Preliminary Ecological Appraisal & Bat Roost Assessment

Home extension at 16 Bell Road, Wylam, Northumberland, NE41 8EH

Report prepared on behalf of Or & Keren Raviv

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Whilst every effort is taken to meet the client's brief and ensure an accurate assessment of the site at the time of the survey, please be aware that no survey can ensure complete evaluation of the natural environment.

Field Investigations and Data

Where field investigations have been carried out these have been restricted to a level of detail required to achieving the stated objectives of the work. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by JP Environmental Solutions for inaccuracies in the data supplied by any other party.

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Contents

Со	ontent	s
1.0) Intro	oduction5
1	1.1 Si	te details5
1	1.2 So	cope of proposed works5
1	1.3 Lc	cation map5
1	1.4	Bat conservation and legal protection6
1	1.5	Bird Protection Legislation7
1	1.6	Brief overview of key legislation8
2.0) Surv	vey Methods
2	2.1 De	esk study11
	2.1.	1 Record search11
	2.1.	2 Designated sites
2	2.2 In:	spection11
2	2.3 Lir	nitations11
2	2.4 Qı	uality Assurance11
3.0	Res	ults
		ults
	3.1 De	
	3.1 De <i>3.1.</i>	esk study11
3	3.1 De <i>3.1.</i> <i>3.1.</i>	esk study
3	3.1 De <i>3.1.</i> <i>3.1.</i> 3.2 Ha	esk study
3	3.1 De 3.1. 3.1. 3.1. 3.2 Ha 3.3 W	esk study
3	3.1 De <i>3.1.</i> <i>3.1.</i> 3.2 Ha 3.3 W 3.4 Bu	esk study111 Designated sites112 Data search ERIC NE11bitat assessment12ork area inspection13
3 3 3 3 4.0	3.1 De <i>3.1.</i> <i>3.1.</i> 3.2 Ha 3.3 W 3.4 Bu) Con	esk study111 Designated sites112 Data search ERIC NE11bitat assessment12ork area inspection13uilding inspection - Bats13
3 3 3 3 4.0	3.1 De 3.1. 3.1. 3.2 Ha 3.3 W 3.4 Bu 3.4 Bu) Con 4.1 Th	esk study111 Designated sites112 Data search ERIC NE11bitat assessment12ork area inspection13uilding inspection - Bats13clusion and recommendations18
3 3 3 4.0 2	3.1 De <i>3.1.</i> <i>3.1.</i> 3.2 Ha 3.3 W 3.4 Bu 3.4 Bu 0 Con 4.1 Th Pote	esk study111 Designated sites112 Data search ERIC NE11bitat assessment12ork area inspection13uilding inspection - Bats13clusion and recommendations18ne importance of the site for bats18
3 3 4.0 2	3.1 De 3.1. 3.1. 3.2 Ha 3.3 W 3.4 Bu 3.4 Bu 4.1 Th Pote 4.2 Th	esk study111 Designated sites112 Data search ERIC NE11bitat assessment12ork area inspection13uilding inspection - Bats13clusion and recommendations18ne importance of the site for bats18ential impacts18
3 3 4.0 2 2	3.1 De 3.1. 3.1. 3.2 Ha 3.3 W 3.4 Bu 3.4 Bu 4.1 Th Pote 4.2 Th 4.3 Re	esk study111 Designated sites112 Data search ERIC NE11bitat assessment12ork area inspection13uilding inspection - Bats13clusion and recommendations18ne importance of the site for bats18ential impacts18ne importance of the site for bats18ne importance of the site for bats18ne importance of the site for bats18ne importance of the site for birds (general)18
3 3 4.0 2 2 5.0	3.1 De 3.1. 3.1. 3.2 Ha 3.3 W 3.4 Bu 3.4 Bu 4.1 Th Pote 4.2 Th 4.2 Th 4.3 Re 9 Refe	esk study111 Designated sites112 Data search ERIC NE11bitat assessment12ork area inspection13uilding inspection - Bats13clusion and recommendations18ne importance of the site for bats18ential impacts18ne importance of the site for bats18ne importance of the site for bats18ne importance of the site for birds (general)18ne importance of the site for birds (general)18

	6.2 E	Bat activity surveys	21
	6.3	Limitations	21
	6.4	Quality Assurance	22
	6.5 D	Dusk Emergence Survey	22
	6.	5.1 Survey Results	22
	6.6 D	Dawn Return Survey	24
	6.	6.1 Survey Results	24
7.	0	Conclusion and recommendations	26
	7.1	The importance of the site for bats	26
	7.2	Roost	26
	7.3	Licence need	26
	7.4	Supervision of works	26
	7.7	If a protected species is discovered	27
	7.8	Wildlife Enhancement	27
8.	0 Ap	pendix	28
	Appe	endix 1: Site location map	28
	Арре	endix 2: Photographs of the buildings	29
	Арре	endix 3a: Plans of existing building layout – external overview	36
	Арре	endix 3b: Plans of existing building layout – internal elevations	37
	Арре	endix 3c: Plans of proposed building layout – external overview	38
	Арре	endix 3d: Plans of proposed building layout – internal overview	39
	Арре	endix 3e: Existing Roof plan	40
	Арре	endix 3f: Proposed roof plan	41
	Арре	endix 4: Protected species records from ERIC NE	42

1.0 Introduction

1.1 Site details

Home extension at 16 Bell Road, Wylam, Northumberland, NE41 8EH

16 Bell Road is a residential area on the eastern edge of the village of Wylam, Northumberland; close to the River Tyne. The property is part of a residential housing area, adjacent to Wylam First School and close the countryside fringe surrounding Newcastle Upon Tyne. The two storey property is located at grid reference NZ1180 6492.

1.2 Scope of proposed works

JP Environmental Solutions has been asked to carry out a preliminary ecological appraisal to support a proposal to extend the existing residential property at the rear; which will be submitted as a planning application and to make recommendations on any future ecological work that may be required.

Following the PEA a bat roost appraisal was undertaken to determine the potential use of the property by local bat populations.

1.3 Location map

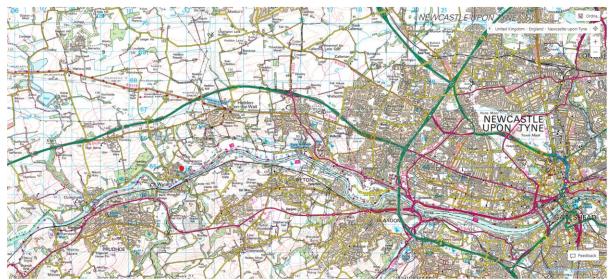


Diagram 1 showing the site location at the red dot (image from Bing Maps)



Diagram 2 showing an aerial view of the site, located with the red box (image from Bing Maps).

1.4 Bat conservation and legal protection

All bat species and bat roosts are under legal protection in the UK, and all bats are designated as European Protected Species by the EU. In England there are several pieces of legislation protecting bats, starting with the Wildlife and Countryside Act 1981 and subsequent amendments to this act including those made in the Countryside and Rights of Way Act 2000. European protection started in 1992 with the European Union's Habitat Directive, which has been implemented in England most recently as the Conservation of Habitats and Species Regulations 2010 (the original version was implemented in 1994, with amendments in 2007 and 2008/09).

In England, you will commit a criminal offence if you do any of the following:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat, in particular in a way that would affect its ability to survive, breed or rear young, hibernate or migrate, or significantly affect the local distribution or abundance of the species;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat;
- Intentionally or recklessly disturb a bat at a roost;
- Intentionally or recklessly obstruct access to a roost.

The UK Biodiversity Action Plan (UKBAP) (Anon, 1995), organised to fulfil the Convention on Biological Diversity in 1992, to which the UK is a signatory, has produced a national priority species list. All species included have specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species of nature conservation importance at regional and local levels.

The UKBAP, as updated in 2007, lists seven bat species as conservation priorities:

- Barbastelle
 Barbastella barbastellus
- Bechstein's Myotis bechsteinii
- Noctule
 Nyctalus noctula

- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared Plecotus auritus
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe Rhinolophus hipposideros

In Northumberland a total of 10 species are recorded as present in the county as shown in the table below:

Species	Frequency
Brandt's bat (Myotis brandtii)	Rare
Brown Long Eared (Plecotus auritus)	Frequent
Common Pipistrelle (Pipistrellus pipistrellus)	Common
Daubenton's bat (Myotis daubentonii)	Frequent on water
Leisler's bat (Nyctalus leisleri)	Rare
Nathusius' Pipistrelle (Pipistrellus nathusii)	Rare
Natterer's bat (Myotis nattereri)	Uncommon
Noctule bat (Nyctalus noctula)	Scattered
Soprano Pipistrelle (Pipistrellus pygmaeus)	Common
Whiskered bat (Myotis mystacinus)	Uncommon

 Table 1:
 Current extent of bat species found in Northumberland – taken from

 Northumberland Biodiversity Action Plan.

1.5 Bird Protection Legislation

All wild bird species, their eggs and nests are protected by law. You must always try to avoid harming birds or to use measures which do not kill or injure them before considering taking harmful action.

In most cases you should be able to avoid harming wild birds by:

- timing your work to avoid the breeding season
- using a range of methods that deter but don't harm them

In exceptional cases the law allows <u>certain exemptions to permit legal activities</u> (such as a development with planning permission) and where avoiding harm isn't possible. It is illegal for you to:

- intentionally kill, injure or take wild birds
- intentionally take, damage or destroy a wild bird's nest while it's being used or built
- intentionally take or destroy a wild bird's egg
- possess, control or transport live or dead wild birds, or parts of them, or their eggs
- sell wild birds or put them on display for sale
- use prohibited methods to kill or take wild birds

Schedule 1 bird (for example barn owls), have extra legal protection. For these bird species it's also an offence to do the following, either intentionally or by not taking enough care:

- disturb them while they're nesting, building a nest, in or near a nest that contains their young
- disturb their dependent young

You could get an unlimited fine and up to 6 months in prison for each offence if you're found guilty.

Activities that can harm birds, particularly during breeding season include:

- trimming or cutting trees, bushes, hedges and rough vegetation
- renovating, converting or demolishing a building
- creating disturbance, EG noise, lighting and vibration
- taking actions to prevent problems, EG shooting birds or removing nests

1.6 Brief overview of key legislation

Bern Convention

The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. encourages to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals. To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or 'Bonn Convention' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CROW).

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Fora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Conservation of Habitats and Species Regulations 2017

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years.

Public bodies must also help preserve, maintain and re-establish habitats for wild birds. The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the

animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

Schedule 2 – European Protected Species of Animals

- Horseshoe bats Rhinolophidae all species
- Common bats Vespertilionidae all species
- Large Blue Butterfly Maculinea arion
- Wild cat Felis silvestris
- Dolphins, porpoises and whales *Cetacea* all species
- Dormouse Muscardinus avellanarius
- Pool frog Rana lessonae
- Sand lizard Lacerta agilis
- Fisher's estuarine moth Gortyna borelii lunata
- Great crested newt Triturus cristatus
- Otter Lutra lutra
- Lesser whirlpool ram's-horn snail Anisus vorticulus
- Smooth snake Coronella austriaca
- Sturgeon Acipenser sturio
- Natterjack toad Epidalea calamita
- Marine turtles Caretta caretta, Chelonia mydas,
- Lepidochelys kempii, Eretmochelys imbricata,
- Dermochelys coriacea

Schedule 5 – European Protected Species of Plants

- Shore dock *Rumex rupestris*
- Killarney fern *Trichomanes speciosum*
- Early gentian Gentianella anglica
- Lady's-slipper Cypripedium calceolus
- Creeping marshwort Apium repens
- Slender naiad Najas flexilis
- Fen orchid Liparis loeselii
- Floating-leaved water plantain *Luronium natans*
- Yellow marsh saxifrage Saxifraga hirculus

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or
- young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and

The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore
- attached to any such wild plant;
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8;
- or
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates.

Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise case to grow in the wild any plant which is listed in Part II of Schedule 9. It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

Wild Mammals (Protection) Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation. Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering. Its application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

2.0 Survey Methods

2.1 Desk study

2.1.1 Record search

A protected species data search was commissioned from the Environmental Record Centre North East (ERIC NE) to supply information within a 2km radius of the site.

2.1.2 Designated sites

The Multi-Agency Geographic Information for the Countryside (MAGIC) website was carried out to identify any areas designated for nature conservation within a 2km radius of the site.

2.2 Inspection

A site visit was carried out on the 4th August 2022 by ecologist Jonathan Pounder. This daytime assessment was undertaken to obtain a general overview of the site and identify any potential impacts the proposed work will have on the natural environment and any protected species/ habitats.

The weather conditions during the site visit was dry and sunny with a temperature of 18°C with a fresh breeze W 11mph. There had been no rainfall in the days leading up to the survey.

2.3 Limitations

The survey represents only a snap shot in time and although every effort was made to identify the correct information the daylight inspection only represents a true record at the time the survey was carried out. Full access to the property was achieved during the survey and it was carried out within "bat season". Access in the loft space was restricted into the far areas of the loft due to the chimney construction.

2.4 Quality Assurance

JP Environmental Solutions staff are experienced, well qualified bat workers and members of the Chartered Institute of Ecology and Environmental Management (CIEEM). All field work is carried out according to the Bat Conservation Trust's 'Bat Surveys: Good Practice Guidelines, 3rd edition'.

3.0 Results

3.1 Desk study

3.1.1 Designated sites

The search of the MAGIC databases revealed the work site is not within a SSSI site with the closest SSSI site being Close House Riverside SSSI at 623m and the River Tyne at Ovingham SSSI at 2989m. The site is inside of the SSSI Impact Zone.

The closest Local Nature Reserve is Clara Vale at 1187m and Wylam Haughs LNR at 700m

3.1.2 Data search ERIC NE

The data search from ERIC NE provided 22,966 unfiltered records provided, of which

- 7,810 are protected/ notable species
- 15,156 are other species record

- 550 are bat species records
- 5,292 are protected bird records
- 75 are amphibian species records

From the records Barn Owls are recorded in the area as well as Noctule, Soprano pipistrelle, Common pipistrelle, Daubenton's, Whiskered, Natterers, Whiskered, Whiskered/ Brandt's, and a number of Unidentified Bat Species (including Myotis spp and Pipistrelle spp.)

There are 738 biological records with the grid reference NZ11 64; but no biological records for the specific grid reference of the property NZ1180 6492.

A Common pipistrelle bat roost is recorded at grid reference NZ1164 (Roost in a house) from 1996; but without a more specific grid reference the exact location cannot be determined.

3.2 Habitat assessment

The site is located within a residential area at the edge of Wylam; slightly further away from the site you have the countryside fringe bordering Newcastle and the open land of Northumberland. Major structures surrounding the site include the A69 to the North and the River Tyne to the south. To the west is Wylam Village which has a mixed building age structure and construction type (traditional and more modern); to the east is the primary school and then agricultural land (mainly pastural), larger estate buildings and golf courses; before meeting the edge of the City of Newcastle.

This land is broken up by a patchwork of small woodlands (some ancient or semi natural) linked with hedgerows, burns and other small watercourses and a PROW network; thus providing good connectivity between the urban environments and the countryside.

The work area is covered by:

- Northumberland County Council
- Wylam Parish Council
- 393m away from designated Ancient and semi natural woodland
- 109m away from Priority Habitat Inventory Traditional Orchard
- Network Enhancement Zone 2
- Farm Wildlife Package Area
- Woodland Willow Tit
- Keeping Rivers Cool
- Landscape Character Area Settlement
- Inside the SSSI Impact Zone
- Below the Moorland Line
- Objective 2 Area
- Arable Assemblage 4 species
- Grassland Bird Assemblage 3 species
- CS Target species Curlew, Grey Partridge, Lapwing, Tree Sparrow, Yellow wagtail
- North East Region HLS Theme Area
- Groundwater Vulnerability Map Medium/ High
- Built Up Area 2011

Closest Listed Building – Wylam War Memorial Grade 2 (1442824) at 300m

Closest Scheduled Monument - Defended settlement, 400m south west of South Farm, Houghton (1014076) at 1638m

Closest Bat License - 1213m, EPSM2010-2103 for Brown Long Eared

Closest GCN Return – 1004m, License return 05/05/15

Closet GCN pond 10 figure present – 1368m

3.3 Work area inspection

A visual inspection of the work area was undertaken during the site visit, with the table of results presented in Table 2.

3.4 Building inspection - Bats

A building inspection was undertaken following the guidelines set out in Mitchell-Jones, A.J. & McLeish, A.P. [Eds.] (2012) The Bat Workers Manual (3rd edition). Joint Nature Conservancy Council, Peterborough.

Photographs from the survey can be found in Appendix 2 and plans for the site are in Appendix 3. Bat roost potential assessment based on the following table:

Bat Roost Suitability	Description
Negligible	The structure lacks any features suitable for roosting bats (such as well sealed modern buildings with no access points or suitable exterior features) and is located away from suitable foraging or connecting habitat.
Low	The structure has one or more potential roosting sites that could be used by individual bats sporadically. However, these potential roost sites are not suitable to be used on a regular basis or by a large number of bats. A tree of sufficient size and age to contain potential roost features, but with none seen from the ground or features seen with only very limited roosting potential. Surrounding habitat may be suitable for foraging and commuting bats but is isolated.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats but are unlikely to support roosts of high conservation status. Habitat is connected to the wider landscape and could be used by foraging and commuting bats.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis. Surrounded by high quality habitat that is well connected to the wider landscape and is likely to be used regularly by foraging and commuting bats.
Confirmed roost	Positive signs of bats are recorded within the structure (internally or externally), such as individual bats or bat droppings.

Table 2: Criteria for Bat Roost Potential Assessment of a Structure (Based on Table 4.1 from Collins, 2016)

See Diagram 3 for full results and Photographs 1 to 12 in Appendix 2.

External

The semi-detached property is a two-storey brick constructed building with pebble dashed walls and a tiled roof; located at the end of a row of similarly constructed buildings; set in a wider residential area (Photograph 1). The front/ south eastern elevation leads out onto Bell Road and has new UPVC windows and doors (modern style, well fitted), plastic rain water goods and the pebble dashing over the brickwork across the upper floor. The pointing on the visible brickwork is in good condition.

The roof tiles are of an older age and in places are lifted and damaged, with gaps present on the ridge tile as well. The lead flashing around the chimney is also slightly lifted in places creating a gap (Photograph 2).

The wooden soffit is again aged and displays gaps and holes throughout (Photograph 3).

The gable end is the north eastern elevation and completely rendered in pebble dashing (Photograph 4). Several roof tiles are missing from the rear facing roof slope at the edge of the roof with gaps present in the soffit apex (Photograph 9) and gaps and water damage also present (Photograph 10).

The rear of the property has a more recent single storey extension built onto the ground floor of the property in more recent times (Photograph 5). The extension is built to the same construction as the rest of the building (brick with a tiled roof), with UPVC double doors and window and in very good condition.

The pebble dashing on the walls on the first floor of the original building continues and is in good condition. The fascia's and soffits do look tired with damage and gaps present. The roof again has some lifted tiles and gaps that could be exploited.

In the rear garden there is also a single storey out building made from a bricks, with a flat felted roof with a slim wooden fascia (Photograph 6). The building is set on the garden boundary with the neighbouring property and demonstrates the incline to the garden at the rear of the property (Photograph 7). The old wooden door is in declining condition with several shallow holes around the stone lintel above it.

Gaps are present between the wooden fascia and brickwork, but with heavy cobwebbing (Photograph 8).

Internal

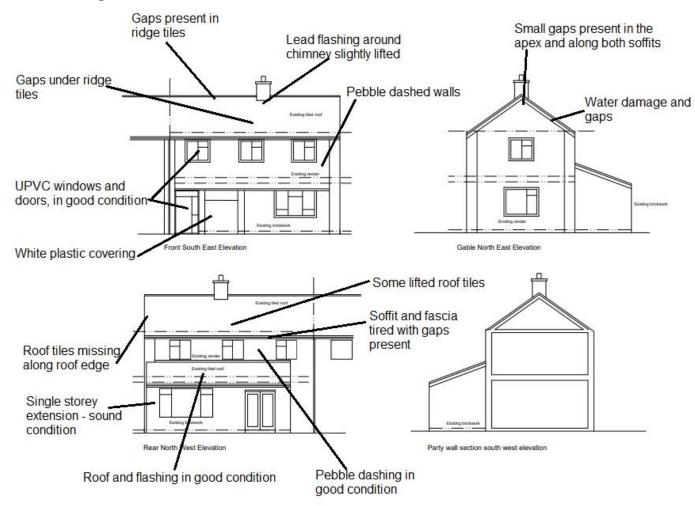
The property is occupied and well cleaned and maintained, the homeowners reported no evidence of bat activity inside the property. The loft is accessible through one of the bedrooms in the property; which has ladder access. The immediate area around the loft hatch has wooden decking and has a fluorescent tube lighting.

The roof space shows a timber framework supporting a felt lined roof (Photograph 11). The area around the loft hatch is used for storage providing opportunities for field signs, but the inspection produced no signs.

The loft space access is restricted to the full loft area by the timber framework construction and chimney construction (Photograph 12); and is heavily insulated

The loft has a large number of cobwebs and when the lights are turned off, daylight is visible in several places. No evidence of bat activity was identified in the loft.

Conclusion of visual inspection – the building has *moderate to low potential for use by local bat populations*; and further ecological survey work is required to determine the potential impacts on the development.



