

Huddersfield Bus Station

Preliminary Roost Assessment

**Willmott Dixon
Construction Ltd**

April 2024

Ecus Ltd

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Preliminary Roost Assessment

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Executive Summary

Ecus Limited (Ltd) was commissioned by Willmott Dixon Construction Limited in January 2024 to undertake a Preliminary Roost Assessment (PRA) at Huddersfield Bus Station, Upperhead Row, Huddersfield, HD1 1JN, central Ordnance Survey National Grid Reference (NGR): SE 14204 16569, hereafter referred to as 'the Site'. The PRA was requested to inform proposals for transformation of the bus station, including interior concourse building refurbishment and reconfiguration, changes to the bus circulatory area, improvements to the approach to the bus station off Henry Street, and construction of a new canopy area, taken from the SGP Architects 'Proposed Site Plan' (Drawing Reference: 202233-SGP-HUD-00-DR-A-021000, dated October 2021).

A data consultation was undertaken with West Yorkshire Joint Services (WYJS) and West Yorkshire Bat Group (WYBG) for records of bats within 2 km of the Site. No roosts returned were associated with the Site, with the closest roost pertaining to an unknown roost type belonging to an unidentified bat species, recorded in 2005, 0.3 km north of the Site.

The Site visit was undertaken on 16th February 2024, with the buildings assessed as displaying 'Low' suitability for roosting bats, following good practice guidelines (Collins, 2023). This is due to the number and type of Potential Roosting Features (PRFs) for bats across the buildings such as gaps behind PVC and metal fascia boards and within vertical crevices where concrete overhangs are present.

No confirmed bat roosts were identified on the Site during the PRA. However, given that the buildings are assessed as displaying 'Low' suitability to support roosting bats, further survey is recommended to determine the presence or likely absence of bats to inform the proposals. Further survey would comprise a minimum of one dusk emergence survey undertaken within the peak bat activity season (mid-May to August inclusive) with night vision aids (Collins, 2023).

In the event that roosting bats are encountered at the building(s) during the survey, further emergence survey(s) may be required to fully characterise the roosts present to inform a bat mitigation licence application that would permit the works to lawfully proceed.

The outcome of the emergence survey(s) would further inform any bat mitigation strategy and/or compensation measures which may be required to safeguard bats during the construction and operational phases of the proposed works. However, irrespective of the results of further survey, the loss of PRFs should be compensated for through the installation of two bat boxes, such as the 'WoodStone Beaumaris Bat Box', or similar box design. This would be an enhancement measure and any mitigation or compensation for bat roosts (where identified) would be separate to the installation of these bat boxes.

1. Introduction

1.1 Background

- 1.1.1 Ecus Limited (Ltd) was commissioned by Willmott Dixon Construction Limited in January 2024 to undertake a Preliminary Roost Assessment (PRA) of two buildings and a retaining wall at Huddersfield Bus Station, Upperhead Row, Huddersfield, HD1 1JN, central Ordnance Survey National Grid Reference (NGR): SE 14204 16569, hereafter referred to as 'the Site'. The Site is displayed in Figure 1.
- 1.1.2 The PRA was requested to inform proposals for transformation of the bus station, including interior concourse building refurbishment and reconfiguration, changes to the bus circulatory area, improvements to the approach to the bus station off Henry Street, and construction of a new canopy area, taken from the SGP Architects '*Proposed Site Plan*' (Drawing Reference: 202233-SGP-HUD-00-DR-A-021000, dated October 2021).
- 1.1.3 Ecus Ltd were also commissioned to undertake a Preliminary Ecological Appraisal (PEA) for the Site and the findings of this are detailed in the Ecus Ltd '*Huddersfield Bus Station – Preliminary Ecological Appraisal*' report (reference 21287 V1.0, dated March 2024).
- 1.1.4 This report details the findings of a data consultation and PRA. Methodologies employed during the survey are described along with the survey findings, an evaluation, assessment and/or mitigation/enhancement as required.

