



Bat Survey Report

**4 Redsteads Cottages
Christon Bank
Northumberland**

John Young

FE-168-001-400-R-01-V1

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FALCO Ecology

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1 Executive Summary

- A Preliminary Roost Assessment and a single bat activity survey was undertaken by FALCO Ecology on 4 Redseads Cottages. Two buildings were present on the site which included the 'House' and the derelict 'Cottage' (also referred to as the 'surveyed buildings'). Surveys were undertaken in suitable weather conditions in August 2022.
- The survey objectives were to establish if a bat roost was present and characterise the roost type, record Bat Access Points, species, approximate number of roosting bats.
- Surveys were led by a bat licensed surveyor – Adrian George and assisted by Anna Stephenson, Owen Dodgson, Ken Wright and Marius Guraliuc.
- No evidence of confirmed roosting bats was recorded during the Preliminary Roost Assessment survey. However, gaps were present within the roof structure and walls of the House and walls of the Cottage that led to Potential Roost Features (PRF). The House was assessed as having moderate suitability to support roosting bats, whilst the Cottage had low suitability.
- Emergence survey no.1 – four surveyors and three infrared cameras were used to cover the surveyed buildings during the survey. No bats were recorded emerging from the surveyed buildings. A total of four soprano pipistrelles were recorded commuting west to east over the site. Only one common pipistrelle was recorded at anyone moment in time. Noctule was also recorded high above the surveyed buildings on a few occasions throughout the survey. A brief pass by a brown long-eared bat was recorded late in the survey within the site.
- Emergence survey no.2 – two surveyors and two infrared cameras were used to cover the House during the survey. No bats were recorded emerging from the House. A total of five soprano pipistrelles were recorded commuting west to east over the site. Only one common pipistrelle was recorded at anyone moment in time. Noctule was also recorded high above the surveyed buildings on a few occasions throughout the survey. A brief pass by a brown long-eared bat was recorded late in the survey within the site.
- The surveyed buildings have negligible value to the local bat populations.
- Construction activities at dusk, dawn or at night has the potential to displace commuting and foraging bats in the vicinity of the surveyed buildings.
- Mitigation measures will be required to minimise the indirect and direct impacts on the adjacent day roost and foraging bats. These essentially include:
 - no construction works at dusk, dawn or at night under flood lights;
 - gaps between fascia boards and exterior walls to remain (post construction) along the wall head of the House; and
 - All re-roofing works or works on the southern gable end wall of the House should be undertaken outside of the breeding season.
- The residual impact of the proposed development on roosting bats will be negligible, following the mitigation measures.
- The residual impact of the proposed development on foraging bats will be negligible, following the mitigation measures.



- Evidence of breeding birds (droppings under gaps and nest material) on or within the House were recorded during the PRA.
- The residual impact of the proposed development on breeding birds will be negligible.
- It is recommended that two integrated bat boxes and two integrated bird boxes are integrated near the wall head of the east aspect wall of the proposed development. Additionally, four artificial swallow platforms/nests will be installed into the proposed archway.
- Required Actions include:
 - All construction works related to the proposed development will follow the mitigation measures as set out in Section 6 of this report.
 - The make and model of the proposed integrated bat and bird boxes will require confirmation with Northumberland County Council and evidence (photos) of the proposed integrated bat box inclusion into the surveyed building will also be submitted to Northumberland County Council.



2 Introduction

2.1 Background

- 2.1.1 FALCO Ecology Ltd. was commissioned by John Young (hereon referred to as the "Client") to undertake a Preliminary Roost Assessment and a Breeding Bird Assessment (hereon referred to as the "PRA") at 4 Redsteads Cottages (hereon referred to as the "surveyed building"). Two bat activity surveys were commissioned after the findings of the PRA.
- 2.1.2 The purpose of this report is to provide a record of the suitability of the surveyed building to support roosting bats and any evidence of bat roosts. The suitability of the surrounding habitats to support foraging bats is included within this report. Evidence of other protected species including breeding birds within/on the surveyed building is also included within this report.

2.2 Surveyed Building Description and Location

- 2.2.1 The surveyed buildings consisted of an end of terrace residential property (hereafter referred to as the 'House') which was not occupied at the point when the surveys were undertaken. The second building was a former small dwelling which only had the exterior walls standing but the roof had collapsed into the building (hereafter referred to as the 'Cottage'). Some internal renovation works had occurred, and construction materials were being stored within the House.
- 2.2.2 The address of the surveyed building was 4 Redsteads Cottages, Christon Bank, Alnwick, Northumberland, NE66 3ES. The central Ordnance Survey grid reference for the surveyed building was NZ 16242 72113 and was ~70m above sea level. The location of the surveyed building is shown in Figure 1 (page 3).
- 2.2.3 The immediate surrounding habitats of the surveyed building were residential dwellings within Christon Bank. Mixed farmland dominated the surrounding landscape and several woodland blocks with woodland corridors were present to the west of the surveyed buildings. The surrounding area of the surveyed building with 500m, 1km and 2km buffers are shown in Figure 2 (page 3).
- 2.2.4 The surveyed building was within the administrative area of Northumberland County Council.