Results diagram – External

Diagram 3 showing the results of the survey for the external of the building

Species	Brief feature description	Potential Impacts	Recommendations
Notable vegetation	The surrounding land is residential gardens, no notable vegetation identified	No Impact	
Invasive plant species	No invasive species were noted during the visit,	Negligible Impact	Ensure contractors have cleaned equipment before entering the work area to reduce the chance of them bringing in any invasive plant species
Bird	No active nests were identified during the visual inspection.	Low Impact If active nests are present at the time of the work starting	A visual check (ideally by an ecologist) prior to development work being started to ensure no nesting activity is being undertaken in the work area. No work can start until active nests are vacated. Implement work in the Autumn/ Winter period to avoid the main nesting season
Otter	Otter activity associated within the wider geographical area; but there are no watercourses on the site and as a result the local Otter population will not be able to utilise the site	No Impact	
Dormouse	No records of dormouse in the area. Habitat is unsuitable for them within the work area	No Impact	
Bat	Bats are known to be present in the wider area, and the building does have several potential roosting opportunities that could be utilised. The surrounding area will be good foraging habitat and bats are known to be active in the wider area	Medium Impact	Detailed visual inspection undertaken during field visit. Further ecological surveys IS NEEDED to confirm the use of the building by local bat populations.
Great Crested Newt	Present in the wider area (closest confirmed breeding pond is 1004m), but habitat less suitable for them within the work area. Work will not impact on them.	No Impact	
Natterjack Toads	Area unsuitable, no nearby records	No Impact	
Sand Lizards	Area unsuitable, no nearby records	No Impact	
Smooth snakes	Area unsuitable, no nearby records	No Impact	
Badger	Badgers are active in the wider geographical area, but the presence of the boundary wall and urbanised surroundings of the site restrict any potential use of the site by badgers.	No Impact	
Red Squirrel	Area increasing unsuitable due to Grey Squirrel dominance, most historic records of Red's in the area are before 2008;	No Impact	

Table 3 - Preliminary Ecological Appraisal of the work site

JP Environmental Solutions

	but an unconfirmed record in 20220.		
Water Vole	No watercourses on site, no nearby records	No Impact	
Freshwater Pearl Mussel	No watercourses on site.	No Impact	
White-clawed Crayfish	No watercourses on site, no nearby records	No Impact	
Other reptile	Records of Slow worm, Common Lizard and Red-eared Terrapin recorded in the surrounding area	No Impact	
Terrestrial Invertebrates	A variety of insect species identified in the data search and could utilise the garden areas. Insect activity during the winter period will be at a minimal. Possible some disturbance of insects overwintering during the building work	Negligible Impact	
Aquatic Invertebrates	No watercourses on site	No Impact	
Salmonid Fish	No watercourses on site	No Impact	
Others	Urban area with a small possibility of anti-social activity eg dumping or tipping	Negligible Impact	
	OVERALL		Medium Impact

Table 4 showing an overview of the survey results

Information	Rating - Bats	Rating - Birds
Holes present in the roof tiles, gaps in	Moderate potential	Low potential
ridge tiles and gaps in soffit and fascia		No evidence of nesting activity
Gaps around the fascia, shallow holes	Low potential	Negligible potential
around the lintel		No evidence of nesting activity
	Holes present in the roof tiles, gaps in ridge tiles and gaps in soffit and fascia Gaps around the fascia, shallow holes	Holes present in the roof tiles, gaps in ridge tiles and gaps in soffit and fasciaModerate potentialGaps around the fascia, shallow holesLow potential

4.0 Conclusion and recommendations

4.1 The importance of the site for bats

The buildings surveyed are considered to have Moderate to Low Potential for roosting bats. The buildings contain several opportunities for roosting that could be impacted by the proposed development.

Bats are known to be active in the wider area from the data search (within 2Km). The site is located within an area of good quality habitat and connectivity to the wider areas; with numerous other roosting opportunities available in other areas. Closest confirmed roost is in 2013 for a Brown Long Eared under license EPSM2010-2103 at a distance of 1213m distance from the site.

A Common pipistrelle bat roost is recorded at grid reference NZ1164 (Roost in a house) from 1996; but without a more specific grid reference the exact location cannot be determined.

4.1.1 Roost

No bats or evidence was found during the ground-based assessment.

4.1.2 Foraging and commuting

The surround habitats, agricultural land and urban gardens that provide good habitat for foraging and commuting bats and good connectivity to other surrounding areas.

4.1.3 Potential Impacts

Should a bat roost be present on site in the buildings, there would be the risk of both destroying a roost and killing or injuring bats. Both these actions would constitute a criminal offense

4.2 The importance of the site for birds (general)

4.3.1 Nests/ field evidence

The surveyed buildings contained no evidence of birds nesting (at the time of the survey) in the main house and outhouse. However this could potential change prior to the development work being undertaken.

4.3.2 Potential Impacts

Should an active nest be in use at the time of the start of the development work then there would be a risk of injuring/ killing the bird or damaging/ disturbing the nest. These actions would constitute a criminal offense.

4.3 Recommendations

The following recommendations are made:

Bats

• Further ecological is required. Carry out a dusk/ emergence and dawn/ re-entry survey involving two surveyors to carry out sufficient survey work in line with current survey guidance. The results of this survey will inform if/ what further action is required.

General birds

• A site inspection prior to the start of any construction work by an ecologist to confirm no active nesting present in the buildings. If the nest is in use then building work cannot start until the birds have fledged and the nest is no longer in use.

Invasive Plant Species

• No invasive species are currently found on the site and every effort (through correct biosecurity) should be made to prevent any invasive species being brought onto the site.

If a protected species is discovered

If a protected species is discovered during the work, work must immediately stop in that area and the ecologist contacted (if not on site then contacted on 07980 581437). The ecologist will then need to visit the site, assess the situation and potentially apply for the necessary consents **<u>BEFORE</u>** any further work can recommence.

Following on from the Preliminary Ecological Appraisal, the further survey work was commissioned by the client to determine the potential use of the building by bats.

5.0 References

- Anon (1995) Guidelines for Baseline Ecological Assessment. Institute of Environmental Assessment. Chapman & Hall.
- Anon (1995) The UK Biodiversity Action Plan. Joint Nature Conservation Committee, Peterborough.

Collins, J (ed.) (2016). Bat surveys: good practice guidelines. 3rd edition. Bat Conservation Trust, London.

- Mitchell-Jones, A.J. (2004) Bat Mitigation Guidelines. English Nature, Peterborough.
- Mitchell-Jones, A.J. & McLeish, A.P. [Eds.] (2004) The Bat Workers Manual (3rd edition). Joint Nature Conservancy Council, Peterborough.

UK legislation and policy web address:

- Conservation of Habitats and Species Regulations 2010: http://www.opsi.gov.uk/si/si2010/uksi_20100490_en_1
- Habitats Directive: www.europa.eu.int/eur-lex/en/lif/dat/1992/en_392L0043
- Wildlife and Countryside Act 1981: www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810069_en_1
- National Parks and Access to the Countryside Act 1949: http://www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1949/cukpga_19490097_en_1
- National Planning Policy Framework: <u>http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf</u>
- Northumberland Biodiversity Action Plan <u>https://www.nwt.org.uk/sites/default/files/2018-</u> <u>10/Nland_Biodiversity_Action_Plan.pdf#:~:text=Northumberland_Biodiversity_Action</u> Plan Each action plan provides,the key legislation that it is protected by.

6.0 Bat Roost Assessment

Following on from the Preliminary Ecological Appraisal, the further survey work was commissioned by the client to determine the potential use of the building by bats.

6.1 Desk study

The desk study was carried out for the Protected Species Assessment survey in August 2022. The results can be seen in the report above, Section 3 on page 11.

6.2 Bat activity surveys

A dusk emergence and dawn return surveys were carried out on the following dates:

Survey Type	Survey Start	Sun rise/ set	Survey Finish	Weather Details	Surveyors
Dusk Emergence Survey Thursday 4 th August 2022	20:50	21:05	22:15	15 - 14ºC 20% cloud, Wind West 11mph Low insect abundance	Jonathan Pounder Dave Pounder
Dawn Return Survey Saturday 20 th August 2022	04:20	05:50	05:50	13°C 20% cloud, dry. Wind SSW 7mph, medium insect abundance	Jonathan Pounder Dave Pounder

Table 5 showing the survey dates and weather conditions

Surveyors are listed

- Licensed Bat Surveyors: Jonathan Pounder
- Experienced Bat Surveyor: Dave Pounder

During the field survey, the weather conditions were noted, including wind speed, cloud cover, temperature and any major fluctuations in these conditions during the survey.

The emergence surveys commenced 15 minutes before local sunset until an hour and a half after dusk with the dawn return survey starting an hour and a half before sunset and continuing until sunrise (with an additional 15 minutes taken after sunset if bat activity is ongoing at the time) in line with Collins, J (ed.) (2016). Bat surveys: good practice guidelines. 3rd edition. Bat Conservation Trust, London.

The surveyors were on site during the survey(s) and strategically placed around the building, concentrating on the features which may have potential as bat roosts or potential access points to bat roosts, identified during the protected species assessment survey.

All bat activity was recorded, including the species (where possible), precise time, location, direction of flight, behaviour, such as commuting, foraging, social calling etc. Particular attention was made to ascertaining whether or not the bats were emerging from the building.

The surveyors used Echo Metre Touch 2 and Ipad recorders.

6.3 Limitations

The survey represents only a snap shot in time and although every effort was made to identify the correct information the evening survey only represents a true record at the time the survey was carried out. Weather conditions where suitable for surveying.

6.4 Quality Assurance

JP Environmental staff are experienced, well qualified bat workers and members of the Chartered Institute of Ecology and Environmental Management (MCIEEM). All field work is carried out according to the Bat Conservation Trust's 'Bat Surveys: Good Practice Guidelines, 3rd edition', Collins, J. 2016. At least one surveyor on each survey was a licensed bat worker.

6.5 Dusk Emergence Survey

The dusk emergence surveys took place on the 4th August 2022 on an evening of good weather conditions. On the dusk survey commuting and foraging activity by 45 pipistrelle was mainly recorded with individual records of Noctule and 55 pipistrelle commuting. A single 45 pipistrelle was seen to emerge from the gable end of the property.

Time	Location	Description
21:33	Unseen JP	Brief distant Noctule commuting
21:33	Unseen DWP	Brief distant Noctule commuting
21:35		Hedgehog
21:36	Unseen JP	Very brief distant 55 pipistrelle commuting
21:36	Unseen DWP	Brief 55 pipistrelle commuting
21:38	Unseen JP	Brief distant Noctule commuting
21:39	Unseen JP	Brief 45 pipistrelle commuting
21:40 - 21:50	A	45 pipistrelle foraging, largely unseen, multiple and frequent passes
21:41	В	45 pipistrelle foraging, several loops following road
21:49	С	45 pipistrelle commuting
21:49 - 21:51	В	2x 45 pipistrelle foraging together, chasing each other
21:50	С	45 pipistrelle commuting
21:51	Unseen JP	Brief Noctule commuting
21:51 - 21:58	D	45 pipistrelle foraging in front of house
21:53	Unseen JP	Brief Noctule commuting
21:53	E	45 pipistrelle commuting
21:53	А	45 pipistrelle commuting
21:53	С	45 pipistrelle commuting
21:54	А	45 pipistrelle commuting
21:55	С	45 pipistrelle commuting
21:56	С	45 pipistrelle commuting
21:57	В	Briefly a 2nd 45 pipistrelle foraging, both then left unseen
21:57	С	45 pipistrelle commuting
21:58	E	45 pipistrelle commuting
21:58 - 22:16	В	45 pipistrelle foraging in front of house
22:01	E	45 pipistrelle commuting
22:02	F	45 pipistrelle commuting down the road
22:02	Unseen JP	Brief 45 pipistrelle commuting
22:02	G	Possible EMERGENCE 45 pipistrelle from gable end
22:04	Н	45 pipistrelle commuting
22:09	Unseen JP	Brief 55 pipistrelle commuting

6.5.1 Survey Results

22:11	Unseen JP	Brief 55 pipistrelle commuting
22:14	Unseen JP	Brief Noctule commuting

Table 6 showing the survey results from the Dusk Emergence Survey undertaken on the 4th August 2022.