2. Methodology

2.1 Data Consultation

- 2.1.1 A data consultation was undertaken by Ecus Ltd in February 2024 with West Yorkshire Joint Services (WYJS) and the West Yorkshire Bat Group (WYBG) to determine the presence of existing bat records within 2 km of the Site.
- 2.1.2 In February 2024, the Multi-Agency Geographical Information for the Countryside (MAGIC) website (<http://magic.defra.gov.uk>) was consulted for information on bat European Protected Species (EPS) mitigation licences granted within 2 km of the Site.
- 2.1.3 Information obtained from WYJS, WYBG and MAGIC is included within this report where appropriate.

2.2 Preliminary Roost Assessment

- 2.2.1 The Site was surveyed on 16th February 2024 by Senior Ecologist Katie Smith BSc (Hons) ACIEEM and Assistant Ecologist James Storey BSc MSc using the recommended building survey protocol (Collins, 2023).
- 2.2.2 The PRA included an external and internal inspection of the buildings and retaining wall to assess their suitability for roosting bats based on factors including, but not limited to, the number/orientation/locations of PRFs, the proximity of suitable foraging habitat, and the presence of lighting. Any evidence of bat presence, e.g. droppings, feeding remains, staining marks around potential roost access points and live or dead animals were recorded (where identified). Where possible to reach from ground level or with an extendable ladder, close-up inspection of Potential Roost Features (PRFs) was undertaken.
- 2.2.3 An individual building or structure may have several features of potential interest to roosting bats and it is not always possible to confirm usage of a feature by bats during the PRA survey, given the often-transient nature of bat roosts. Consequently, it is customary when undertaking such surveys to assign a given building to a defined category of roosting suitability (i.e. confirmed, high, moderate, low, negligible or none), taking into consideration current best practice guidelines (Collins, 2023).

2.3 Survey Limitations

- 2.3.1 Some records provided by WYBG were provided as four figure grid references and were only accurate to approximately 100 m. The details of records with four figure grid references were reviewed for named locations to provide further accuracy. Where appropriate, records with six figure grid references were considered as the nearest records to the Site for accuracy, unless details provided as part of the records indicated closer proximity.

3. Findings and Evaluation

3.1 Site Description

- 3.1.1 The Site is an active bus station situated within the centre of Huddersfield comprising two adjoining buildings. The bus station concourse building (B1, Figure 1) was constructed of brick, metal panelling and glass, and was predominantly flat roofed with a multi-storey car park set in the upper levels of the building. The Henry Street alighting area (B2, Figure 1) to the north of B1 was a long, single-storey building constructed of metal and glass.
- 3.1.2 Vegetated habitats within the Site are limited to modified grassland, introduced shrub and scattered young and semi-mature trees located to the east of B1 and B2.
- 3.1.3 The Site was bounded by a retaining wall to the west, separating the bus station from the A62. Introduced shrub and hardstanding was located to the south of the Site and further hardstanding was present to the east and north of the Site. The Site is shown in Figure 1.
- 3.1.4 The wider area consisted of roads, pedestrianised shopping streets and residential properties interspersed by areas of greenspace comprising grassland and wooded habitats associated with the town of Huddersfield.

3.2 Desk Study

Roosting Bats

- 3.2.1 WYJS returned a total of 132 bat records for locations within 2 km of the Site, 38 of which were roost locations. Species included were unidentified bat species, pipistrelle species *Pipistrellus spp.*, and common pipistrelle *Pipistrellus pipistrellus*. The closest of these records pertained to an unknown roost type of an unidentified bat species located approximately 0.3 km north of the Site from 2005.
- 3.2.2 WYBG returned a total of 32 bat records for locations within 2 km of the Site, 20 of which were roost locations. Species included were unidentified bat species, pipistrelle species and common pipistrelle. The closest of these records pertained to the unidentified bat species roost recorded by WYJS as mentioned above.
- 3.2.3 Three EPS licences relating to bats were identified within 2 km of the Site following a review of the MAGIC website. The closest licence pertained to common pipistrelle located approximately 0.6 km south west of the Site from 2014 and allowed the destruction of a resting place. The other two licences pertained to common pipistrelle located approximately 0.77 km south west of the Site dated between 2011 and 2013, and common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared *Plecotus auritus* located approximately 1.34 km south west of the Site dated

between 2010 and 2012 and allowed the destruction of resting places.