2.3 Development Proposals

- 2.3.1 The proposed development includes the demolition of the Cottage and constructing a dog leg extension off the south elevation of the House. The architectural plans are shown in Appendix 1.
- 2.3.2 The proposed development will involve demolition works on the Cottage and works to the existing roof of the House. Therefore, has the potential to disturb roosting bats or destroy bat roost locations if present within the surveyed buildings.



Figure 1: Surveyed building.

© Google Earth. Imagery Date: 01/07/2018.



Figure 2: Surrounding habitats.

© Google Earth. Imagery Date: 01/07/2018.

2.4 Survey and Reporting Objectives

2.4.1 The survey comprised of a preliminary roost assessment. This were undertaken by FALCO Ecology and included the following objectives:



- Establish if the surveyed building is used by roosting bats;
- Record evidence of use by bats;
- Record locations of Potential Access Points (PAP) and Bat Access Points (BAP)
- Record locations of Potential Roost Features (PRF);
- Provide recommendations for further bat surveys where required;
- Obligations for the Client to consider if confirmed bat roost(s) are located; and
- Observations of old bird nests within/on the surveyed building or PAPs for breeding birds were also recorded.

2.5 Legislation

- 2.5.1 UK Legislation (specifically related to England) relating to bats are fully documented in Appendix 2; however, in summary all bats and their roosts are protected under UK legislation. **This legislation makes it an offense to deliberately disturb, damage or destroy a bat roost. An unlimited fine and/or six months imprisonment may be given per offense.**
- 2.5.2 Active bird nests (nests under construction, nest with eggs or young) are fully protected from deliberate and reckless destruction under the Wildlife & Countryside Act 1981 (as amended). Furthermore, Schedule 1 species, such as barn owl *Tyto alba*, are protected from deliberate or reckless disturbance at the nest site or of dependant young.



3 Methodology

3.1 Desktop Study

Data Search

3.1.1 A data search from following web recourses was used:

- The Government’s Multi-Agency Geographic Information for the Countryside or ‘MAGIC’ website, which provides details of:
 - Statutory sites designated for their ecological interest;
 - Priority habitats including deciduous woodland that are likely to support roosting and foraging bats; and
 - Local European Protected Species Mitigation (EPSM) Licenses that had been granted.
- Google Earth Pro was utilised to assess the habitats surrounding the surveyed building for their suitability to support foraging, commuting and roosting bats;
- North East England Nature Partnership; and
- Northumberland Bat Group website.

Consultation Data

3.1.2 Consultation data is not included as part of this report as no evidence of bat roosts was present within the roof void and no PRFs with evidence of roosting bats were located above or surrounding the proposed development location. Given the locality of the surveyed building and the surrounding habitats it is considered that a wide range of bat species listed in paragraph 4.1.6 would be present in the local area.

3.2 Preliminary Roost Assessment

3.2.1 The exterior of the surveyed buildings was surveyed from ground level using high powered binoculars (Swarovski EL 10x42) and a Ledlenser i18R torch to locate any PAPs.

3.2.2 The interior inspection of the House included an inspection of the roof void from the loft hatch with an Apple iPad Mini 2 and an Echo Meter Touch to record any potential bat calls. The ground floor and first floor were surveyed for evidence of roosting bats as there were broken first floor windows that would provide bats access to within the House.

3.2.3 Photos were taken using an iPhone 8 plus or a Canon D70 with a 70-200mm lens.

3.2.4 The survey followed the guidance for assessing buildings as set out within the Bat Conservation Trust (BCT) Guidelines (Collins 2016) as shown in Table 1 (page 6). The survey was undertaken by Adrian George on the 26th July 2022 in suitable weather conditions.

**Table 1: Guidelines for assessing potential roost features.**

Suitability	Description
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individuals bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitats to be used on a regular basis or by large numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously used by large numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Confirmed	A bat or bats or evidence of roosting bats observed within the building/tree.

3.2.5 All UK bats have been found to be roosting in buildings; however, some bats prefer buildings more than others. Furthermore, many species prefer unique aspects of a roost feature within a building. Bats that utilise buildings for roosting can be separated into four categories and are described in Table 2 (BCT 2015).

