



Bat Emergence and Re-Entrance Survey

Manettes 95-96 High Street and Barcode 92-94 High Street, Merthyr Tydfil, CF47 8UP

G+B Investments Ltd and

MF Design and Build Ltd

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Executive summary

Arbtech Consulting Limited was commissioned by the owners of two neighbouring commercial properties to undertake three Bat Emergence and Re-entrance Surveys (BERS) at Manettes and Barcode on Merthyr High Street. Given that the properties are immediately joining it was possible to conduct a single suite of BERS that served both properties. Each property has also been the subject of an individual Preliminary Roost Assessment (reported under separate cover). The survey suite was completed on the 30th June 2021. The aim of the assessment was to appraise the presence/likely-absence of a bat roost and to provide an assessment of the current status of all the survey features. This includes providing evidence for species, numbers and levels of activity, to identify any entrance and egress points, and to gain an understanding of the activity of bats using the site in the local landscape.

As a result of the survey suite, it is assessed that there is a likely-absence of roosting bats at both properties but that there was a historical pipistrelle roost in Barcode.

At the bequest of the LPA Ecologist a further bat survey was undertaken in October 2021.

Recommendations

	Survey Findings	Foreseen impacts	Recommendations / Mitigation	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (July 2018)
Barcode and Manettes	As a result of the survey suite, it is assessed that there is a likely-absence of roosting bats in the property. The presence of a small number [~30] of old pipistrelle droppings on the upper floor	The development of residential apartments in both properties is not considered to pose any risk to roosting bats and is not considered likely to result in any interference with extraneous bat commuting or foraging.	No further work is required and it is suggested that a planning decision can be made on the basis of no impact upon bat species.	It is recommended that #3 FSC Improved Triple Cavity bat boxes be wall-mounted on the west-facing elevations of each of the buildings to create new niche roost habitat for crevice-dwelling bats (6# units in total). Bats from these units would have good access to the wooded riparian corridor to the north west of site.

	of Barcode suggests that a minor roost may once have been present but no appears to be historical. Both properties show extensive signs of having been used by pigeons and probably other urban avian species such as corvids and starling.	No active nesting was observed in the summer of 2021	The LPA might consider using standard planning conditions to ensure the protection of nesting birds during conversion.	
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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Ltd was commissioned by the owners of Manettes and Barcode, via their agent, to undertake a suite of bat emergence and re-entrance surveys at two adjoining properties on Merthyr High Street. The survey suite was completed on the 30th June 2021 and in favourable survey conditions with all three surveys undertaken during the optimum survey window. The assessment is informed by the Bat Conservation Trust publication, *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

1.2 Site Context

The properties are located at National Grid Reference SO 04950 06387 and have a shared area of approximately 0.05ha. The site consists of two existing commercial buildings with frontage onto the High Street. The buildings are attached. Barcode is a bar venue and Manettes is a former ladies' fashion retail unit. The site is urban in context and both buildings are illuminated at night (on either side) by street lighting.

1.3 Scope of the report

This report provides a description of the bat activity observed and recorded during the survey. The aim of the assessment was to characterise any roosts present including species, number of individuals, number and location of roost access points, and to gain an understanding of how bats use the site.

Robust data has been collected, following good practice guidelines, to inform an assessment of the potential impacts of the proposed development on bats, and inform mitigation and enhancements. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve planning permission, and statutory consent to comply with wildlife legislation.

To achieve the aims of the assessment, the following steps have been taken:

- A desk study has been carried out, including a request for information from the local bat group or records centre – refer to PRA.
- Field survey(s) has been undertaken, including an external survey and internal inspection.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on the requirements of a European Protected Species Mitigation Licence (EPSML) application if appropriate.

A survey plan is presented in Appendix 1 showing the location of each surveyor and the bat activity observed and recorded during each survey, proposed plans will be provided once available in Appendix 2, desk study results are provided in Appendix 3, and a summary of relevant legislation is presented in Appendix 4.

1.4 Project Description

The development proposals in both cases are for the internal conversion of the upper floors into residential apartments.

2.0 Methodology

2.1 Desk Study methodology

Refer to the PRAs (2021).

2.2 Site Survey methodology

Three BERS surveys (two dusk and one predawn) were undertaken in June 2021 with all being within the optimum timing window as advised in the BCT survey guidelines.

The LPA Ecologist requested a further bat survey in the autumn which was conducted on a mild evening in October 2021.

The bat emergence/ and re-entrance surveys undertaken in 2021 confirm that there is a likely-absence of roosting bats.