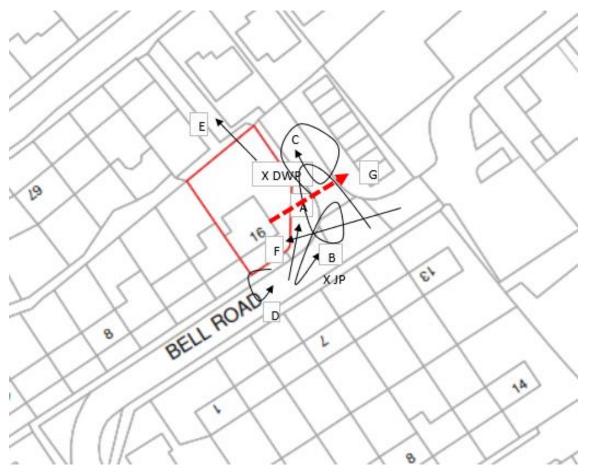


Diagram 4 showing the results of the survey undertaken on the 4th August 2022

6.6 Dawn Return Survey

The dawn return survey took place on the 20th August in a spell of warm, sunny calm weather. On the dawn survey commuting and foraging activity by 45 pipistrelle was recorded with occasional Noctule recording. A 45 pipistrelle was witnessed returning at the gable end during the survey.

Time	Location	Description
04:53	Unseen JP	45 pipistrelle foraging and social
04:53	Unseen DWP	45 pipistrelle foraging
05:04	А	45 pipistrelle foraging, several loops
05:04	В	45 pipistrelle foraging
05:16	С	45 pipistrelle foraging, several loops
05:16	D	45 pipistrelle foraging
05:17	D	45 pipistrelle foraging
05:18	А	45 pipistrelle foraging, several loops and social
05:18	D	45 pipistrelle foraging
05:19	E	45 pipistrelle foraging, several loops
05:19	F	45 pipistrelle RETURN, missing tiles on roof
05:21	G	45 pipistrelle RETURN, apex of gable
05:23	Unseen JP	Brief distant Noctule commuting
05:24	Unseen JP	Brief distant Noctule commuting
05:24	Unseen DWP	Noctule commuting
05:26	Н	45 pipistrelle commuting
05:27	D	45 pipistrelle foraging

6.6.1 Survey Results

Table 7 showing the survey results from the Dawn Return Survey undertaken on the 20th August 2022.



Diagram 6 showing an annotated photograph of entrance point identified in the emergence survey undertaken on the 4th August 2022 (G) and the return survey undertaken on the 20th August 2022 (G)

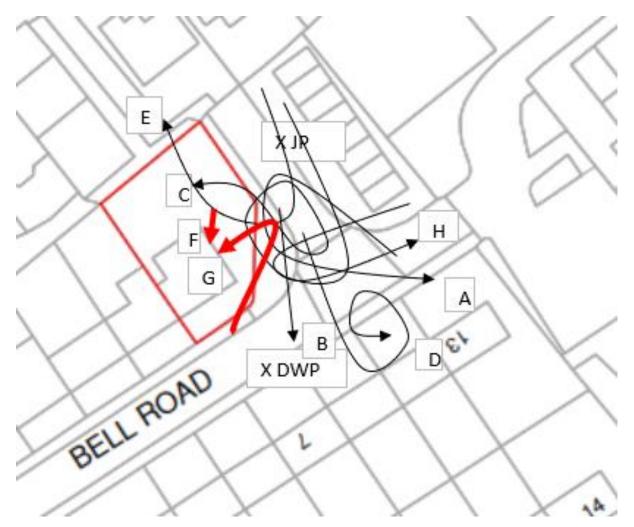


Diagram 5 showing the results of the survey undertaken on the 20th August 2022



Diagram 7 showing an annotated photograph of entrance point identified in the return survey undertaken on the 20^{th} August 2022 (F)

7.0 Conclusion and recommendations

7.1 The importance of the site for bats

45 pipistrelle, 55 pipistrelle and Noctule where recorded commuting and foraging and the property.

7.2 Roost

The building is being used by Common pipistrelle bats for roosting. Two locations in the building where identified:

- 1) Diagram 6, in the gable apex of the soffit
- 2) Diagram 7, through the missing tiles on the north west elevation.

7.3 Licence need

A Natural England European Protected Species License would be required to cover the proposed works if the building works affected the roof structure.

However through discussions with the client and designer; the current proposal does not involve any works that impact on the roof/ gable end; and as a result no works will impact on the identified bat roosts.

Further to this the following steps are being adopted to proceed with works under a Method Statement:

- No heavy equipment/ machinery is going to be used during the proposed work.
- Where possible hand tools only will be used during construction
- Any cutting works will be completed at ground level
- Noise levels will be kept to a minimum when working on the extension, particularly the higher walls/ roof level. No high noise equipment or prolonged periods of noise.
- Works to be implemented from the bottom-up approach the lower walls of the extension will be started before changing the existing ground floor roof to an internal floor and then working up to the flat roof of the extension.
- The new build will be tied into the existing building below the roof level hence no works impacting on the existing roof structure.
- No repair works to be undertaken on the existing roof structure (linked to the roost of Diagram 7).
- No scaffold will be erected on any part of the gable end of the property (linked to the roost of Diagram 6).
- No materials will be stored against the gable end of the property, it is to be maintained as a walkway only.
- Works to be conducted in daylight hours, with all works stopping an hour before sunset.
- Contractor to agree to these conditions of work and undergo a protected species site induction.
- Ecological Clerk of Works (ECOW) to supervise the works to be undertaken
- Works to be completed in the shortest possible timescale

7.4 Supervision of works

Construction work be carried out by hand and in a systematic fashion to extension to be constructed with no disturbance/ impact on the existing roof structure. Works to be overseen by a suitably experienced ECOW, who will carry out a protected species site induction with

construction staff, supervise the works being delivered and ensure works are carried out in line with the Method Statement.

7.7 If a protected species is discovered

If a protected species is discovered during the work, work must immediately stop in that area and the ecologist contacted (if not on site then contacted on 07980 581437). The ecologist will then need to visit the site, assess the situation and potentially apply for the necessary license **<u>BEFORE</u>** any further work can recommence. Until the license is secured, no further works can be undertaken in the discovery area.

7.8 Wildlife Enhancement

Where possible include wildlife friendly features (planting, nest boxes etc) in the new development to support and encourage local wildlife. Further information can be provided upon request.

8.0 Appendix

Appendix 1: Site location map



Location Plan

NORTH

Diagram 9 showing the site location

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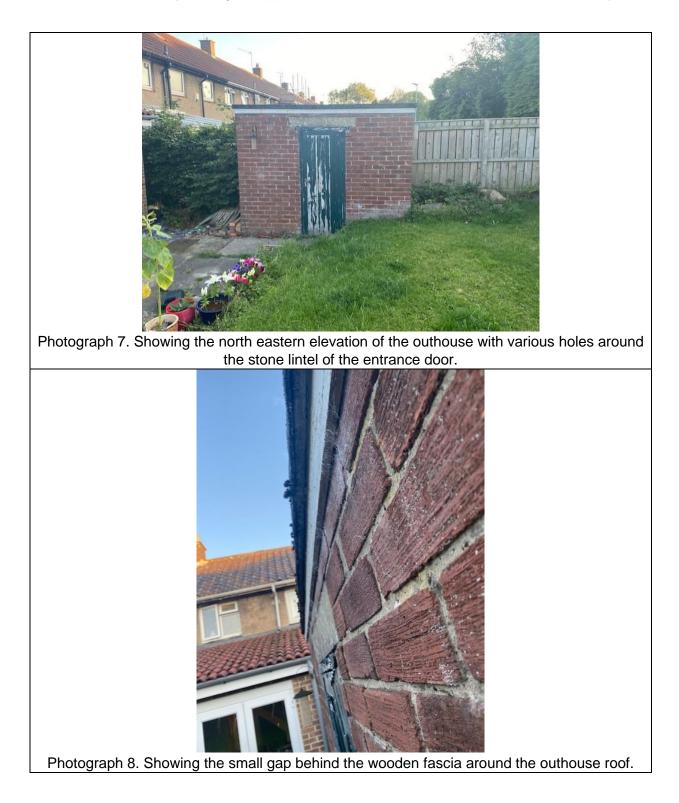
Appendix 2: Photographs of the buildings

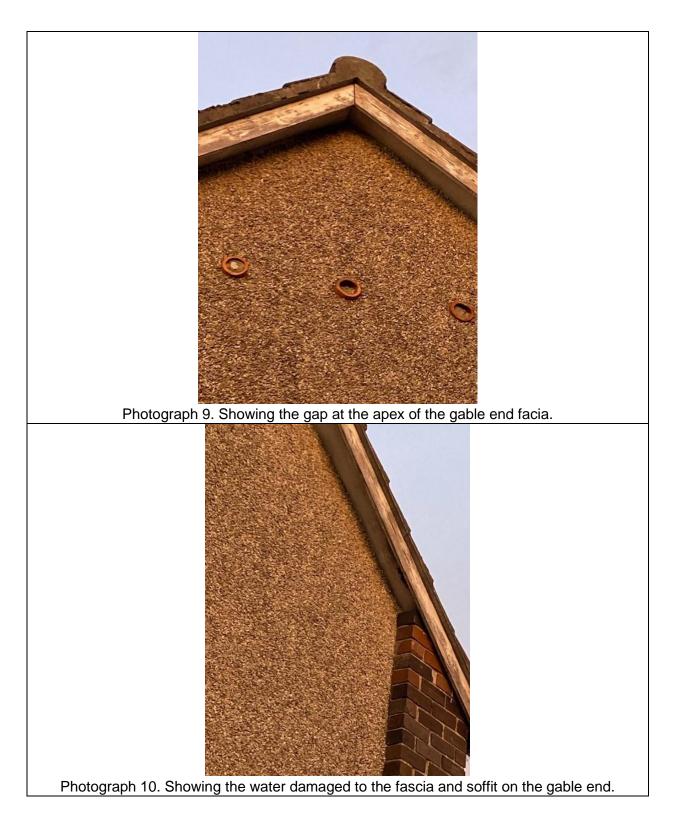


Photograph 2. Showing the front/ south eastern elevation of the property with UPVC doors and windows.











Photograph 11. Showing the accessible are of the loft with wooden framework and lined roof.



Photograph 12. Showing the view into the inaccessible area of the loft due to the chimney and timber framework.

