BAT EMERGENCE SURVEY REPORT

at
Huddersfield Open Market
Huddersfield
West Yorkshire
HD1 1RY

Client:
Kirklees Council

Client Address:
Princess Street
Huddersfield
HD1 2TT

JCA Ref:
22853/AWe

Date of Report:
07/05/2025

JCA Limited
Arboricultural & Ecological Consultants

Quality Assurance

Version	**Desktop Survey Completed:**		**Site Surveyed:**		**Report Completed:**		**Reviewed:**	
	Date	Name	Date	Name	Date	Name	Date	Name
1	January 2020	Liz Mattison (AECOM)	06/05/25	Adam West (lead surveyor)	07/05/25	Adam West	07/05/25	Alex Donovan

This report has been prepared and provided in accordance with the *British Standard 42020: Biodiversity – Code of practice for planning and development 2018* and the *CIEEM's Code of Professional Conduct.*

© JCA Limited 2025

Summary

JCA Ltd was commissioned by **Kirklees Council** to provide ecological advice to inform works at **Huddersfield Open Market**, hereafter referred to as 'the site'. The site is located at **Huddersfield, West Yorkshire, HD1 1RY,** Ordnance Survey (OS) National Grid Reference SE 14520 17000. The Preliminary Ecological Appraisal (PEA) survey undertaken on 12/12/2019 (AECOM, 2020) identified two buildings, the market hall and the market offices, with low Bat Roost Potential (BRP) which would be impacted by the proposed development. Further surveys were recommended on these buildings to determine the presence/likely absence of a roost or roosts.

A walkover of the site to identify any significant changes since the production of AECOM's report was carried out by JCA on 10/04/2025. This survey found that netting was present on the access points to the market hall and this would prevent bats accessing the interior of the market hall. This building was reassigned the roosting potential category of **negligible**. Inspection of the market offices found that no changes had occurred, and the roosting potential category of **low** was endorsed.

The purpose of this report is to present the findings of the surveys, an interpretation of the findings and to provide recommendations for undertaking the proposed works in accordance with relevant legislation.

Bats and their roosts are protected under UK law. Development works that are likely to affect bats or their roost sites must be completed under licence from the statutory conservation body, in this case Natural England (NE).

A field survey of the market offices was undertaken on 06/05/2025 to identify any bat use of the building. The survey found no evidence of bat roosting within the structure and very low levels of bat activity in the area.

An evaluation of the site, likely impacts of the scheme upon bats and recommendations for proceeding with works in compliance with legislation are presented in Chapters 4, 5 and 6 of this report.

© JCA Limited 2025

Contents

© JCA Limited 2025

1. Introduction

1.1 Background

1.1.1 In 2019, AECOM (2020) was commissioned by **Kirklees Council** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Huddersfield Open Market, Huddersfield, West Yorkshire, HD1 1RY,** hereafter referred to as 'the site'. The PEA survey identified two buildings on site with **moderate** bat roost potential that would be disturbed as part of the proposed work.

1.1.2 A walkover of the site to identify any significant changes since the production of AECOM's report was carried out by JCA on 10/04/2025. This survey found that netting was present on the access points to the market hall and this would prevent bats accessing the interior of the market hall. This building was reassigned the roosting potential category of **negligible**. Inspection of the market offices found that no changes had occurred, and the roosting potential category of **low** was endorsed.

1.2 Details of Proposed Development

1.2.1 The scheme is the renovation of the market which includes remediation works to the roof of the market offices.

1.3 Site Location

1.3.1 The site is located at Ordnance Survey (OS) National Grid Reference SE 14520 17000, with nearby postcode **HD1 1RY.** The site is located within the town centre of Huddersfield and surrounded entirely by urban areas.

1.4 Scope of Works

1.4.1 The following elements of work were included in the bat survey programme:

- Desktop study – a review of historical records of bats in the surrounding area, including the results of recent ecological surveys in the area.
- Field surveys – one dusk survey during the summer to assess whether bats are using the buildings/trees to roost in.
- Ecological report – detailing the survey results, implications for the disturbance of the buildings/trees and recommendations.

1.5 Survey and Report Aims

1.5.1 The main aim of the dusk emergence bat survey was to determine the presence/likely absence of roosting bats that will be impacted by the proposed development.