Table 2: Roost features in buildings that various bats prefer.

Roost Type	Species
Crevice dwelling bats (These are often hidden from view)	Common pipistrelle <i>Pipistrellus pipistrellus</i> , soprano pipistrelle <i>Pipistrellus pygmaeus</i> , Nathusius' pipistrelle <i>Pipistrellus nathusii</i> , Brandt's bat <i>Myotis brandtii</i> and whiskered bat <i>Myotis mystacinus</i>
Roof-void dwelling bats (maybe seen on roof timbers)	Serotine <i>Eptesicus serotinus</i> , Leisler's bat <i>Nyctalus leisleri</i> , Daubenton's bat <i>Myotis daubentonii</i>
Bats that need flight space in certain types of roost	Natterer's bat <i>Myotis nattereri</i> and brown long-eared bat <i>Plecotus auritus</i>
Bats that need flight space and flying access into the roost	Greater Horseshoe <i>Rhinolophus ferrumequinum</i> and Lesser Horseshoe <i>Rhinolophus hipposideros</i>



3.3 Roost Characterisation

3.3.1 The various terminologies of bat roost types, used within this report, as illustrated within the BCT Guidelines (Collins 2016) and replicated from the Natural England European Protected Species Licence application form are shown in Table 3.

Table 3: Bat roost types.

Roost Type	Natural England definition
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.
Maternity roost	Where female bats give birth and raise their young to independence.
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.

3.4 Bat Activity Survey

3.4.1 Two bat activity surveys were undertaken and broadly followed the guidance set out within the BCT survey guidelines (Collins 2016). The bat activity surveys consisted of two dusk (emergence) surveys which were separated by a minimum of 14 days. The bat activity survey details are shown in Table 4, below.

Table 4: Bat activity survey details and weather conditions.

Survey Type	Date	Sunset/Sunrise Times	Start Time	End Time	Weather Conditions	Start Temp °C	End Temp °C
Emergence (Dusk)	14.08.22	20:44	20:29	22:14	High cloud, overcast, calm, dry	17.9	17.9
Emergence (Dusk)	30.08.22	20:05	19:50	21:35	Partially overcast, calm, dry	13.2	12.6

3.4.2 Four surveyors (SL01-04) were used during the first bat activity survey which provided coverage of the House and the Cottage. Two surveyors (SL01-02) were used during the second bat activity survey which provided coverage of the House only. The bat activity surveys were undertaken and led by Adrian George and assisted by Owen Dodgson, Anna Stephenson, Marius Guraliuc and Ken Wright. The locations of the surveyors during the bat activity surveys are shown in

3.4.3 An Anabat Scout, Echo Meter Touch 2 and full spectrum Anabat Express were used to record bat calls during the surveys. Two to three infrared cameras were used to aid surveyors when light levels dropped.



Figure 3: Surveyor locations.

© Google Earth. Imagery Date: 01/07/2018.

3.5 Breeding Bird Assessment

3.5.1 An inspection of the surveyed building to identify any nest material from former bird nests was undertaken during the survey. Nest material varies depending upon individual species, for example a house sparrow *Passer domesticus* may use small twigs, grasses and leaves; however, a house martin *Delichon urbicum* construct a nest using mud. Furthermore, some species are crevice nesters (house sparrow) whilst other are open nesting on external walls (house martin).

3.6 Surveyor's Experience

Adrian George

3.6.1 Adrian is an experienced ecologist who has undertaken bat surveys on a range of developments including residential properties, small to large scale wind farms, solar farms, power lines and water pipelines. Bat surveys have been undertaken throughout England, Wales and Scotland. Adrian holds a Class 2 Natural England (CL18 2017-32910-CLS-CLS) and a Scottish Natural Heritage bat licence. Adrian is a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM) and a member of the Northumberland Bat Group.

Anna Stephenson

3.6.2 Anna completed bat survey training with a northeast England based ecological consultancy in 2019. Anna has undertaken bat activity surveys with FALCO Ecology since 2020.



Owen Dodgson

- 3.6.3 Owen completed bat survey training with FALCO Ecology during spring 2021. Owen has now undertaken several bat activity surveys during the 2021/22 season with FALCO Ecology.

Ken Wright

- 3.6.4 Ken has undertaken three seasons of bat activity surveys, including transect surveys. He is a volunteer for the Northumberland Bat group and has participated in winter hibernation surveys and trapping for *Nathusius pipistrelle* as part of the national project.

Marius Guraliuc

- 3.6.5 Marius been doing dawn and dusk bat surveys since 2018 with various ecological consultancies in the northeast of England. These have included a variety of buildings in both rural and urban areas and have included trees.