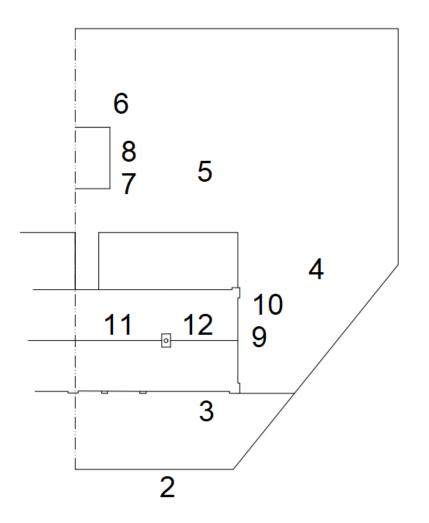
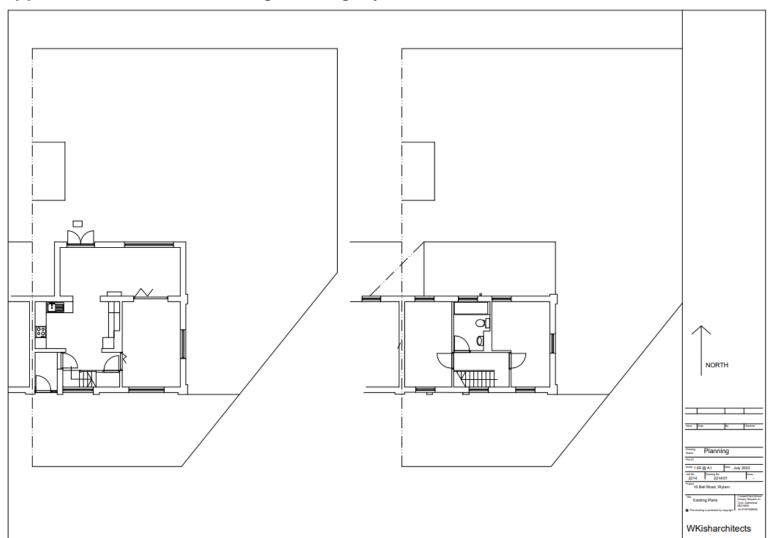


Diagram 10 showing the location of the photographs taken

1



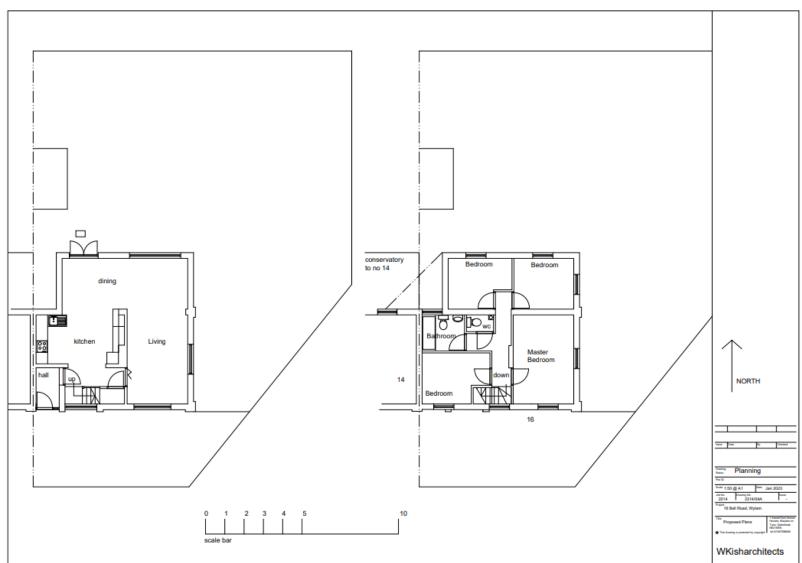
Appendix 3a: Plans of existing building layout – external overview



Appendix 3b: Plans of existing building layout – internal elevations



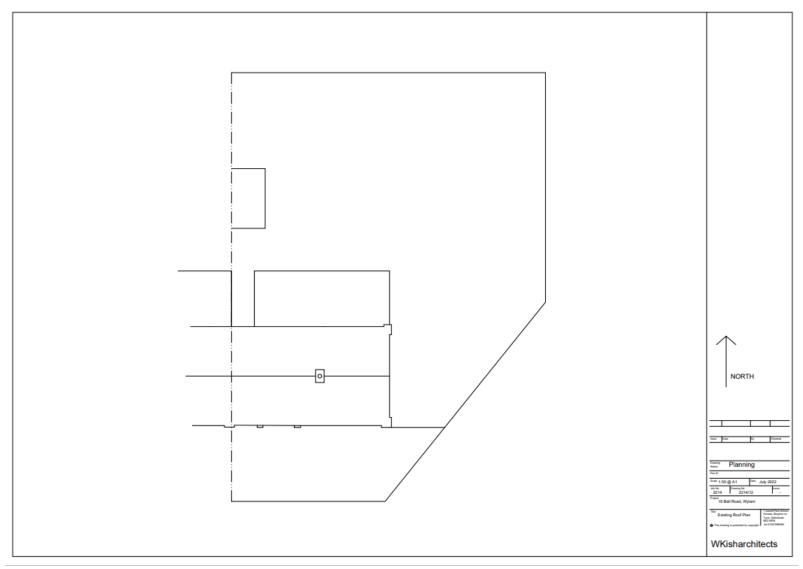
Appendix 3c: Plans of proposed building layout – external overview



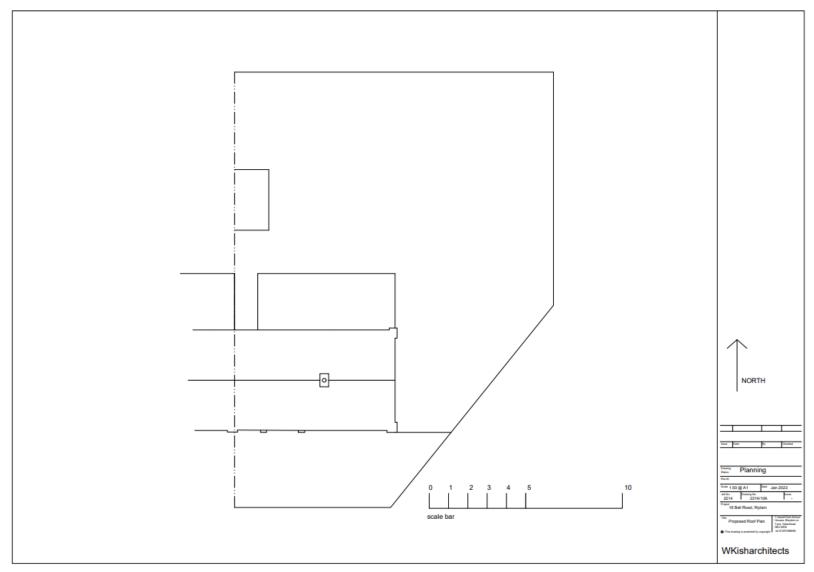
Appendix 3d: Plans of proposed building layout – internal overview

August 2022

Appendix 3e: Existing Roof plan



Appendix 3f: Proposed roof plan



August 2022

Appendix 4: Protected species records from ERIC NE

The data search from ERIC NE provided 22,966 unfiltered records provided, of which

- 7,810 are protected/ notable species
- 15,156 are other species record
- 550 are bat species records
- 5,292 are protected bird records
- 75 are amphibian species records

From the records Barn Owls are recorded in the area as well as Noctule, Soprano pipistrelle, Common pipistrelle, Daubenton's, Whiskered, Natterers, Whiskered, Whiskered/ Brandt's, and a number of Unidentified Bat Species (including Myotis spp and Pipistrelle spp.). Bat records shown below in Table 8:

Common Name	Location Name	Abundances	Date	Grid Reference
Brown Long-eared Bat	Clara Vale NE40 3SX	1 Count	Summer 2010	NZ135651
Pipistrelle Bat species	Bradley Gardens, Sled Lane, Wylam., Crawcrook		May-90	NZ126635
Pipistrelle Bat species	Fairholme, The Crescent, NE41 8HU, Wylam		May-07	NZ11886429
Brown Long-eared Bat	Close House, Heddon-on-the-Wall		Mar-93	NZ127658
Pipistrelle Bat species	Hagg Bank, Wylam	65 Count	Jul-91	NZ104646
Daubenton's Bat	Close House, Heddon on the Wall	3 Count	Jul-08	NZ129654
Natterer's Bat	Close House, Heddon on the Wall	1 Count	Jul-08	NZ129654
Common Pipistrelle	Close House, Heddon on the Wall	14 Count	Jul-08	NZ129654
Natterer's Bat	Close House, Heddon on the Wall	1 Count	Jul-07	NZ1265
Common Pipistrelle	Close House, Heddon on the Wall	1 Count	Jul-07	NZ1265
Myotis Bat species	Eastwood School	1 Count	August 2015 - September 2015	NZ10776348
Noctule Bat	Eastwood School	1 Count	August 2015 - September 2015	NZ10776348
Common Pipistrelle	Eastwood School	3 Count	August 2015 - September 2015	NZ10776348
Soprano Pipistrelle	Eastwood School	2 Count	August 2015 - September 2015	NZ10776348
Myotis Bat species			Aug-17	NZ1162
Common Pipistrelle			Aug-17	NZ1162

Soprano Pipistrelle			Aug-17	NZ1162
Common Pipistrelle	Clara Vale		31/07/2017	NZ1322264025
Common Pipistrelle	Crawcrook		31/07/2017	NZ1325163970
Common Pipistrelle	Crawcrook		31/07/2017	NZ1326063947
Common Pipistrelle	Crawcrook		31/07/2017	NZ1329963877
Common Pipistrelle	Crawcrook		31/07/2017	NZ1332163845
Common Pipistrelle	Clara Vale		31/07/2017	NZ1339764985
Common Pipistrelle	Clara Vale		31/07/2017	NZ1346964892
Soprano Pipistrelle	Clara Vale		31/07/2017	NZ1359964869
Soprano Pipistrelle	Clara Vale		31/07/2017	NZ1363864832
Daubenton's Bat	Tyne Riverside Country Park		31/05/2018	NZ103646
Common Pipistrelle	Tyne Riverside Country Park		31/05/2018	NZ103647
Soprano Pipistrelle	Tyne Riverside Country Park		31/05/2018	NZ103648
Myotis Bat species	Tyne Riverside Country Park		31/05/2018	NZ103649
Noctule Bat	Tyne Riverside Country Park		31/05/2018	NZ103650
Common Pipistrelle	Holeyn Hall		31/05/2017	NZ1096466601
Common Pipistrelle	Holeyn Hall		31/05/2017	NZ1096466601
Soprano Pipistrelle	Stable Block, Close House, Heddon-on-the-Wall	50+ Count	31/05/2000	NZ126659
Pipistrelle Bat species	MARYSIDE HILL		30/10/2003	NZ1350065500
Soprano Pipistrelle	Stable Block, Close House, Heddon-on-the-Wall	100 Count	30/08/2011	NZ126659
Brown Long-eared Bat	Stable Block, Close House, Heddon-on-the-Wall		30/08/2011	NZ126659
Noctule Bat	Heddon Common, Heddon-on-the-Wall		30/08/2005	NZ127665
Common Pipistrelle	Heddon Common, Heddon-on-the-Wall		30/08/2005	NZ127665
Noctule Bat	Heddon Common, Heddon on the Wall, Northumberland NE15 0BL		30/08/2004	NZ1278266613
Common Pipistrelle	Heddon Common, Heddon on the Wall, Northumberland NE15 0BL	3 Count	30/08/2004	NZ1278266613
Soprano Pipistrelle	Hagg Farm		28/08/2014	NZ1039564786
Soprano Pipistrelle	Hagg Farm		28/08/2014	NZ1039564786
Common Pipistrelle	Hagg Farm		28/08/2014	NZ1091264584
Common Pipistrelle	Hagg Farm		28/08/2014	NZ1091264584