The survey involved surveyors positioned around the building ensuring that all elevations and roof sections with suitable roosting features could be clearly observed. The location of each surveyor during each survey is shown in Appendix 1. Each surveyor was assigned an area of the building to observe for the duration of the survey. Surveyors used heterodyne and frequency division bat detectors, and Wildlife Acoustics EM3+ and Echo Meter Touch detectors connected to iPads. Bat echolocation calls recorded during the surveys were analysed using Wildlife Acoustics sound analysis software Kaleidoscope V3.1.7 when required. The Echo Meter Touch includes an auto ID function for bat species; however, this is not 100% accurate and further post-survey sound analysis is often required to confirm species that could not be identified by the auto ID software during the survey. Surveyors also used head torches, survey record sheets and pens/pencils for recording all activity observed during the surveys. Each surveyor was also provided with a hand-held radio for communication between surveyors to assist with confirming ambiguous bat activity e.g. a bat emergence or a bat passing over the building.

In accordance with the latest bat survey guidelines (Collins, J. 2016) dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility. Dawn re-entry surveys commenced 2 hours before sunrise and continued until 15 minutes after sunrise.

Surveys were completed during optimal weather conditions i.e. when temperatures were above 10°C, with no significant rain or strong winds, as these adverse weather conditions can impact upon bat emergence and foraging behaviour.

2.3 Surveyors

The lead surveyor was Chris Formaggia (NRW Bat Licence S088475/1) and he was assisted by Megan James, Ecology Intern with 1 year of bat survey experience. Two surveyors were able to provide enough cover of the building. The designated position of each surveyor during each survey is detailed in the tables in Section 3.6 below and shown on the plan in Appendix 1.

At the bequest of the LPA Ecologist – a third surveyor was utilised in October and positioned in the public car park at NGR SO 04910 06421 to cover any flightpaths over to the Nant Morlais corridor.

2.4 Survey Timings and Weather Conditions

The dates and times of the survey is presented in Table 1, along with sunset/sunrise times as applicable and the weather conditions at the start and end of each survey.

Table 1: Survey schedule and weather conditions

Reference	Survey date	Survey Start and End Times Sunset/sunrise time	Weather Conditions Start	Weather Conditions END
Barcode/Manettes	02/06/2021	2050– 2330 Sunset: 2124	Temp: 18°C Humidity: 88% Cloud Cover: 65% Wind: 7mph from NE Rain: None	Temp: 16°C Humidity: 94% Cloud Cover: 80% Wind: 5mph from W Rain: None
Barcode/Manettes	16/06/2021	2100– 2345 Sunset: 2134	Temp: 15°C Humidity: 94% Cloud Cover: 40% Wind: 9mph from W Rain: None	Temp: 14°C Humidity: 94% Cloud Cover: 60% Wind: 10mph from W Rain: None
Barcode/Manettes	30/06/2021	0300– 0510 Sunrise: 0459	Temp: 13°C Humidity: 100% Cloud Cover: 5% Wind: 5mph from N Rain: None	Temp: 12°C Humidity: 100% Cloud Cover: 10% Wind: 7mph from NW Rain: None
Barcode/Manettes	11/12/2021	1730-2000 Sunset: 1754	Temp: 13°C Humidity: 63% Cloud Cover: 30% Wind: 12mph from W Rain: None	Temp: 13°C Humidity: 63% Cloud Cover: 20% Wind: 10 mph from W Rain: None

2.5 Limitations

This survey follows best practice guidance to confirm presence/likely-absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the building, and the site as a whole by bats, at all times cannot be established based on this information.

There were no specific limitations to the survey which was undertaken with the favoured optimal survey window and under suitable weather conditions. It should be noted that the survey conditions in May had been characterised up to the survey date by cold temperatures, high rainfall and strong winds. The survey month was characterised by low temperatures and high rainfall. This improved considerably at the end of May and into June.

3.0 Results and Evaluation

3.1 Survey Results

The results of the survey are provided in the tables below.

Table 2: Survey results – Dusk Emergence/Re-entrance Surveys

Date		02/06/2021
Start and End Times		2050– 2330 Sunset: 2124
Surveyor (position) As shown in Appendix 1		Chris Formaggia (32 years of professional bat survey experience) – at NGR SO 04971 06378 at front of target buildings. Megan James (1+ years of BERS experience) at NGR SO 04930 06392 at rear of target buildings.
Building Reference	Surveyor Position	Notes/observations:
B/M	1 to 2	No bat emergence or re-entrance from/into either property. The only bat activity recorded/observed was some minor foraging by one to two common pipistrelle bats over the roofs on the east side of the high street and 6 CPIP passes over and around the Castle Street Car Park. No other bats observed or detected. Bat activity was considered very low.
Date		16/06/2021
Start and End Times		2100– 2345 Sunset: 2134
Surveyor (position) As shown in Appendix 1		Chris Formaggia (32 years of professional bat survey experience) – at NGR SO 04971 06378 at front of target buildings. Megan James (1+ years of BERS experience) at NGR SO 04930 06392 at rear of target buildings.
Building Reference	Surveyor Position	Notes/observations:
B1	1 to 2	No bat emergence or re-entrance from/into either property. No bat activity recorded or observed at all at the front of the properties. Only 7 bat detections/observations to the rear of the properties. 5 of these were CPIP and 2 were high passes by noctule. Bat activity was considered very low.