3.7 Limitations

- 3.7.1 MAGIC Maps provides a digital database of the issued European Protected Species Mitigation licences within England; however, no digital online records are available for Low Impact Class licenses. Therefore, it is plausible that further impacts on local bat roosts, either breeding or resting locations, have been approved by Natural England within the local area.
- 3.7.2 As with most buildings, it was not possible to inspect inaccessible voids such as between the roof tiles and potential roof underlays or within any potential wall cavities.
- 3.7.3 The internal roof inspection of the House was only undertaken from the loft hatch as the beams had the potential to be unsafe. Two bat activity surveys were undertaken and therefore the restriction in this restriction is not deemed to have negatively affected the results of the bat surveys.
- 3.7.4 The details within this report will remain valid for a period of 12 months. Beyond this period, it is recommended that a new review of the ecological conditions of the surveyed building are undertaken.



4 Results

4.1 Desktop Study

Data Search

Statutory Designated Sites

4.1.1 The surveyed building was not situated within a statutory designated site. The surveyed building did lie within a Site of Special Scientific Interest (SSSI) Impact Risk Zone. There were no statutory designated sites present within 2km of the surveyed building.

Priority Habitats

4.1.2 The closest priority habitat to the surveyed building was broadleaved woodland ~680m west of the surveyed buildings. A conifer woodland, that may include deciduous trees, and a pond within it was present ~250m east of the surveyed buildings. Very few woodland blocks were present to the east, although woodland blocks and linear woodland corridors were present to the west of the surveyed building.

4.1.3 The surrounding habitats of the surveyed building was dominated by mixed farmland. Residential dwellings formed the village of Christon Bank. It is considered that the surrounding habitats provide potential roosting (residential buildings, trees) and optimal foraging opportunities for a wide range of bat species as outlined in paragraph 4.1.6.

EPSM Licenses

4.1.4 A total of three granted EPSM licences were returned within 2km of the surveyed building (MAGIC 2022). These were for the:

- destruction of a resting site for common pipistrelle (2019-41440-EPS-MIT) which was ~1.4km east of the surveyed building.
- damage of a resting site for soprano pipistrelle (2020-44692- EPS-MIT) which was ~1.75km west southwest of the surveyed building.
- destruction of a breeding site and resting site for common pipistrelle, soprano pipistrelle and Natterer's bat (EPSM2011-3272) which was ~2km north northwest of the surveyed building.

4.1.5 It is not known how many Low Impact Class Licenses have been issued within the local area.

Local & Regional Status of Species

4.1.6 There were 17 bat species recorded in the UK, of which ten (possibly more) had been recorded in Northumberland. Nine bat species had been recorded breeding within the county. Their abundance within the county is stated within the Northumberland Biodiversity Action Plan (NEENP 2020) and is as follows:

- Brandt's bat – rare;
- Whiskered bat – uncommon;
- Natterer's bat – uncommon;



- Daubenton's bat – frequent on water;
- Noctule bat – scattered;
- Leisler's bat – rare;
- Brown Long-eared bat – frequent;
- Common Pipistrelle – common and widespread;
- Soprano Pipistrelle – common and widespread; and
- Nathusius' Pipistrelle – rare with single figure maternity roosts known via radio-tracking.

4.1.7 All the above species are listed as a Northumberland Biodiversity Action Plan Priority Species.

4.2 Preliminary Roost Assessment

Key Findings


- *No evidence of roosting bats were recorded during the PRA.*
- *The House had **moderate** suitability to support roosting bats.*
- *The Cottage had **low** suitability to support roosting bats.*
- *Bird nests and evidence of roosting and breeding birds under the fascia boards and within large holes in the southern gable end wall of the House.*

External and Internal Inspection

4.2.1 The description of the external features are listed and shown in Table 5 below. Examples of potential access points are shown by the red arrows.

4.2.2 The internal inspection of the roof void found no evidence of roosting bats. The roof void was partially boarded, and the loft insulation was clean.




Table 5: Building description.