Other Bat Records

3.2.4 WYJS and WYBG returned a total of 107 records which related to foraging or grounded bats. Species included were unidentified bat species, brown long-eared bat, Daubenton's bat *Myotis daubentonii*, Leisler's bat *Nyctalus leisleri*, Myotis species *Myotis spp.*, Natterer's bat *Myotis nattereri*, Noctule *Nyctalus noctula*, Nyctalus species *Nyctalus spp.*, common pipistrelle, pipistrelle species, soprano pipistrelle and whiskered bat *Myotis mystacinus*. The closest of these pertained to a record of a foraging pipistrelle species located approximately 0.15 km east of the Site from 2005.

3.3 Preliminary Roost Assessment

Roosting Bats

B1

- 3.3.1 B1 (Figure 1, Plate 1-6 & 10-11) was a large four storey concrete structure used as a multi-storey car park in the upper three levels and with shops and bus station access with glass frontages on the ground level. Stairwells were present at the north and south extents and these were tall brick structures with flat roofs and metal framed windows. The multi-storey car park was predominantly concrete and created an overhang over the glass frontages below. PVC cladding was present beneath the overhang on the south and east elevations of the building, above the shop facades. A free-standing porch was present on the east elevation and was constructed from metal.
- 3.3.2 The PVC cladding had gaps between the panels (approx. 1-2 cm wide) and were in a poor state of repair with some sections having cladding missing, revealing a void above which could be accessed by roosting bats. However, this is considered of limited suitability for roosting bats given the lack of small crevices and disturbance levels below. Vents were present on the north and east elevation of the building, however these all contained mesh behind them, preventing bat access. The metal lintels surrounding windows on the stairwells on the south and north elevations had no gaps and were in good condition.
- 3.3.3 On the north elevation of the building, a horizontal crevice was present between the concrete overhang of the multi-storey car park and concrete car park ramps. This was relatively deep, approximately 1 m in depth, 3 cm in width and 5 m in length, offering a suitable PRF for roosting bats.
- 3.3.4 On each of the three levels of the multi-storey car park, horizontal crevices were present in the concrete structure, approximately 20 cm in depth, 3 cm in width and extending around the entirety of B1. The overhang directly above the bus bays on the western elevation of the building could not

be surveyed for the presence of a crevice from ground level due to a concrete ledge obscuring the surveyor's view, however it can be reasonably assumed that a crevice is present based on the design of the rest of the car park above it. On each level there was also a narrow crevice between the brickwork of the stairwell and the concrete structure of the car park.

- 3.3.5 The interior of B1 beneath the multi-storey car park consisted of retail units and the bus station concourse area, which were subjected to heavy levels of noise and lighting from pedestrians and shop users. The multi-storey car park is an open structure with brick stairwells and no roof voids between levels.

B2

- 3.3.6 B2 (Figure 1, Plate 7-9 & 12) to the north of B1 was a long, single-storey building constructed of metal and glass with a flat roof constructed from roofing felt at the northern end and a glass hipped roof at the southern end. PVC and metal fascia boards were present on all elevations of the building and a wooden soffit box was present on the east elevation of the building. Approximately three gaps (approx. 30 cm long and 1 cm wide) were present behind the fascia boards on the east elevation and the wooden soffit box had become warped slightly revealing a void within, all of which offer suitable roosting opportunities for bats. Two ventilation gaps were present in the brickwork on the west elevation of the building, offering a suitable PRF for roosting bats.
- 3.3.7 The interior of B2 consisted of a glass and metal walkway used by bus users which was subjected to high levels of noise and lighting and had no roof void.