© JCA Limited 2025

1.5.2 If roosting bats are present, to:

- Identify the species and numbers of bats present.
- Determine the type of roost (e.g. maternity roost, transitional roost, hibernation site, etc).
- Gain sufficient information to allow the potential impacts on bats of the proposed works to be assessed and for appropriate avoidance, mitigation and/or compensation measures to be designed.

1.5.3 The aims of the report presented are to:

- Outline the legislative protection given to bats.
- Report on the findings of a desk-based study undertaken to identify any existing records for bats which are relevant to the site.
- Summarise the findings of the bat surveys and provide an assessment of the potential ecological constraints to the proposed works at the site.
- Provide recommendations for further survey, avoidance, mitigation and/or enhancement where appropriate.

1.6 Legislative Context

1.6.1 In the UK all species of bat and their roosts are fully protected under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, with additional protection offered under Schedule 5 of the Wildlife and Countryside (WCA) Act 1981 (as amended). This makes it an offence to:

- Deliberately or recklessly capture, injure or kill a bat;
- Deliberately or recklessly disturb in a way that would affect their local distribution or abundance, or affect their ability to survive, breed or rear young;
- Damage or destroy a bat roost (this is an ‘absolute’ offence);
- Intentionally or recklessly obstruct access to a bat roost; and/or
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.

1.6.2 Under this legislation a roost is determined as any structure or place used for shelter. As bats tend to re-use the same roosts, the roost is protected whether the bats are present at the time or not.

1.6.3 Please see Appendix 1 for a more detailed overview of the UK legislation protecting bats.

© JCA Limited 2025

2. Methodology

2.1 Desktop Study

2.1.1 A desktop study was carried out as part of the PEA undertaken by AECOM in December 2019. The local biological records centre, West Yorkshire Ecology Service (WYES), was commissioned to provide details of historical protected and notable species records within a 2km radius of the site.

2.1.2 Ordnance Surveys maps (1:25000 scale), MAGIC maps and aerial imagery (Google Earth) were used to assess habitat availability and connectivity in the wider area around the site.

2.2 Field Surveys

2.2.1 The field surveys were planned and conducted with reference to Bat Surveys: Good Practice Guidelines 4th Edition (Collins, 2023). The survey was conducted in May 2025.

2.2.2 The surveys were led by Adam West (Principal Ecologist) and assisted by Jordan Greenwood-England and Joe McEvoy (Field surveyors).

2.3 Emergence Surveys

2.3.1 Dusk emergence surveys are used to determine the presence or likely absence of bat roosts in buildings or features when the preliminary roost assessment cannot reasonably rule out the presence of roosting bats. They are also used to identify the type of roost where a known roost is present. They can only be completed in the season when bats are most active (May to September, with optimum bat activity between June and August).

2.3.2 During the PEA conducted on 12/12/2019 (AECOM, 2020) all structures on site were subject to an internal and external survey to establish the suitability of the structure to support roosting bats in accordance with Collins (2023). Dusk emergence and survey effort is dictated by the category of bat roost potential assigned to a structure or tree during the preliminary bat roost potential assessment. **Table 1** (taken from Collins, J. 2023) summarises the survey effort required for structures to give confidence in a negative result.

Table 1 Recommended minimum number of survey visits for presence/likely absence surveys *(taken from Collins, 2023)*.

Negligible roost suitability	Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M

© JCA Limited 2025

No futher survey required	One survey visit. One dusk emergence survey, May to August (structures). No further surveys required (trees).	Two separate dusk emergence survey visits. May to September, with at least one survey between May and August.	Three separate dusk emergence survey visits. May to September, with at least two surveys between May and August
September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time but may pick up mating roosts. Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced out at **least three weeks apart**, preferably more. Survey timings **should consider the prevailing conditions in the year of survey, which will vary geographically**. In years with a cold spring, the surveys should not be started in early May, or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the **optimum coverage includes the pre-parturition, post-parturition, and mating periods**. Structures that have been categorised as low potential can be problematic, and the number of surveys required should be judged on a case-by-case basis. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.			

2.3.3 AECOM assigned the following categories to structures and trees that required further survey.

Table 2 Categories of Structures Surveyed

Structure/tree to be surveyed	Assigned category	Number of surveys required
Market Hall	Low*	1*
Market Offices	Low	1

*Following a walkover of the site in 2025, JCA reclassified this building and determined that no further surveys were required (see paragraph 1.1.2).