Description	Photographs
<p>House</p> <ul style="list-style-type: none"> • Random stone construction with dressed stone coins • Solid wall construction with rubble in-fill • Dressed stone door/window surrounds • Clay interlocking pan roof tiles and clay ridge tiles • Dressed stone watershed stones on southern gable end wall • Wooden fascia boards on the front and rear elevations • Slate roof with no underlay on the single story rear extension 	



Description	Photographs
<ul style="list-style-type: none"> • Wooden doors, windows and frames • No evidence of bats within the roof void • No ridge beam present • Bitumen roofing underlay was present, though didn't meet at the ridge and external light was visible <p>PAPs</p> <ul style="list-style-type: none"> • Missing ridge tile mortar • Gaps between the fascia boards and the exterior walls • Broken window on gable end • Missing brick mortar on the gable end wall • 2no. large holes in the gable end wall • Missing brick mortar on west aspect of the chimney • Slipped slate roof tiles <p>PRFs</p> <ul style="list-style-type: none"> • Within rubble in-fill walls • On wall heads • Within the House • Within the roof void of the House • Between the clay roof tiles and the bitumen roofing underlay <p>Presence of bats</p> <ul style="list-style-type: none"> • No evidence of roosting bats recorded <p>Breeding birds</p> <ul style="list-style-type: none"> • 2no jackdaw <i>Corvus monedula</i> nests in southern gable end wall (blue arrows) • Bird droppings under wooden fascia boards on the front and rear elevation walls 	



Description	Photographs
	
<p><u>Cottage</u></p> <ul style="list-style-type: none"> • Solid wall with a rubble in-fill • Random stone with dressed coins <p>PAPs</p> <ul style="list-style-type: none"> • Gaps in the wall mortar near the apex of both gable walls. <p>PRFs</p> <ul style="list-style-type: none"> • Within rubble in-fill walls <p>Breeding birds</p> <ul style="list-style-type: none"> • No evidence of breeding birds 	 

4.3 Emergence Survey no.1

Key findings:

- *No bats were recorded emerging from the surveyed building.*

4.3.1 The first bat recorded during the emergence survey was a noctule at 20:53 which was nine minutes after sunset. This bat was only heard and not seen but presumed to be flying high over the surveyed buildings. A common pipistrelle was observed foraging over the adjacent rear gardens at 21:02. This was closely followed by a small number of soprano and common pipistrelles that were observed commuting west to east



between the House and the Cottage. Thereafter, common and soprano pipistrelles were recorded foraging around and commuting in the vicinity of the surveyed building.

- 4.3.2 Noctules were recorded (heard not seen) flying near the surveyed building on a few occasions during the survey. A single, brief pass by a brown long-eared bat was recorded at 22:09 which was an 1hr 40 mins after sunset.
- 4.3.3 Overall, bat activity around the surveyed building was steady and consistent with most recordings relating to common pipistrelles and soprano pipistrelles which were predominantly commuting east over/near the surveyed buildings.
- 4.3.4 Table 6 below, displays the data collected during the emergence activity survey by the observers.

Table 6: Results of the emergence survey no.1.

Observer/ Location	Time or 15 min interval	Species	Peak No. of Bats	Activity Type	No. of passes
SL01/03 Adrian George and Ken Wright – Rear and side elevations of the House and the Cottage	20:45- 20:59	Noctule	1	Foraging – heard not seen	1
	21:00- 21:14	Soprano pipistrelle	1	Commuting/foraging	Few
		Common pipistrelle	1	Commuting/foraging	Few
	21:15- 21:29	Soprano pipistrelle	1	Foraging	Few
		Common pipistrelle	1	Foraging	Few
	21:30- 21:44	Common pipistrelle	1	Foraging	Few
	21:45- 21:59	Common pipistrelle	1	Foraging and socialising	Few
	22:00- 22:14	Soprano pipistrelle	1	Foraging – heard not seen	1
		Common pipistrelle	1	Foraging and socialising	Few
		Brown long- eared bat	1	Brief passes – foraging	2
SL02/04 Anna Stephenson & Marius Guraliuc – Front and side elevations of House and Cottage	20:45- 20:59	Common pipistrelle	1	Heard not seen	1
		Noctule	1	Foraging – heard not seen	2
	21:00- 21:14	Soprano pipistrelle	1	Foraging – heard not seen	Few
		Noctule	1	Foraging – heard not seen	1
	21:15- 21:29	Soprano pipistrelle	1	Foraging – heard not seen	Few
		Common pipistrelle	1	Foraging – heard not seen	Few



Observer/ Location	Time or 15 min interval	Species	Peak No. of Bats	Activity Type	No. of passes
	21:30- 21:44	Soprano pipistrelle	1	Foraging – heard not seen	1
		Common pipistrelle	1	Foraging – heard not seen	2
		Noctule	1	Foraging – heard not seen	1
	21:45- 21:59	Soprano pipistrelle	1	Foraging – heard not seen	1
		Common pipistrelle	1	Foraging – heard not seen	Few
		Noctule	1	Foraging – heard not seen	1
	22:00- 22:14	Soprano pipistrelle	1	Foraging – heard not seen	Few
		Common pipistrelle	1	Foraging – heard not seen	Few
		Noctule	1	Foraging – heard not seen	1

4.4 Emergence Survey no.2

Key findings:

- *No bats were recorded emerging from the surveyed building.*

4.4.1 The first bat recorded during the emergence survey was a soprano pipistrelle at 21:15 which was 10 minutes after sunset. This bat was observed commuting west to east between the House and the Cottage. Four more soprano pipistrelles and two common pipistrelles were recorded commuting in the same direction. Foraging noctules were recorded throughout the survey; however, the majority were heard and not seen. A single, brief pass by a brown long-eared bat was recorded at 21:23 which was 78 minutes after sunset.