Date		30/06/2021
Start and End Times		0300– 0510 Sunrise: 0459
Surveyor (position) As shown in Appendix 1		Chris Formaggia (32 years of professional bat survey experience) – at NGR SO 04971 06378 at front of target buildings. Megan James (1+ years of BERS experience) at NGR SO 04930 06392 at rear of target buildings.
Building Reference	Surveyor Position	Notes/observations:
B1	1 to 2	No bat emergence or re-entrance from/into either property. No bat activity observed or recorded at all throughout survey.
Date		27/10/2021
Start and End Times		1730– 2000 Sunset: 2054
Surveyor (position) As shown in Appendix 1		Elias Formaggia (3+ years of professional bat survey experience) – at NGR SO 04971 06378 at front of target buildings. Megan James (1+ years of BERS experience) at NGR SO 04930 06392 at rear of target buildings. Chris Formaggia (32+ years of professional bat survey experience) at NGR SO 04910 06421 between sites and Nant Morlais riparian corridor
Building Reference	Surveyor Position	Notes/observations:
B1	1 to 2	No bat emergence or re-entrance from/into either property. No bat activity observed or recorded at all throughout survey.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

When bat roosts are present, the bat surveys undertaken at a site facilitate the characterisation of the roost type. This allows for appropriate mitigation and compensation to be designed to inform a European Protected Species Mitigation Licence (EPSML) application to Natural England.

The definitions of bat roost types are provided below, taken from the *Bat Mitigation Guidelines* (English Nature, 2004) and the Bat Conservation Trust publication, *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

Day roost: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

Night roost: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.

Feeding roost: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.

Transitional / occasional roost: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

Swarming site: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites

Mating sites: sites where mating takes place from later summer and can continue through winter.

Maternity roost: where female bats give birth and raise their young to independence.

Hibernation roost: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort should be classed as 'hibernation confirmed'.

Satellite roost: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Other: roost types are interchangeable and not always easy to classify according to the nuances of certain species.

The surveys undertaken to date in and around the properties provide sufficient information to inform a planning application.

On the basis of the survey, it is concluded that there is a likely-absence of roosting bats in both buildings.

The old pipistrelle droppings found on the upper floor of Barcode are assessed as being remnants from a minor pipistrelle roost that is now historical.

4.2 Evaluation

The optimum BERS survey finds a likely-absence of bats at the properties. The level of effort is sufficient for planning consent purposes and accords with standard bat survey guidelines.

Table 5: Evaluation of buildings on site

	Survey Findings	Foreseen impacts	Recommendations / Mitigation	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (July 2018)
Barcode and Manettes	As a result of the survey suite, it is assessed that there is a likely-absence of roosting bats in the property. The presence of a small number [~30] of old pipistrelle droppings on the upper floor of Barcode suggests that a minor roost may once have been present but	The development of residential apartments in both properties is not considered to pose any risk to roosting bats and is not considered likely to result in any interference with extraneous bat commuting or foraging.	No further work is required and it is suggested that a planning decision can be made on the basis of no impact upon bat species. The additional survey has strengthened the conclusion that the two buildings are not functioning bat roosts.	It is recommended that #3 FSC Improved Triple Cavity bat boxes be wall-mounted on the west-facing elevations of the buildings to create new niche roost habitat for crevice-dwelling bats. Bats from these units would have good access to the wooded riparian corridor to the north west of site.

	no appears to be historical.			
	Both properties show extensive signs of having been used by pigeons and probably other urban avian species such as corvids and starling.	No active nesting was observed in the summer of 2021	The LPA might consider using standard planning conditions to ensure the protection of nesting birds during conversion.	

4.3 Mitigation/Compensation

Not required

Dedicated Bat Facility (DBF):

Not required.

Enhancement:

Wall-mounted array of #3 FSC Improved triple cavity bat boxes on west facing elevations, per building.