Retaining Wall

- 3.3.8 The retaining wall on the western boundary of the Site was constructed from stone and had expansion joints located at approximately 5 m intervals along the wall's length. From inside the expansion joints, gaps could be seen behind the stonework, offering suitable PRFs for roosting bats.

Summary of Suitability for Roosting Bats

- 3.3.9 It is considered that B1, B2 and the retaining wall display 'Low' suitability for roosting bats following good practice guidelines (Collins, 2023). This is due to the presence of features which have suitability for roosting bats, however these are likely to support only single/low numbers of roosting bats given the type of features present, high levels of disturbance and lack of ecological connectivity to suitable foraging/commuting habitats in the wider area. No evidence of roosting bats was identified during the survey.
- 3.3.10 The features present in the multi-storey car park are unlikely to provide stable and humid conditions favoured for hibernation by some species of bat, although pipistrelle bats are often found roosting

individually in more exposed/thermally unstable locations. As such, B1 has some suitability to support hibernating bats.

Foraging and Commuting Bats

3.3.11 The Site offers limited opportunities for foraging and commuting bats given the lack of mature vegetation present and urbanised setting. The wider area surrounding the bus station is dominated by roads, pedestrianised shopping streets and residential properties associated with the town of Huddersfield, with pockets of woodland and grassland approximately 0.8 km to the west which are partially connected to the Site by linear features such as lines of trees and introduced shrub, although these features are subject high levels of disturbance from vehicle/pedestrian activity and street lighting.

4. Assessment & Conclusions

4.1 Legislation

- 4.1.1 All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Under regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).
- 4.1.2 All UK bats are also included on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.
- 4.1.3 Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared bat, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros*, noctule and soprano pipistrelle bats are included as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

4.2 Proposals

- 4.2.1 Proposals for the Site are taken from the SGP Architects '*Proposed Site Plan*' (Drawing Reference: 202233-SGP-HUD-00-DR-A-021000, dated October 2021) and involve the transformation of the bus station, including refurbishment of the interior concourse building and shop frontages, reconfiguration of the bus loading area, and construction of a new canopy area adjacent to Upperhead Row. It is understood that the multi-storey car park and retaining wall will be retained and not directly impacted with only the ground level of B1 and the entirety of B2 being directly impacted as part of the proposals.

4.3 Assessment and Conclusions

- 4.3.1 No confirmed bat roosts were identified on the Site during the PRA. However, given the buildings are assessed as displaying 'Low' suitability to support roosting bats, further survey following good practice guidelines (Collins, 2023) is recommended to determine the presence or likely absence of roosting bats to inform the proposals. Further survey would comprise a minimum of one dusk emergence survey undertaken within the peak bat activity season (mid-May to August inclusive) with Night Vision Aids (NVAs) to provide coverage of areas to be impacted by the proposals and based on the locations of identified PRFs (Collins, 2023).
- 4.3.2 Surveyors should record the species and number of bats using any roosts on Site (if present), as well as recording incidental bat activity observed during the survey period. For a dusk emergence survey, surveyors should be in place at least 15 minutes prior to sunset for a minimum of 1.5 hours after sunset. The survey should be conducted during periods when weather conditions are dry,

with relatively low winds and temperatures in excess of approximately 10°C. Surveyors should be supplemented by NVAs i.e. infrared cameras accompanied by an infrared lighting rig.