Common Pipistrelle	Wylam		28/08/2014	NZ1133664851
Common Pipistrelle	Wylam		28/08/2014	NZ1133664851
Common Pipistrelle	Holelyn Hall		28/08/2014	NZ1154066327
Common Pipistrelle	Holelyn Hall		28/08/2014	NZ1154066327
Common Pipistrelle	Holelyn Hall		28/08/2014	NZ1156866081
Common Pipistrelle	Holelyn Hall		28/08/2014	NZ1156866081
Common Pipistrelle	Oakwood House		28/08/2014	NZ1166165842
Common Pipistrelle	Oakwood House		28/08/2014	NZ1166165842
Common Pipistrelle	Oakwood House		28/08/2014	NZ1170465553
Common Pipistrelle	Oakwood House		28/08/2014	NZ1170465553
Common Pipistrelle	Holelyn Hall		28/08/2014	NZ1188966494
Common Pipistrelle	Holelyn Hall		28/08/2014	NZ1188966494
Common Pipistrelle	Houghton		28/08/2014	NZ1251466755
Common Pipistrelle	Houghton		28/08/2014	NZ1251466755
Soprano Pipistrelle	Wylam	1 Count	28/03/2018	NZ1170064473
Soprano Pipistrelle	Wylam	1 Count	28/03/2018	NZ1174064494
Common Pipistrelle	Wylam	1 Count	28/03/2018	NZ1174564496
Soprano Pipistrelle	Wylam	1 Count	28/03/2018	NZ1175164499
Common Pipistrelle	Wylam	1 Count	28/03/2018	NZ1176364498
Common Pipistrelle	Wylam	1 Count	28/03/2018	NZ1177664507
Common Pipistrelle	Wylam	1 Count	28/03/2018	NZ1179364522
Common Pipistrelle	Wylam	1 Count	28/03/2018	NZ1184964545
Common Pipistrelle	Wylam	1 Count	28/03/2018	NZ1185064541
Common Pipistrelle	Wylam	1 Count	28/03/2018	NZ1194764628
Soprano Pipistrelle	Wylam	1 Count	28/03/2018	NZ1202464673
Common Pipistrelle	West Wylam		27/07/2017	NZ1088363466
Common Pipistrelle	West Wylam		27/07/2017	NZ1088363466
Soprano Pipistrelle	West Wylam		27/07/2017	NZ1088363466
Soprano Pipistrelle	West Wylam		27/07/2017	NZ1088363466

Common Pipistrelle	West Wylam		27/07/2017	NZ1093263564
Common Pipistrelle	West Wylam		27/07/2017	NZ1093263564
Daubenton's Bat		1 Count	27/05/2013	NZ126633
Noctule Bat		1 Count	27/05/2013	NZ126633
Common Pipistrelle		1 Count	27/05/2013	NZ126633
Soprano Pipistrelle		1 Count	27/05/2013	NZ126633
Soprano Pipistrelle	HEDDON ON THE WALL	1 Count	27/05/2003	NZ1266
Soprano Pipistrelle	Trajan Walk, Heddon-on-the-Wall	1 Count	27/05/2003	NZ128665
Pipistrelle Bat species	Wylam Mill	147 Count	27/05/1992	NZ117645
Common Pipistrelle	Hillcrest, NE41 8HU, Wylam	2 Count	26/06/2014	NZ118642
Natterer's Bat	Wylam Wood Farm	7 Count	25/05/2003	NZ117642
Noctule Bat	Wylam Wood Farm	15 Count	25/05/2003	NZ117642
Common Pipistrelle	Wylam Wood Farm	5 Count	25/05/2003	NZ117642
Natterer's Bat	Wylam Wood Farm	7 Count	25/05/2003	NZ118641
Noctule Bat	CLARA VALE		24/10/2004	NZ1350064500
Soprano Pipistrelle	Horsley Wood		24/07/2017	NZ0982564971
Soprano Pipistrelle	Horsley Wood		24/07/2017	NZ0982564971
Common Pipistrelle	Horsley Wood		24/07/2017	NZ0982964942
Common Pipistrelle	Horsley Wood		24/07/2017	NZ0982964942
Common Pipistrelle	Horsley Wood		24/07/2017	NZ0983164920
Common Pipistrelle	Horsley Wood		24/07/2017	NZ0983164920
Common Pipistrelle	Holeyn Hall		24/07/2017	NZ1047266228
Common Pipistrelle	Holeyn Hall		24/07/2017	NZ1047266228
Common Pipistrelle	Oakwood House		24/07/2017	NZ1107365320
Common Pipistrelle	Oakwood House		24/07/2017	NZ1107365320
Soprano Pipistrelle	Oakwood House		24/07/2017	NZ1107365320
Soprano Pipistrelle	Oakwood House		24/07/2017	NZ1107365320
Common Pipistrelle	Oakwood House		24/07/2017	NZ1108265214
Common Pipistrelle	Oakwood House		24/07/2017	NZ1108265214

Common Pipistrelle	Wylam		24/07/2017	NZ1140964626
Common Pipistrelle	Wylam		24/07/2017	NZ1140964626
Soprano Pipistrelle	Castle Hill		24/07/2017	NZ1207364214
Soprano Pipistrelle	Castle Hill		24/07/2017	NZ1207364214
Soprano Pipistrelle	Castle Hill		24/07/2017	NZ1213764132
Soprano Pipistrelle	Castle Hill		24/07/2017	NZ1213764132
Soprano Pipistrelle	Bradley Mews, Wylam, ne41 8jl	1 Count	24/07/2017	NZ1239563335
Common Pipistrelle	Clara Vale		24/07/2017	NZ1321464030
Common Pipistrelle	Crawcrook		24/07/2017	NZ1327863918
Soprano Pipistrelle	Crawcrook		24/07/2017	NZ1327863918
Common Pipistrelle	Houghton		24/06/2015	NZ1228766654
Common Pipistrelle	Houghton		24/06/2015	NZ1228766654
Common Pipistrelle	Wylam	156 Count	24/06/2002	NZ116647
Common Pipistrelle	Wylam	156 Count	24/06/2002	NZ116647
Whiskered/Brandt's Bat	Woodcroft Road, Wylam	28 Count	24/06/1986	NZ11606460
Soprano Pipistrelle		287+ Count	23/06/2009	NZ16
Common Pipistrelle	Wylam		23/05/2016	NZ1132064765
Common Pipistrelle	Wylam		23/05/2016	NZ1132064765
Myotis Bat species	Wylam		23/05/2016	NZ1182464612
Myotis Bat species	Wylam		23/05/2016	NZ1182464612
Common Pipistrelle	Wylam		23/05/2016	NZ1197864487
Common Pipistrelle	Wylam		23/05/2016	NZ1197864487
Noctule Bat	Bradley Hall		23/05/2016	NZ1245063685
Noctule Bat	Bradley Hall		23/05/2016	NZ1267963331
Common Pipistrelle	West Wylam		22/08/2016	NZ1033263827
Common Pipistrelle	West Wylam		22/08/2016	NZ1033263827
Common Pipistrelle	Clara Vale	1 Count	22/08/2011	NZ1364
Brown Long-eared Bat	Clara Vale	8 Count	22/08/2011	NZ1364
Bats	Edington Gardens, Clara Vale, Ryton, NE40 3SS, Crawcrook	0 Count	22/07/2009	NZ132649

Bats	Wylam Church	1 Count	22/07/1985	NZ11366473
Whiskered/Brandt's Bat	Woodcroft Road, Wylam		22/07/1985	NZ11606460
Soprano Pipistrelle	Stable Block, Close House, Heddon-on-the-Wall	29 Count	22/05/2002	NZ126659
Soprano Pipistrelle	Bradley Hall Mews, Prudhoe		21/07/1998	NZ123633
Whiskered/Brandt's Bat	Heddon	1 Count	21/05/2016	NZ126667
Common Pipistrelle	Heddon	2 Count	21/05/2016	NZ126667
Myotis Bat species			2015	NZ1363
Noctule Bat			2015	NZ1363
Common Pipistrelle			2015	NZ1363
Soprano Pipistrelle			2015	NZ1363
Brown Long-eared Bat	Stable Block, Close House, Heddon-on-the-Wall		2010	NZ126659
Common Pipistrelle	HORSLEY	1 Count	2009	NZ0965
Brown Long-eared Bat	Wylam Church		2006	NZ113647
Common Pipistrelle	Wylam	1 Count	2006	NZ113651
Soprano Pipistrelle	Bradley Hall Mews, Prudhoe	200 Count	2006	NZ123633
Bats	Wylam		2005	NZ107661
Noctule Bat	Wylam	50 Count	2004	NZ113651
Common Pipistrelle	Wylam Wood Farm	2 Count	2004	NZ117641
Bats	Wylam Wood Farm		2004	NZ117641
Brown Long-eared Bat	Wylam Wood Farm	1 Count	2004	NZ118640
Common Pipistrelle	Wylam Wood Farm	20 Count	2004	NZ118641
Myotis Bat species	Wylam Wood Farm	1 Count	2003	NZ118640
Noctule Bat	Wylam Wood Farm		2003	NZ118640
Common Pipistrelle	Crawcrook	123 Count	2000	NZ123634
Common Pipistrelle	Horsley Wood		20/08/2014	NZ1077065959
Common Pipistrelle	Horsley Wood		20/08/2014	NZ1077065959
Soprano Pipistrelle	Horsley Wood		20/08/2014	NZ1077065959
Soprano Pipistrelle	Horsley Wood		20/08/2014	NZ1077065959
Soprano Pipistrelle	Oakwood House		20/08/2014	NZ1117765030

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Soprano Pipistrelle	Oakwood House		20/08/2014	NZ1117765030
Common Pipistrelle	Wylam		20/08/2014	NZ1122764994
Common Pipistrelle	Wylam		20/08/2014	NZ1122764994
Soprano Pipistrelle	Wylam		20/08/2014	NZ1197964480
Soprano Pipistrelle	Wylam		20/08/2014	NZ1197964480
Common Pipistrelle	Wylam		20/08/2014	NZ1199164423
Common Pipistrelle	Wylam		20/08/2014	NZ1199164423
Soprano Pipistrelle	Bradley Hall		20/08/2014	NZ1228963968
Soprano Pipistrelle	Bradley Hall		20/08/2014	NZ1237263936
Soprano Pipistrelle	Bradley Hall		20/08/2014	NZ1239363745
Soprano Pipistrelle	Bradley Hall		20/08/2014	NZ1239563873
Soprano Pipistrelle	Bradley Hall		20/08/2014	NZ1243263483
Common Pipistrelle	Bradley Hall		20/08/2014	NZ1269263298
Common Pipistrelle	Holeyn Hall		20/07/2017	NZ1066266240
Common Pipistrelle	Holeyn Hall		20/07/2017	NZ1066266240
Myotis Bat species	Holelyn Hall		20/07/2017	NZ1191666508
Myotis Bat species	Holelyn Hall		20/07/2017	NZ1191666508
Myotis Bat species	Heddon	1 Count	20/07/2008	NZ1366
Pipistrelle Bat species	PRUDHOE	1 Count	20/01/1999	NZ1063
Pipistrelle Bat species	WYLAM	65 Count	1991	NZ1064
Bats	Sled Lane Wylam	1 Count	1987	NZ126635
Bats	Sled Lane Wylam	1 Count	1986	NZ126635
Common Pipistrelle	Holeyn Hall		19/06/2017	NZ1065866440
Common Pipistrelle	Holeyn Hall		19/06/2017	NZ1065866440
Common Pipistrelle	Holeyn Hall		19/06/2017	NZ1066066441
Common Pipistrelle	Holeyn Hall		19/06/2017	NZ1066066441
Common Pipistrelle	Horsley Wood		19/06/2017	NZ1091165695
Common Pipistrelle	Horsley Wood		19/06/2017	NZ1091165695
Noctule Bat	Oakwood House		19/06/2017	NZ1101765476