2.3.4 All other buildings/trees on site are considered to have negligible bat roost potential (BRP).

2.3.5 Dusk emergence surveys commence 15 minutes before sunset and end ~1.5 hrs after sunset, depending on activity levels recorded during the survey.

2.3.6 During the surveys, the building was monitored using two Sannce 4CH 1080N Security Camera Systems. The site was illuminated by Tonton Infrared Illuminators. and

2.3.7 Bat calls were monitored using Anabat Scout bat detectors and notes were made on the times of bat calls and any bat activity seen or heard (commuting, foraging, roosting or social calls) to determine the following information:

- Time and species of first and last bat call.
- Location of bats/proximity to the buildings.
- Number and species of bats present (where identification is possible).
- Bat activity levels (foraging, commuting, social calls).

© JCA Limited 2025

- Number of bats recorded entering/exiting the structures/trees/buildings

2.4 Survey Constraints

2.4.1 The comprehensiveness of any ecological assessment will be limited by the season in which surveys are undertaken. To determine presence or likely absence of a protected species and their status (i.e. the number of individuals present) usually requires multiple visits at suitable times of the year. The survey conditions and timings were suitable for surveying bats and therefore are not considered to be a limitation to the effectiveness of the surveys.

2.4.2 The weather conditions during the survey are given in **Table 3** below:

Table 3 Weather Conditions during the survey.

Date	Sunset time	Start & finish time	Temp - Start and Finish (°C)		Wind speed (mph)	Cloud cover (%)	Precipitation
06/05/25	20:46	20:22	14	12	4	60	None

2.4.3 The details of this report will remain valid for 18 months. Beyond this period, if the proposed works have not commenced, a new review of the ecological conditions must be undertaken.

© JCA Limited 2025

3. Results

3.1 Desktop study

3.1.1 Local Data Centre Records: WYES has been commissioned to provide the records held for bat species within a 2km radius of the survey site. The results have been reproduced from AECOM's report below. It should be noted that the absence of records should not be taken as confirmation bat species are absent from the search area.

Species	Legally Protected Species?	Species of Principal Importance?	Other Notable Species?	Present on Site?	Present / Potentially Present in Wider Zone of Influence?	Supporting Comments
Bats	✓	✓	x	?	✓	Existing records of pipistrelle bat species (*Pipistrellus sp.)*, noctule (*Nyctalus noctula)*, Daubenton's bat *(Myotis daubentonii),* and noctule bat *(Nyctalus leisleri)* were identified within 1 km of the Site, the majority of these were activity records. One record was in relation to a pipistrelle species roost located approximately 850 m to the south-east. Two European Protected Species Mitigation Licences (EPSMLs) for bats have been granted within 1 km of the Site boundary; one was granted for 2014 in relation to common pipistrelle *(Pipistrellus pipistrellus),* located approximately 560 m south-east of the Site boundary. Another licence was granted between 2011 and 2013 for common pipistrelle and is located approximately 850 m south-east of the Site boundary. Both licences are for resting places only. Bats are listed on the Kirklees BAP. There are two buildings (Target Notes B1 and B2) with bat roost suitability. The other habitats present within the Site provide limited foraging and commuting habitats for bats, and these habitats lack connectivity and are surrounded by hard-standing/buildings associated with Huddersfield City Centre.

3.2 Field Survey

3.2.1 06/05/2025 dusk emergence survey Market Offices – Location 1

A total of one bat detection was made during the survey. The detection was made at 21:40, 54 minutes after sunset. One species was identified: common pipistrelle. Commuting

© JCA Limited 2025

behaviour only was recorded. No bats were observed to emerge from the building being surveyed.

3.2.2 06/05/2025 dusk emergence survey Market Offices – Location 2

A total of one bat detection was made during the survey. The detection was made at 21:49, 63 minutes after sunset. One species was identified: common pipistrelle. Commuting behaviour only was recorded. No bats were observed to emerge from the building being surveyed.

© JCA Limited 2025

4. Interpretation of Survey Results

4.1.1 No bats were observed emerging from the surveyed building. The number of commuting passes recorded during the survey suggests a very low activity level in this area of the site.

© JCA Limited 2025

5. Impacts of the Scheme

5.1.1 The survey did not record any use of the building by roosting bats and it is considered unlikely that the scheme will result in an offence under relevant legislation (see section 1.5 and Appendix 1).