4.4.2 Overall, bat activity around the surveyed building was steady with foraging noctules and commuting soprano and common pipistrelles. The latter was recorded foraging around the front of the House, presumably around the streetlights on the adjacent road.

4.4.3 Table 7 below, displays the data collected during the emergence activity survey by the observers.

Table 7: Results of the emergence survey no.2.

Observer/ Location	Time or 15 min interval	Species	Peak No. of Bats	Activity Type	No. of passes
SL01 Adrian George – Rear and side elevations of the House	20:15- 20:29	Soprano pipistrelle	1	Commuting	2
		Noctule	1	Heard not seen	1
	20:30- 20:44	Soprano pipistrelle	4	Commuting	Few



Observer/ Location	Time or 15 min interval	Species	Peak No. of Bats	Activity Type	No. of passes
		Noctule	1	Foraging – heard not seen	Few
	20:45- 20:59	Common pipistrelle	2	Commuting	Few
		Noctule	1	Foraging – heard not seen	Few
	21:00- 21:14	Soprano pipistrelle	1	Foraging – heard not seen	Few
		Common pipistrelle	1	Foraging – heard not seen	Few
	21:15- 21:29	Soprano pipistrelle	1	Foraging – heard not seen	Few
		Common pipistrelle	1	Foraging – heard not seen	Few
		Brown long- eared bat	1	Brief pass – heard not seen	1
	SL02/04 Owen Dodgson – Front and side elevations of House and Cottage	20:15- 20:29	Soprano pipistrelle	1	Heard not seen
Noctule			1	Heard not seen	2
20:30- 20:44		Soprano pipistrelle	1	Commuting	1
		Common pipistrelle	1	Continuous foraging – heard not seen	Several
20:45- 20:59		Common pipistrelle	1	Heard not seen	1
		Noctule	1	Continuous foraging – heard not seen	Several
21:00- 21:14		Soprano pipistrelle	1	Foraging	1
		Common pipistrelle	1	Foraging – heard not seen	1
21:15- 21:29		Soprano pipistrelle	1	Foraging – heard not seen	1
		Common pipistrelle	1	Foraging – heard not seen	1
		Noctule	1	Foraging – heard not seen	1

4.5 Breeding Bird Assessment

- 4.5.1 Two jackdaw nests were recorded in the large holes in the southern gable end wall of the House. It is expected that any jackdaw nestlings would have fledged before the bat surveys were conducted. It is plausible that two pairs of jackdaws breed within the House.
- 4.5.2 Barn swallow *Hurundo rustica* were recorded nesting within the metal shed within the rear garden of the House.



- 4.5.3 No birds were recorded entering or exiting the gaps between the exterior walls and the fascia boards on the front and rear elevations of the House during the bat surveys; however, bird droppings were recorded on both the front and rear elevation walls indicating roosting or breeding birds had been present.
- 4.5.4 The surveyed building did not have features that could support breeding Schedule 1 species, such as barn owl.



5 Assessment

5.1 Evaluation

Bats

- 5.1.1 The results of the PRA concluded that surveyed buildings had suitability to support roosting bats; however, no bats were recorded emerging from the surveyed buildings during the two bat activity surveys.
- 5.1.2 Common and soprano pipistrelle were predominantly recorded, on both bat activity surveys, with bats commuting from west to east between the House and the Cottage. It is likely that there are bat roosts to the west of the surveyed buildings and the bats are heading to the woodland and pond ~250m east of the surveyed buildings. Both pipistrelle species were briefly recorded foraging in the vicinity of the surveyed buildings (adjacent road and neighbouring rear gardens). Two brief passes of brown long-eared bat were recorded within the rear garden of the surveyed buildings, which were 78 minutes and 100 minutes after sunset. The median emergence times of brown long-eared bats is 54 minutes after sunset (University of Bristol 2005). Therefore, it is unlikely that these bats emerged from the surveyed buildings or the adjacent outbuilding at the end of the surveyed building garden.
- 5.1.3 The rear garden of the surveyed buildings is not considered to be of importance to foraging bats.
- 5.1.4 It is concluded that roosting bats are likely to be absent from the surveyed buildings, although PAPs remain and there is a potential of the very occasional roosting bat in the future.
- 5.1.5 The surveyed building had **negligible** suitability to support hibernating bats. It is unlikely that hibernating bats would be present within the surveyed building during the winter months (November to March, inclusive).
- 5.1.6 The value of the surveyed building to roosting bats was **negligible**. The value of the rear garden for foraging bats was low.