Noctule Bat	Oakwood House		19/06/2017	NZ1101765476
Common Pipistrelle	Wylam		19/06/2017	NZ1134464612
Common Pipistrelle	Wylam		19/06/2017	NZ1134464612
Common Pipistrelle	Wylam		19/06/2017	NZ1179164607
Common Pipistrelle	Wylam		19/06/2017	NZ1179164607
Common Pipistrelle	Wylam		19/06/2017	NZ1192264558
Common Pipistrelle	Wylam		19/06/2017	NZ1192264558
Soprano Pipistrelle	Wylam		19/06/2017	NZ1192264558
Soprano Pipistrelle	Wylam		19/06/2017	NZ1192264558
Common Pipistrelle	Castle Hill		19/06/2017	NZ1211664156
Common Pipistrelle	Castle Hill		19/06/2017	NZ1211664156
Pipistrelle Bat species	Bradley Hall		19/06/2017	NZ1238263779
Whiskered Bat	Woodcroft Road, Wylam	24 Count	19/06/1987	NZ11606460
Common Pipistrelle	Wylam	1 Count	19/05/2015	NZ119633
Common Pipistrelle	Clara Vale NE40 3SS	55 Count	18/07/2008	NZ133649
Natterer's Bat	Wylam Wood Farm		18/06/2003	NZ118641
Bats	Bradley Gardens, Sled Lane, Wylam., Crawcrook	1 Count	17/10/1986	NZ126635
Bats	Bradley Gardens, Sled Lane, Wylam., Crawcrook		17/09/1986	NZ126635
Soprano Pipistrelle	Stable Block, Close House, Heddon-on-the-Wall	52+ Count	17/06/1999	NZ126659
Myotis Bat species	Wylam Transect 1		17/05/2014	NZ1053764852
Myotis Bat species	Wylam Transect 1		17/05/2014	NZ1055364856
Myotis Bat species	Wylam Transect 1		17/05/2014	NZ1057764981
Noctule Bat	Wylam Transect 1		17/05/2014	NZ1058664985
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1058664985
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1066765113
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1078564778
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1080164767
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1081464752
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1081464752

Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1084465247
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1085565271
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1085865280
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1088964667
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1091264645
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1093764613
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1093764613
Noctule Bat	Wylam Transect 1		17/05/2014	NZ1094464601
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1094464601
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1094464601
Myotis Bat species	Wylam Transect 1		17/05/2014	NZ1095764594
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1095764594
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1095764594
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1098164617
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1099464632
Noctule Bat	Wylam Transect 1		17/05/2014	NZ1101064658
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1101064658
Soprano Pipistrelle	Wylam Transect 1		17/05/2014	NZ1101064658
Noctule Bat	Wylam Transect 1		17/05/2014	NZ1101464709
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1101464709
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1101564679
Common Pipistrelle	Wylam Transect 1		17/05/2014	NZ1101564700
Noctule Bat	Wylam Transect 1		17/05/2014	NZ1101564703
Soprano Pipistrelle	Wylam Community Orchard		17/05/2014	NZ119648
Natterer's Bat	Clara Vale, Gateshead	1 Count	16/10/2009	NZ16H
Common Pipistrelle	Clara Vale, Gateshead	1 Count	16/10/2009	NZ16H
Brown Long-eared Bat	Clara Vale, Gateshead	1 Count	16/10/2009	NZ16H
Brandt's Bat	Rear Mansion House, Close House, Heddon-on-the-Wall	49 Count	16/06/1992	NZ127658
Brown Long-eared Bat	Close House, Heddon-on-the-Wall	1 Count	16/06/1992	NZ127658

Whiskered/Brandt's Bat	Close House, Heddon-on-the-Wall	47 Count	16/06/1992	NZ128659
Noctule Bat	4677 Wylam	1 Count	15/06/2016	NZ1262
Pipistrelle	4677 Wylam	20 Count	15/06/2016	NZ1262
Soprano Pipistrelle	4677 Wylam	1 Count	15/06/2016	NZ1262
Noctule Bat	Wylam	1 Count	15/06/2015	NZ119633
Common Pipistrelle	Wylam	2 Count	15/06/2015	NZ119633
Soprano Pipistrelle	Wylam	3 Count	15/06/2015	NZ119633
Brown Long-eared Bat	Wylam	2 Count	15/06/2015	NZ119633
Common Pipistrelle	Drumbreck, Station Road, Wylam	3+ Count	15/04/1996	NZ11966429
Whiskered/Brandt's Bat	Crawcrook	1 Count	14/07/2015	NZ126635
Noctule Bat	Crawcrook	1 Count	14/07/2015	NZ126635
Soprano Pipistrelle	Crawcrook	7 Count	14/07/2015	NZ126635
Brown Long-eared Bat	Crawcrook	1 Count	14/07/2015	NZ126635
Common Pipistrelle	Holelyn Hall		13/08/2017	NZ1146466819
Common Pipistrelle	Holelyn Hall		13/08/2017	NZ1146466819
Soprano Pipistrelle	Horsley Wood		13/06/2014	NZ1075165985
Soprano Pipistrelle	Horsley Wood		13/06/2014	NZ1075165985
Soprano Pipistrelle	Wylam		13/06/2014	NZ1126764964
Soprano Pipistrelle	Wylam		13/06/2014	NZ1126764964
Pipistrelle Bat species	Wylam		13/06/2014	NZ1192864548
Pipistrelle Bat species	Wylam		13/06/2014	NZ1192864548
Common Pipistrelle	Wylam		13/06/2014	NZ1199164443
Common Pipistrelle	Wylam		13/06/2014	NZ1199164443
Soprano Pipistrelle	Wylam		13/06/2014	NZ1199164443
Soprano Pipistrelle	Wylam		13/06/2014	NZ1199164443
Common Pipistrelle	Castle Hill		13/06/2014	NZ1202064316
Common Pipistrelle	Castle Hill		13/06/2014	NZ1214664126
Soprano Pipistrelle	Castle Hill		13/06/2014	NZ1214664126
Soprano Pipistrelle	Castle Hill		13/06/2014	NZ1220264034

Common Pipistrelle	Crawcrook		13/06/2014	NZ1326163943
Common Pipistrelle	Crawcrook		13/06/2014	NZ1334363798
Common Pipistrelle	Clara Vale nature reserve	1 Count	13/05/2009	NZ132649
Natterer's Bat	Clara Vale nature reserve	1 Count	13/05/2009	NZ132650
Soprano Pipistrelle	Northumberland		12/11/2010	NZ118646
Soprano Pipistrelle	NE41 8DP, Wylam	0 Count	12/11/2010	NZ118646
Soprano Pipistrelle	Wylam	1 Count of roost	12/08/2007	NZ125634
Natterer's Bat	Wylam Wood Farm	2 Count	12/04/2003	NZ118641
Noctule Bat	Wylam Wood Farm		12/04/2003	NZ118641
Common Pipistrelle	Wylam Wood Farm		12/04/2003	NZ118641
Soprano Pipistrelle	Bradley		11/08/2007	NZ1263
Noctule Bat	Wylam		11/07/2011	NZ1165
Common Pipistrelle	Wylam		11/07/2011	NZ1165
Soprano Pipistrelle	Wylam		11/07/2011	NZ1165
Whiskered/Brandt's Bat	Crawcrook	1 Count	10/06/2015	NZ126635
Noctule Bat	Crawcrook	1 Count	10/06/2015	NZ126635
Common Pipistrelle	Crawcrook	11 Count	10/06/2015	NZ126635
Soprano Pipistrelle	Crawcrook	22 Count	10/06/2015	NZ126635
Common Pipistrelle	Holeyn Hall		10/06/2014	NZ1071166120
Common Pipistrelle	Holeyn Hall		10/06/2014	NZ1071166120
Common Pipistrelle	Holeyn Hall		10/06/2014	NZ1073566031
Common Pipistrelle	Holeyn Hall		10/06/2014	NZ1073566031
Soprano Pipistrelle	Horsley Wood		10/06/2014	NZ1092665649
Soprano Pipistrelle	Horsley Wood		10/06/2014	NZ1092665649
Common Pipistrelle	Wylam		10/06/2014	NZ1131264910
Common Pipistrelle	Wylam		10/06/2014	NZ1131264910
Common Pipistrelle	Wylam		10/06/2014	NZ1191564560
Common Pipistrelle	Wylam		10/06/2014	NZ1191564560

Soprano Pipistrelle	Wylam		10/06/2014	NZ1191564560
Soprano Pipistrelle	Wylam		10/06/2014	NZ1191564560
Soprano Pipistrelle	Castle Hill		10/06/2014	NZ1202564287
Noctule Bat	Castle Hill		10/06/2014	NZ1214464121
Common Pipistrelle	Castle Hill		10/06/2014	NZ1262764061
Soprano Pipistrelle	Castle Hill		10/06/2014	NZ1262764061
Common Pipistrelle	Clara Vale		10/06/2014	NZ1312364173
Soprano Pipistrelle	Crawcrook		10/06/2014	NZ1323463988
Common Pipistrelle	Crawcrook		10/06/2014	NZ1338163730
Common Pipistrelle	West Wylam		10/05/2017	NZ1036763833
Common Pipistrelle	West Wylam		10/05/2017	NZ1036763833
Common Pipistrelle	Bradley Hall Farm		10/05/2017	NZ1113163809
Common Pipistrelle	Bradley Hall Farm		10/05/2017	NZ1113163809
Noctule Bat	Bradley Gardens, Sled Lane, Wylam., Crawcrook		10/05/1988	NZ126635
Bats	Bradley Gardens, Sled Lane, Wylam., Crawcrook		10/05/1988	NZ126635
Common Pipistrelle	Clara Vale		09/08/2017	NZ1321564036
Pipistrelle Bat species	Hagg Bank, Wylam	28 Count	09/08/1991	NZ104646
Myotis Bat species	4677 Wylam	1 Count	09/07/2016	NZ1262
Noctule Bat	4677 Wylam	1 Count	09/07/2016	NZ1262
Pipistrelle	4677 Wylam	1 Count	09/07/2016	NZ1262
Soprano Pipistrelle	4677 Wylam	1 Count	09/07/2016	NZ1262
Soprano Pipistrelle	Wylam		08/09/2014	NZ1133264682
Soprano Pipistrelle	Wylam		08/09/2014	NZ1133264682
Soprano Pipistrelle	Oakwood House		08/09/2014	NZ1148465184
Soprano Pipistrelle	Oakwood House		08/09/2014	NZ1148465184
Common Pipistrelle	Oakwood House		08/09/2014	NZ1168665780
Common Pipistrelle	Oakwood House		08/09/2014	NZ1168665780
Soprano Pipistrelle	Bradley Hall		08/09/2014	NZ1237563935
Soprano Pipistrelle	Bradley Hall		08/09/2014	NZ1240863728