5.1.2 Furthermore, the proposed works are not anticipated to have a negative impact on important foraging areas or commuting routes used by bats.

© JCA Limited 2025

6. Recommendations

6.1.1 As bats have not been confirmed to be roosting at **Huddersfield Open Market**, a Bat Mitigation Licence from Natural England, is **not required**. Bats do not pose any constraint to the development of the market.

6.1.2 In the unlikely event a bat is found within any of the trees or buildings on site at any time of year, either prior to or during the scheme, works should cease immediately, and the advice of an appropriately qualified, experienced and licensed ecologist should be sought.

© JCA Limited 2025

7. References

AECOM (2020) *Huddersfield Outdoor Market Redevelopment Preliminary Ecological Appraisal Report*

Bat Conservation Trust and Institute of Lighting Professionals (2018) *Guidance Note 08/18: Bats and artificial lighting in the UK*. ILP, Rugby

Collins (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition, Bat Conservation Trust, written 2023

Mitchell-Jones, A.J. & McLeish, A.P. (2012) *The Bat Workers' Manual.* Pelagic Publishing, Exeter.

Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines.* English Nature, Peterborough

Relevant Legislation:

Wildlife and Countryside Act 1981 http://jncc.defra.gov.uk/page-3614

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. https://www.legislation.gov.uk/ukdsi/2019/9780111176573

Countryside and Rights of Way Act 2000 http://www.legislation.gov.uk/ukpga/2000/37/pdfs/ukpga_20000037_en.pdf?view=interweave

© JCA Limited 2025

Appendices

Appendix 1: Legislation Pertaining to the Protection of Bats

All bat species have, for some time, been protected under **Schedule 5: Animals which are Protected** and **Schedule 6: Animals which may not be Killed or Taken by Certain Methods** of the **Wildlife & Countryside Act 1981**. However, the effective protection for bats now comes from **Schedule 2 European Protected Species of Animals** of **The Conservation of Habitats and Species Regulations (CHSR) 2017**, which is retained in UK lay post-Brexit by **CHSR (Amendment) (EU Exit) 2019**. Changes to legislation, and devolution, mean the law is difficult to summarise succinctly across the UK, but the strong legal protection for bats and roosts remains.

It is an offence across the UK to:

- deliberately or recklessly capture, injure or kill a bat
- deliberately or recklessly disturb in a way that would affect their local distribution or abundance, or affect their ability to survive, breed or rear young
- damage or destroy a bat roost (breeding site, resting place, or any place used for shelter or protection, this is an 'absolute' offence)
- disturb bats while occupying a bat roost
- intentionally or recklessly obstruct access to a bat roost
- impair their ability to survive, breed, reproduce, or to rear or nurture their young
- impair their ability to hibernate or migrate
- possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat, or publish or cause to be published any advertisements likely to be understood as conveying the buying or selling, or intention to buy or sell, any of those things.

'Deliberately' in this context may be interpreted as someone who, although not intending to capture/injure or kill a bat, performed the relevant action, being sufficiently informed and aware of the consequence his/her action will most likely have.

In this interpretation, a bat roost is "any structure or place which any wild [bat]...uses for shelter or protection". Because bats tend to reuse the same roosts, legal opinion is that the roost is protected whether or not the bats are present at the time.

For full legislative context, see:

- CHSR 2017 Part 3: Protection of Species, Sections 42-45: Protection of Animals.
- WCA Part 1: Wildlife, Sections 9-12: Protection of other animals and prevention of poaching.

Additionally, the following species are listed as priority species under **Section 41** of the **Natural Environment and Rural Communities (NERC) Act 2006**, designating them as species of principal importance for the purpose of conserving biodiversity:

- Barbastelle bat *Barbastella barbastellus*
- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Greater horseshoe bat *Rhinolophus ferrumequinum*
- Lesser horseshoe bat *Rhinolophus hipposideros*