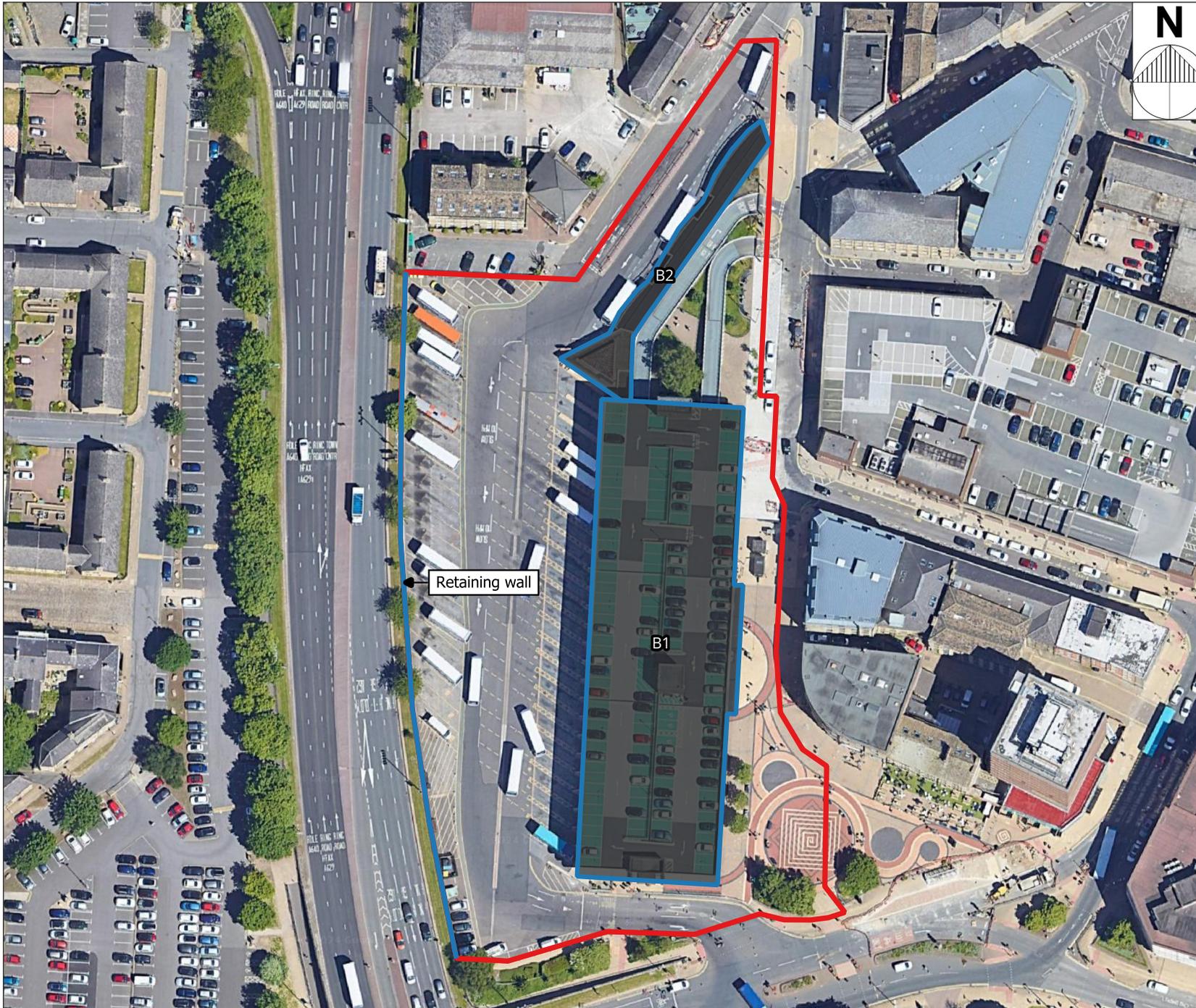
- 4.3.3 In the event that roosting bats are encountered at the building(s) during the survey, further emergence survey(s) may be required to fully characterise the roosts present to inform a bat mitigation licence application that would permit the works to lawfully proceed.
- 4.3.4 The outcome of the emergence survey(s) would further inform any bat mitigation strategy and/or compensation measures which may be required to safeguard bats during the construction and operational phases of the proposed works. However, irrespective of the results of further survey, the loss of PRFs should be compensated for through the installation of two bat boxes, such as the 'WoodStone Beaumaris Bat Box', or similar box design. These are unlikely to be suitable on B2, and so it is recommended that the boxes are installed on the exterior of the brick stairwell section of B1. These should be positioned at least 4 m in height (where possible) and should avoid full north aspects. The boxes should be situated so that they are avoiding bright light spill, i.e., shop and security lights, and ideally be located on the south elevation of B1. This would be an enhancement measure and any mitigation or compensation for bat roosts (where identified) would be separate to the installation of these bat boxes.
- 4.3.5 The multi-storey car park above B1 and the retaining wall on the western boundary of the Site display suitability for roosting bats (including hibernating bats) and could potentially be indirectly impacted by the proposals by increases in noise, light or vibration levels during construction works. These are not understood to be directly impacted as a result of the proposals. Given the nature and location of the proposals within the Site and context of the Site, further survey of these structures/features is not currently considered to be required due to lack of direct impacts and due to existing high disturbance levels from vehicles and pedestrians, which are unlikely to impact bats should they be roosting in these structures/features.
- 4.3.6 It is recommended that any additional lighting which would be greater than what is currently present at the Site should be designed to avoid light-spill onto these structures/features and retained/created greenspace to safeguard these areas as potential roosting, foraging and commuting resources. Lighting design should follow current guidance from the Bat Conservation Trust 'Bats and Artificial Lighting at Night' (Guidance note 08/23).
- 4.3.7 This report is valid for a period of 12 months. In the event that further emergence survey(s) has not been undertaken in this time, it is recommended that an update Preliminary Roost Assessment is undertaken to account for any potential changes in the suitability of the building for roosting bats.