Common Pipistrelle	Bradley Hall		08/09/2014	NZ1269763288
Bats	Heddon Banks, Heddon-on-the-Wall, NE15 0BU		07/11/2012	NZ13016640
Common Pipistrelle	Stephenson's Cottage NE41 8BP, Wylam		07/07/2009	NZ125649
Soprano Pipistrelle	Stephenson's Cottage NE41 8BP, Wylam		07/07/2009	NZ125649
Common Pipistrelle	West Wylam		06/08/2014	NZ1038963829
Common Pipistrelle	West Wylam		06/08/2014	NZ1038963829
Daubenton's Bat	Crawcrook	1 Count	06/05/2015	NZ126635
Whiskered/Brandt's Bat	Crawcrook	1 Count	06/05/2015	NZ126635
Noctule Bat	Crawcrook	1 Count	06/05/2015	NZ126635
Common Pipistrelle	Crawcrook	1 Count	06/05/2015	NZ126635
Soprano Pipistrelle	Crawcrook	1 Count	06/05/2015	NZ126635
Bats	Bradley Gardens, Sled Lane, Wylam., Crawcrook	6 Count	06/05/1988	NZ126635
Common Pipistrelle	Holeyn Hall		05/08/2014	NZ1070866196
Common Pipistrelle	Holeyn Hall		05/08/2014	NZ1070866196
Noctule Bat	Holeyn Hall		05/08/2014	NZ1071266275
Noctule Bat	Holeyn Hall		05/08/2014	NZ1071266275
Common Pipistrelle	Holeyn Hall		05/08/2014	NZ1071266275
Common Pipistrelle	Holeyn Hall		05/08/2014	NZ1071266275
Soprano Pipistrelle	Holeyn Hall		05/08/2014	NZ1071266275
Soprano Pipistrelle	Holeyn Hall		05/08/2014	NZ1071266275
Common Pipistrelle	Horsley Wood		05/08/2014	NZ1092165671
Common Pipistrelle	Horsley Wood		05/08/2014	NZ1092165671
Soprano Pipistrelle	Horsley Wood		05/08/2014	NZ1092165671
Soprano Pipistrelle	Horsley Wood		05/08/2014	NZ1092165671
Common Pipistrelle	Oakwood House		05/08/2014	NZ1111665120
Common Pipistrelle	Oakwood House		05/08/2014	NZ1111665120
Common Pipistrelle	Oakwood House		05/08/2014	NZ1117765028
Common Pipistrelle	Oakwood House		05/08/2014	NZ1117765028
Common Pipistrelle	Wylam		05/08/2014	NZ1132264804

Common Pipistrelle	Wylam		05/08/2014	NZ1132264804
Noctule Bat	Wylam		05/08/2014	NZ1132964884
Noctule Bat	Wylam		05/08/2014	NZ1132964884
Common Pipistrelle	Wylam		05/08/2014	NZ1132964884
Common Pipistrelle	Wylam		05/08/2014	NZ1132964884
Soprano Pipistrelle	Wylam		05/08/2014	NZ1141364629
Soprano Pipistrelle	Wylam		05/08/2014	NZ1141364629
Soprano Pipistrelle	Wylam		05/08/2014	NZ1159564660
Soprano Pipistrelle	Wylam		05/08/2014	NZ1159564660
Soprano Pipistrelle	Wylam		05/08/2014	NZ1187664605
Soprano Pipistrelle	Wylam		05/08/2014	NZ1187664605
Common Pipistrelle	Wylam		05/08/2014	NZ1199264435
Common Pipistrelle	Wylam		05/08/2014	NZ1199264435
Soprano Pipistrelle	Wylam		05/08/2014	NZ1199264435
Soprano Pipistrelle	Wylam		05/08/2014	NZ1199264435
Common Pipistrelle	Castle Hill		05/08/2014	NZ1203164277
Soprano Pipistrelle	Castle Hill		05/08/2014	NZ1212664143
Soprano Pipistrelle	Castle Hill		05/08/2014	NZ1213564133
Common Pipistrelle	Castle Hill		05/08/2014	NZ1220164048
Common Pipistrelle	Bradley Hall		05/08/2014	NZ1234063971
Soprano Pipistrelle	Bradley Hall		05/08/2014	NZ1234063971
Common Pipistrelle	Castle Hill		05/08/2014	NZ1262064057
Soprano Pipistrelle	Clara Vale		05/08/2014	NZ1312064177
Common Pipistrelle	Crawcrook		05/08/2014	NZ1323163997
Common Pipistrelle	Crawcrook		05/08/2014	NZ1334563800
Pipistrelle Bat species	Bradley Hall and Mews Cottages, Crawcrook	300+ Count	05/08/2001	NZ123633
Pipistrelle Bat species	Bradley Hall, Nursery House, Crawcrook	10+ Count	05/08/2001	NZ123633
Noctule Bat	Near Horsley Wood, Wylam		05/06/2015	NZ1026164676
Pipistrelle Bat species	Near Horsley Wood, Wylam		05/06/2015	NZ1037664776

Soprano Pipistrelle	Near Horsley Wood, Wylam		05/06/2015	NZ1054764820
Pipistrelle Bat species	Near Horsley Wood, Wylam		05/06/2015	NZ1072464765
Common Pipistrelle	Near Horsley Wood, Wylam		05/06/2015	NZ1089464607
Pipistrelle Bat species	Ovingham Road, Wylam		05/06/2015	NZ1112164522
Common Pipistrelle	Holeyn Hall Road, Wylam		05/06/2015	NZ1122964994
Soprano Pipistrelle	Church Road, Wylam		05/06/2015	NZ1132564723
Myotis Bat species	Bradley Gardens, Sled Lane, Wylam., Crawcrook	1 Count	04/07/1987	NZ126635
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1052864892
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1053064882
Bats	Wylam Transect 1		03/05/2014	NZ1053264863
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1055464855
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1056464855
Noctule Bat	Wylam Transect 1		03/05/2014	NZ1062164996
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1064864844
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1066065090
Noctule Bat	Wylam Transect 1		03/05/2014	NZ1066565107
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1067364835
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1067364835
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1068364831
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1068364831
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1068865125
Bats	Wylam Transect 1		03/05/2014	NZ1068865125
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1069365112
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1069365112
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1069564829
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1069865127
Noctule Bat	Wylam Transect 1		03/05/2014	NZ1070764823
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1071865063
Pipistrelle Bat species	Wylam Transect 1		03/05/2014	NZ1072065135

Noctule Bat	Wylam Transect 1	03/05/2014	NZ1072364813
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1072364813
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1073165155
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1073565145
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1073964808
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1074565153
Bats	Wylam Transect 1	03/05/2014	NZ1075264802
Bats	Wylam Transect 1	03/05/2014	NZ1075665003
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1075965163
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1076764791
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1076764791
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1077565174
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1078164780
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1078164780
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1078164780
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1078665183
Myotis Bat species	Wylam Transect 1	03/05/2014	NZ1079464770
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1079464770
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1079464770
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1079865194
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1080664760
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1080664760
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1080664920
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1080965204
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1081764747
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1081764747
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1082464889
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1082765224
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1082864882

Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1083065252
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1083164732
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1083164732
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1084165225
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1084165225
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1084465241
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1084465241
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1084465266
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1084764707
Bats	Wylam Transect 1	03/05/2014	NZ1086564688
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1088864666
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1088864666
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1089864885
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1090164655
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1090164655
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1090164655
Noctule Bat	Wylam Transect 1	03/05/2014	NZ1091564645
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1091564645
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1091564645
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1092664635
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1093264835
Common Pipistrelle	Wylam Transect 1	03/05/2014	NZ1094064613
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1094064613
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1095164603
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1095964793
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1096864605
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1098064624
Soprano Pipistrelle	Wylam Transect 1	03/05/2014	NZ1098664631
Bats	Wylam Transect 1	03/05/2014	NZ1098864941

Convers Dinistralla			02/05/2044	NZ1099464639
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1099964746
Myotis Bat species	Wylam Transect 1		03/05/2014	NZ1100664653
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1100664653
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1101364719
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1101464680
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1101464680
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1101464697
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1102164961
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1102164961
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1102564962
Soprano Pipistrelle	Wylam Transect 1		03/05/2014	NZ1102564962
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1103164971
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1105464984
Noctule Bat	Wylam Transect 1		03/05/2014	NZ1109865009
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1113965036
Common Pipistrelle	Wylam Transect 1		03/05/2014	NZ1114365037
Pipistrelle Bat species	CLARA VALE		02/11/2003	NZ1350064500
Common Pipistrelle	Holeyn Hall		02/10/2014	NZ1091866584
Common Pipistrelle	Holeyn Hall		02/10/2014	NZ1091866584
Noctule Bat	Stanley Burn Wood, Prudhoe		02/08/2004	NZ115629
Common Pipistrelle	Heddon	1 Count	02/07/2016	NZ126667
Whiskered/Brandt's Bat	Clara Vale	1 Count	01/09/2011	NZ1364
Natterer's Bat	Clara Vale	1 Count	01/09/2011	NZ1364
Common Pipistrelle	Clara Vale	1 Count	01/09/2011	NZ1364
Brown Long-eared Bat	Clara Vale	1 Count	01/09/2011	NZ1364
Myotis Bat species	Hagg Farm		01/08/2016	NZ1040964795
Myotis Bat species	Hagg Farm		01/08/2016	NZ1040964795
Soprano Pipistrelle	Hagg Farm		01/08/2016	NZ1063564799

Soprano Pipistrelle	Hagg Farm		01/08/2016	NZ1063564799
Common Pipistrelle	Bradley Hall		01/08/2016	NZ1239063926
Soprano Pipistrelle	Bradley Hall		01/08/2016	NZ1265263386
Soprano Pipistrelle	Bradley Hall		01/08/2016	NZ1269763289
Myotis Bat species	Bradley Hall		01/08/2016	NZ1269763292
Soprano Pipistrelle	Bradley Hall		01/08/2016	NZ1271563252
Common Pipistrelle	Hillcrest, NE41 8HU, Wylam	2 Count	01/07/2014	NZ118642
Myotis Bat species	Holeyn Hall Road		01/06/2018	NZ11186511
Noctule Bat	Holeyn Hall Road		01/06/2018	NZ11186511
Common Pipistrelle	Holeyn Hall Road		01/06/2018	NZ11186511
Soprano Pipistrelle	Holeyn Hall Road		01/06/2018	NZ11186511
Brown Long-eared Bat	Holeyn Hall Road		01/06/2018	NZ11186511
Bats	Wylam		01/04/2007	NZ118642