© JCA Limited 2025

Appendix 2: Site Plan and Surveyor Locations

© JCA Limited 2025

Site name & address

Huddersfield Open Market, Huddersfield, West Yorkshire, HD1 1RY

Key

- Surveyor Locations
- Camera Locations
- Building Surveyed

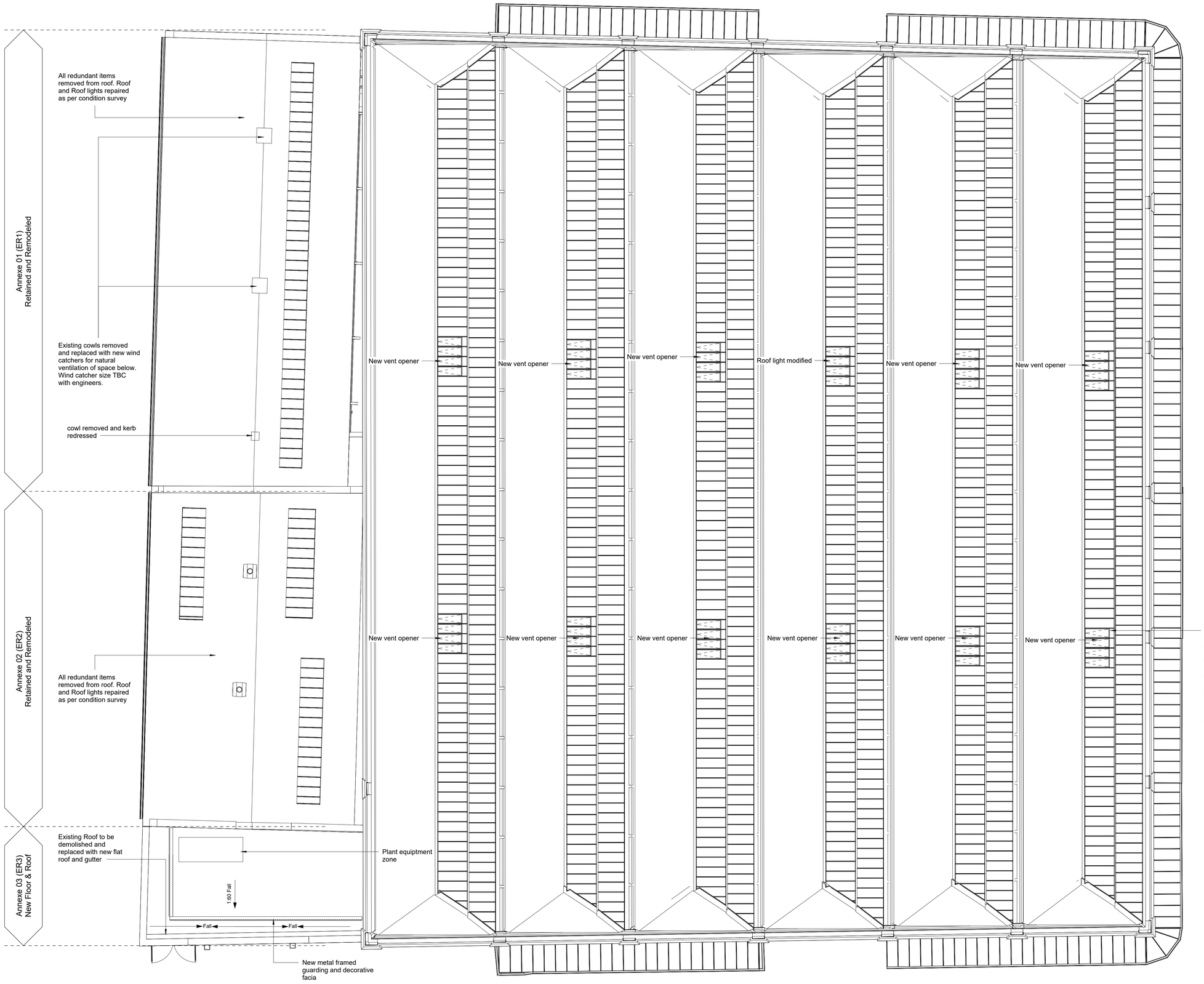
Scale 0 7.5 15 m

Site Huddersfield Open Market	Client Kirklees Council
Project Bat Emergence Survey	Author AWe
Plan ref 22853	Revision 0

Contains Ordanance Survey data © Crown copyright and database right 2025

Appendix 3: Proposed Development Plan

© JCA Limited 2025



1 Market Hall & Annexe - Roof Level
1 : 100

0m 2m 4m 6m 8m 10m
SCALE 1:100 @ A1

Do not remove this panel from this drawing. Do not scale from this drawing. All dimensions and levels are to be checked on site. All discrepancies, errors and omissions must be reported immediately to Greig and Stephenson Ltd. The contractor is responsible for setting out, checking and confirming all site conditions prior to fabrication and construction. All building and fabrication works are to be carried out in accordance with the Local and National Building Codes, practices and standards. This drawing is copyright and must not be reproduced without the written consent of Greig and Stephenson Ltd. Greig and Stephenson Ltd. accept no responsibility for any loss or expenses arising from use of this drawing for any purpose other than those agreed in writing by Greig and Stephenson Ltd. This drawing is not to be used by any third party without the written consent of Greig and Stephenson Ltd.