Breeding Birds

- 5.1.7 The surveyed building appeared to support breeding jackdaw with two nests visible on the southern gable end wall of the House. Furthermore, it is plausible that house sparrow *Passer domesticus*, tree sparrow *Passer montanus* and swift *apus apus* may nest on the wall head of the front and rear elevations of the House.
- 5.1.8 The surveyed building had **negligible** suitability to support breeding Schedule 1 species.
- 5.1.9 The value of the surveyed building for breeding birds was **low**.

5.2 Impact

Bats

- 5.2.1 No bats were recorded roosting within the surveyed buildings, therefore the impact on roosting bats will be **negligible**.



- 5.2.2 Pipistrelle bats were recorded commuting between the House and the Cottage. The proposed development will be constructed across the commuter route; however, during the bat activity surveys, pipistrelle bats were also recorded commuting over the top of the House. As the proposed development is of equal height and no higher than the existing House, it is most likely that these bats will continue to use the commuter route although will fly slightly higher over the proposed development.
- 5.2.3 Common and soprano pipistrelles and to a less extent brown long-eared bats (two occasions) were recorded passing or foraging within the rear gardens of the surveyed buildings and the neighbouring dwellings. There was artificial lighting (streetlights) on the adjacent road, and it is plausible that many properties in the vicinity of the surveyed building have flood/security lights, therefore even if construction works were to occur at night under floodlights, it is unlikely to displace foraging bats.
- 5.2.4 The unmitigated impact of the construction phase of the proposed development could be **low** on foraging bats. Mitigation measures are required to reduce the potential impact on commuting and foraging bats in the vicinity of the surveyed buildings. Any potential disturbance of foraging bats would be short-term and would not affect an individual or population's ability to survive.
- 5.2.5 The impact of the operation of the proposed development on bats is considered to be **negligible**.

Breeding Birds

- 5.2.6 As breeding birds are very likely to be nesting within the House, the unmitigated impact of the proposed development may result in the destruction of nests and therefore mitigation measures are required to safeguard active bird nests. The impact of the potential loss of nests would have a negligible impact on the local bird populations.



6 Mitigation Measures

6.1.1 Mitigation measures are required to ensure that commuting and foraging bats have a dark¹ flightpath over the surveyed buildings.

6.1.2 Mitigation measures include:

- The construction of the proposed development will take place during any period of the year. Following the guidance from the Bat Conservation Trust, the preferred construction period is early spring and autumn.
 - Reason – to minimise any potential indirect impact on the confirmed bat roost.
- No external working at dusk, dawn or at night when roosting bats are likely to emerge/return or are foraging in the vicinity of the rear garden.
 - Reason – to minimise the impact of artificial lighting on foraging and commuting bats.
- No exterior artificial lighting, particularly up lighting, will be installed on the rear elevation (east aspect). Motion trigger, short on period security lights maybe installed but must be low powered, cowled (to reduce light spill) and downward facing.
 - Reason – to minimise the impact of artificial lighting on foraging and commuting bats.
- Exterior lighting is recommended to be triggered by motion to reduce any potential disturbance to foraging or roosting bats.
 - Reason – to minimise any potential direct impact on foraging bats.
- All re-roofing works or works on the southern gable end wall of the House should be undertaken outside of the breeding season. The breeding bird season which is generally classified as 1st March to 31st August. If the above works are undertaken within the breeding bird season, then a nesting birds check (NBC) will be undertaken by a Suitably Qualified Ornithologist (SQO). The NBC must be undertaken no more than 48 prior to the commencement of the works and the NBC is only valid for 48 hours. Thereafter, further NBCs will be required.
 - Reason – to safeguard active bird nests.
- Gaps will be retained between any new fascia boards and the wall heads of the House to allow continued of breeding birds to nest on the wall heads.
 - Reason – to minimise the impact of the proposed development on the local breeding bird populations.

¹ Equal to the existing lighting levels



7 Residual Impacts

- 7.1.1 If the construction and operational phase of the proposed development follows the above mitigation measures, then the residual impacts on roosting and foraging bats and breeding birds will be **negligible**.



