland and buildings (typically pre 1970's or in disrepair). Lighting should only be used for the period of time for which it is required (Jones, 2000).

This can be achieved by following accepted best practice (Fure, 2006; Bat Conservation Trust 2011; Stone 2013; Bat Conservation Trust 2014; Institution of Lighting Professionals, 2018):

- Where appropriate, professional lighting designers should be consulted, and the need for quantitative lighting measurements should be considered;
- Lighting mitigation should be based on robust baseline surveys of bat behaviour and existing light levels on site wherever possible;
- The level of artificial lighting including flood lighting should be kept to an absolute minimum;
- Where this does not conflict with health and safety and/or security requirements, the site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
- Variable lighting regimes (VLR) can be utilised to lower lighting levels during periods of low human activity (e.g 00:30-05:30);
- Lighting required for security or safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor-activated lamps;
- Use narrow-spectrum light sources that peak higher than 550 nanometres, avoiding lights with UV, white and blue wavelengths;
- Lights utilising LED technology are the preferred option as these lights do not emit on the UV spectrum, are easily controllable in terms of direction/spill and can be turned on and off instantly;

- A 'warm white' spectrum LED light (ideally <2700 Kelvin) should be used over 'cool white' to reduce blue light component;
- Avoid the use of sodium or metal halide lamps, these gas lamps require a lengthy period in which to turn off and the diffuse nature of the light emitted makes light spillage a significant problem.
- Lights required for night time deliveries or security patrols could be set to activate with pressure activated sensors set into the ground;
- Lighting should be directed to where it is needed to minimise light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a shield/hood/cowl/baffle/louvre that directs the light below the horizontal plane and restricts the lit area;
- Usually using lower lighting columns and increasing the spacing between them reduces light intensity and spill;
- Plant vegetation to form light barriers and dark corridors. Use close-boarded fencing to screen light until vegetation matures. Dark corridors should be well connected to commuting routes;
- Artificial lighting should not directly illuminate any confirmed or potential bat roosting features or habitats of value to commuting/foraging bats. Similarly, any newly planted linear features or compensatory bat roosting features should not be lit;
- The use of reflective surfaces under lights should be avoided;
- Consider the use of 'smart glass' or automatic blinds where windows and glass facades cannot be avoided; and
- Create new habitat as alternative bat flightpaths if the effects of light cannot be properly mitigated for.



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