Note:
No survey information is available within the former Market Cafe area within Annexe Zone ER2.

Layouts shows are based on assumed wall and opening positions, to be updated following verification from measured survey information.

To be read in conjunction with other design information.

Refer to document HUD001-GSA-XX-XX-SP-A-0001 for outline specification.

Repair and Restoration works not identified on Proposed GA Plans.

For Repairs and Restoration works refer to Watts Condition Report ref:
Huddersfield Open Market Brook Street
Huddersfield
HD1 1RY
Version A Report Date 06 November 2023

REV	DATE	COMMENT	DRW | APRV
P04	02/12/24	Issued for Stage 3 frozen set	CS NM
P03	14/06/24	Annexe roof amended	CS NM
P02	02/06/24	Stage 2 Issued for comments & coordination	CS NM
P01	06-12-22	First Issue for Information	AA NM

Greig & Stephenson Architects
Studio SW.201, Screenworks
22 Highbury Grove
London, N5 2ER
tel. 020 7403 5511
fax. 020 7403 5544
email. info@gands.co.uk

CLIENT: KIRKLEES COUNCIL

PROJECT: HUDDERSFIELD MARKET

STATUS: S2 - For Information

DRAWING: **General Arrangement Market Hall and Annexe Roof Level as Proposed**

SCALE	DRW | CHKD	RVW | APRV	DATE
1 : 100 @ A1	CS NM	CS NM	17/04/24

DRAWING NUMBER: HUD001-GSA-ZZ-RF-DR-A-1102

REVISION: P04

Appendix 4: Bat Survey Calendar

Figure 1: Survey timings calendar (taken from BCT: Bat surveys for professional Ecologists, Good Practice Guidelines; 4th Edition).

Survey type	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
Daytime Bat Walkover (DBW)												
PRA – structures[a]												
Emergence survey for maternity or summer roosts[b]												
Emergence survey for transitional/ occasional roosts[b]												
Re-entry surveys[c]												
Emergence survey for mating roosts[b]												
Hibernation survey – structures[a]												
GLTA[d]												
PRF inspection survey – trees												
Ground-level bat activity survey – night-time walkover surveys and automated/static												
Pre-, during and post-hibernation – automated/static bat activity survey												
Swarming survey[e]												
Back-tracking survey												
Trapping and radio-tagging survey[f]												

= optimal period = sub-optimal period

= weather or location dependent (i.e. may not be suitable due to spring and autumn conditions in any one year or in more northerly latitudes). Note that October emergence surveys are not acceptable in Scotland.

= it is not acceptable to trap bats when they are heavily pregnant and have dependent pups. Mothers need to optimise foraging due to the physiological demands of pregnancy and lactation, and pups need to be regularly fed. Interrupting these activities could potentially have an impact on breeding success in the year in question. The timing of birth can vary between years – it may be as early as the end of May or as late as the start of August, therefore caution should be exercised and local information gained on birth dates before trapping activities are carried out during the summer months. Any information gained and decisions made should be kept as a record.

© JCA Limited 2025

Appendix 5: Glossary

Activity surveys - are used to assess the level of bat activity at a site. This can be done either by using equipment such as an AnaBat device, or manually walking around a site with a heterodyne detector, documenting the number of bat passes and interceptions.

Dawn surveys - begin around 2 hours before and up to sunrise when bats are returning to their roosts from foraging, and swarming behaviour can be seen close to roost entrances.

Dusk surveys - begin around 30 minutes before sunset and up to 2 hours afterwards. These are done in order to see bats emerging from their roost sites at night.

Echolocation – is a system similar to sonar that allows bats to travel and forage even in total darkness. Bats make a call and then listen to the returning echoes in order to build up a map of their surrounding area. This allows bats to gauge the identity and distance of an object by how long the echo takes to return to them.

Habitat - the ecological or environmental area that is inhabited by a particular species of animal, plant or other type of organism.