5. References

Bat Conservation Trust, Institution of Lighting Professionals (2023). '*Bats and artificial lighting at night*'. BCT, London.

Collins, J. (2023) '*Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)*'. The Bat Conservation Trust, London.

Figure 1: Building Reference Map



Key

- Site boundary
- Survey Building/Structure

Building Reference and Name:
 B1: Bus station concourse
 B2: Henry Street



Willmott Dixon Construction Ltd

Huddersfield Bus Station
 Preliminary Roost Assessment

Figure 1
 Building Reference Map

A	07.03.24	JS	KS
Rev	Date	Drawn by	Checked by
Site centred on:		SE 14204 16569	

Appendix 1: Site Photographs



Plate 1 East elevation of B1.

Plate 2 PVC cladding beneath concrete overhang on east elevation of B1.

Plate 3 Porch above entrance to B1.



Plate 4 North elevation of B1.

Plate 5 PVC fascia board with gap behind it on north elevation of B1.

Plate 6 Vertical crevice between B1 and car park ramp on north elevation of B1.

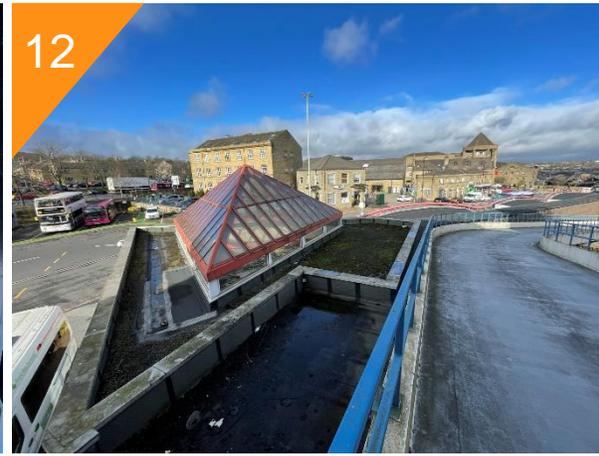


Plate 7 Warped wooden soffit box on east elevation of B2.

Plate 8 East elevation of B2 with metal fascia.

Plate 9 West elevation of B2 with ventilation gaps in brickwork.

Plate 10 Concrete overhang above bus bays on west elevation of B1.

Plate 11 Suspected vertical crevice obscured by ledge on concrete overhang.

Plate 12 Roof of B2 – view north.