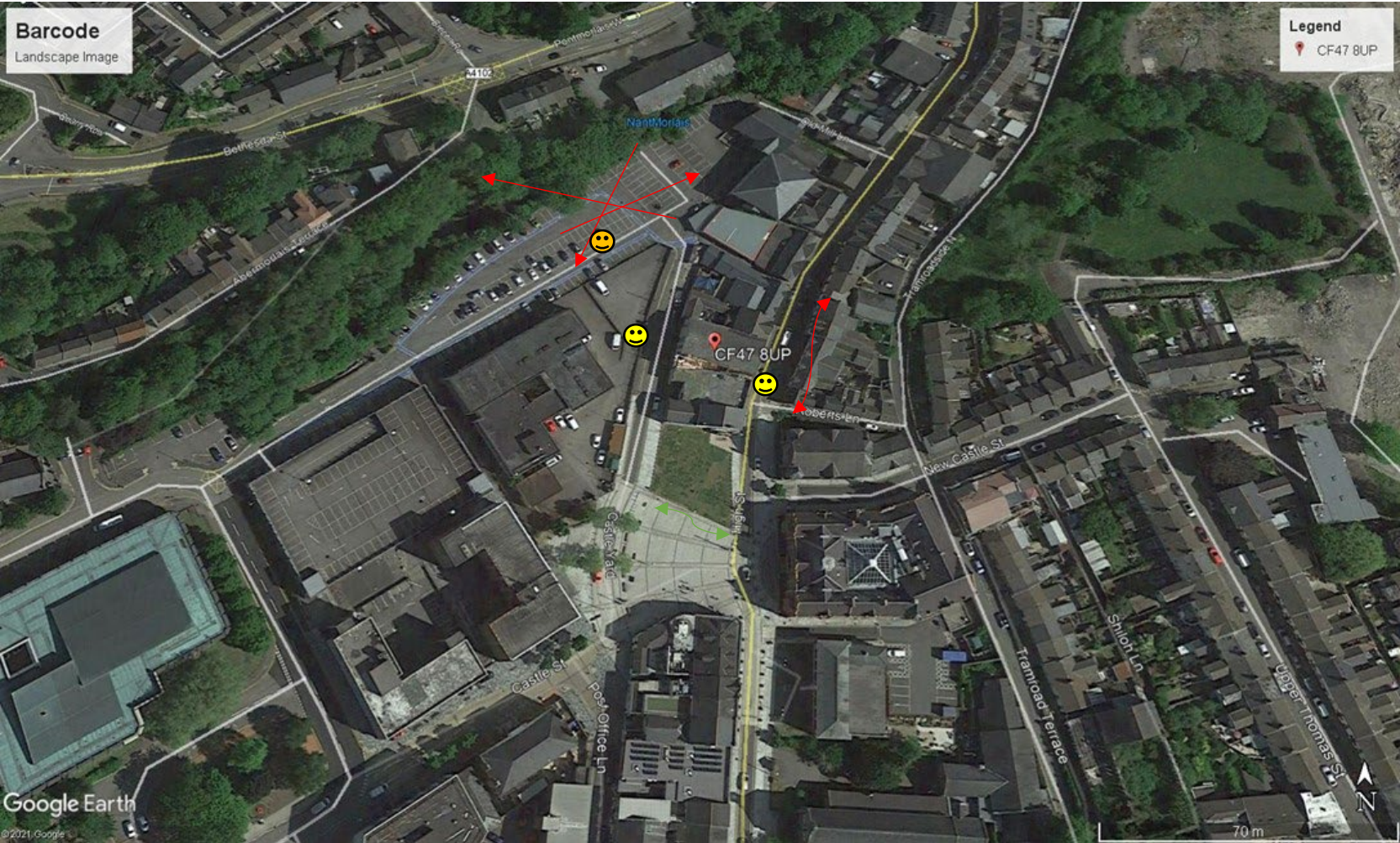
[FSC Improved Triple Cavity Box](#)

5.0 Bibliography

- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2018) accessed on 03/08/2021
- Magic database (2018) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 01/07/21.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendix 1: Survey Plan

Surveyor positions and main CP activity forage lines (red)



Appendix 2: Proposed Site Plan

Refer to PRAs

Appendix 3: Desk Study Information

Refer to PRAs

Appendix 4: Legislation and Planning Policy related to bats

LEGAL PROTECTION

All species of bat are fully protected under *The Conservation of Habitats and Species Regulations 2017* through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

(1) A person is guilty of an offence if they:

- (a) Deliberately captures, injures or kills any wild animal of a European protected species,
- (b) Deliberately disturbs wild animals of any such species,
- (c) Deliberately takes or destroys the eggs of such an animal, or
- (d) Damages or destroys a breeding site or resting place of such an animal,

(2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely—

- (a) To impair their ability:
 - (i) To survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) To affect significantly the local distribution or abundance of the species to which they belong.

All species of bats are also protected under the *Wildlife and Countryside Act 1981 (as amended 01.04.1996)* through their inclusion on **Schedule 5** (which applies to England and Wales). 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

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 42 of the Act requires The National Assembly for Wales must, as respects Wales, publish a list of the living organisms and types of habitat which in the Assembly's opinion are of principal importance for the purpose of conserving biodiversity. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.