Hibernation - is a state of inactivity and metabolic depression characterized by lower body temperature, slower breathing, and lower metabolic rate. Hibernating animals conserve energy, especially during winter when food is short, tapping energy reserves, i.e. body fat, at a slow rate.

Hibernacula - typically consist of underground sites, such as caves and cellars, which remain relatively cold and humid. Bats will hibernate to conserve energy over the winter months when falling temperatures cause a drop in the abundance of insects. These will typically be colonised around November to around March.

Insectivorous – is when an organism feeds exclusively on insects.

Nocturnal - a behaviour characterized by being active during the night and sleeping during the day.

Maternity roosts – colonised around late May early June and consist of mature females and their young. These roosts need to be warm and quiet, and are used up until around August, with females typically leaving first and then the young.

Mating roosts – mating begins around late October to November. Males of most species use special mating calls to attract females. These can include purrs, clicks and buzzing.

Roost – a site where bats live during the day, rear young and hibernate. These can be in man made structures, such as buildings, bridges, tunnels, cellars and mines, or natural features such as mature trees and caves.

Roosts in buildings – many types of buildings will be used by bats. The most likely sites are agricultural buildings (e.g. farmhouses and barns), buildings with exposed wooden beams (greater than 20cm thick), buildings with weather boarding and/or hanging tiles, and buildings close to woodland and/or water.

Roosts in trees – these are typically in mature trees with deep sheltered cracks, under loose sections of bark, or in woodpecker holes.

Species – a group of organisms in which all members can interbreed and produce viable offspring.

Summer roosts (non-breeding) - these are generally occupied by groups of males and immature females during the summer, and are usually only occupied for a short period before the group moves to another location.

Swarming – a behaviour exhibited by bats returning to their roost sites at dawn. Bats can be seen repeatedly flying to and from the roost entrance, making it much easier for consultants to identify where roosts are on a building or structure.

Temporary/Transitory roosts – These are used after hibernation (March – April) before mature females disperse to maternity roosts and male/immature females colonise summer (non-breeding) roosts. Similarly, temporary roosts form before hibernation (August -October).

Underground Roosts – these are typically used during the winter and can be mines, caves, tunnels or cellars.

© JCA Limited 2025

Appendix 6: Author Qualifications

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management, ACIEEM.

Adam joined JCA to lead the expanding ecology department. Having returned to education as a mature student, Adam studied Countryside Management for two years before undertaking a Batchelor's degree in Animal and Wildlife Management, for which he was awarded First Class Honours. Adam has many years' experience in ecological consultancy, working on projects ranging from individual planning applications to national infrastructure projects. Adam holds a Natural England Level 1 great crested newt survey class licence and a Natural England Level 2 bat survey class licence.

Alex Donovan, Assistant Ecologist

MBIOL, BSc Biology (Industrial).

Alex joined JCA in 2023 after graduating from the University of Leeds with a First Class Honours Integrated Master's degree in Biology, including an industrial placement year working in the Uplands Research Department of the Game and Wildlife Conservation Trust. Alex is a CIEEM Qualifying Member, and a member of the BTO's Bird Ringing Scheme and Nest Record Scheme. Alex holds a Natural England barn owl survey licence, and is working towards additional survey licences for bats, great crested newts, and white-clawed crayfish.

© JCA Limited 2025

The information and advice which we have prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and bona fide opinions.

Signed

Redacted

.....

Adam West *ACIEEM, BSc (Hons)*

07/05/2025

Reviewed by

Redacted

.....

Alex Donovan *MBiol (Hons)*

07/05/2025

© JCA Limited 2025

For and on behalf of ***JCA Ltd***

Registered Office:

Unit 80

Bowers Mill

Branch Road

Barkisland

Halifax

HX4 OAD

Tel. 01422 376335

Email: info@jcaac.com

Web: www.jcaac.com

© JCA Limited 2025

ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes
- Butterfly & Insect Surveys

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)
- Planting Schemes
- Monitoring of bird or bat boxes.

ARBORICULTURAL SERVICES

Guidance for Architects & Developers

- British Standard 5837 Surveys
- Arboricultural Implications Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

JCA Limited

Arboricultural & Ecological Consultants

HEAD QUARTERS

Unit 80 Bowers Mill,
Branch Road,
Barkisland
Halifax, HX4 0AD

Company Reg No: 05005041
VAT No: 686 4674 78