8 Recommendations

8.1 Biodiversity Net Gain

8.1.1 To fulfil the latest National Planning Policy Framework which includes biodiversity net gain into proposed developments, it is recommended that two integrated bat boxes are integrated into the east aspect walls as shown in Figure 4 (below). An example of an integrated bird box is the Vivara Pro Build-in WoodStone bat box which is shown in Figure 5² (below). This box can be rendered over, leaving just the lower entrance hole. NOTE – this box must be installed vertically as shown in Figure 5.

8.1.2 Additionally, it is recommended that two integrated bird boxes be installed into the east aspect wall. The proposed locations of the integrated bird boxes are shown in Figure 6 (page 23). An example of an integrated bird box is the Vivara Pro WoodStone Build-in Swift Nest Box Deep which is shown in Figure 7². Swift boxes are also often taken up by breeding sparrows.

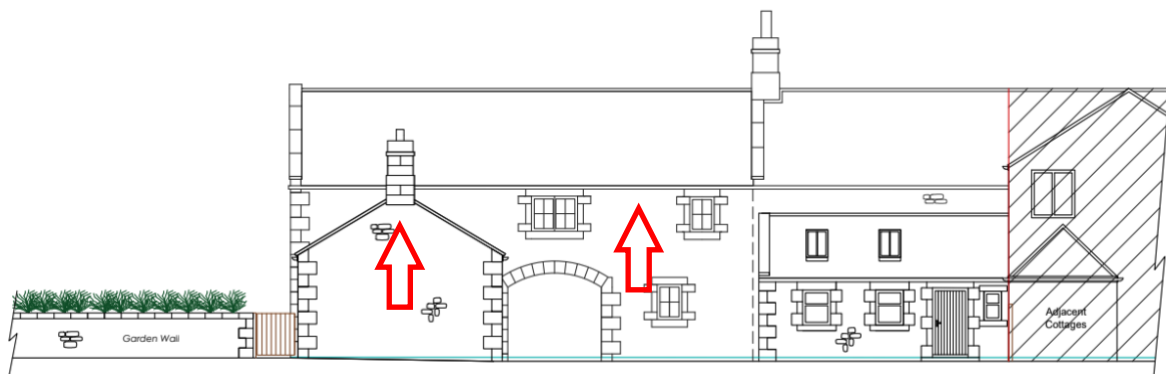


Figure 4: Proposed integrated bat box locations on the east aspect walls.



Figure 5: Example of an integrated bat box.

² Photo sourced from www.nhbs.com

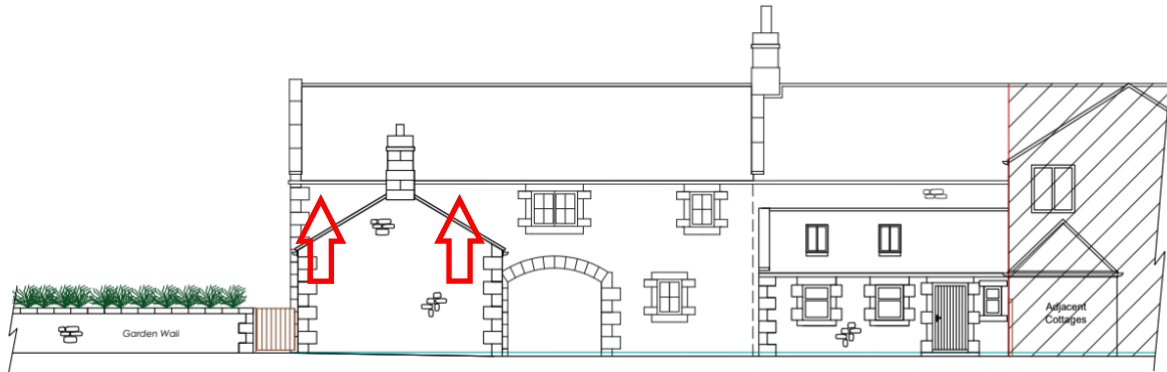


Figure 6: Proposed integrated bird box locations on the east aspect wall.



Figure 7: Integrated swift box.

8.1.3 A total of four swallow platforms or artificial nests will be installed under the proposed archway. An example of the proposed swallow nesting platform is shown in Figure 8, below.



Figure 8: Swallow nesting platform/artificial nest.



9 Required Actions

9.1 Client Responsibility

9.1.1 The following required actions are required:

- All construction works related to the proposed development will follow the mitigation measures as set out in Section 6 of this report.
 - To minimise the indirect and direct impacts on the adjacent day roost and foraging bats.
- The make and model of the proposed integrated bat and bird boxes will require confirmation with Northumberland County Council and evidence (photos) of the proposed integrated bat box inclusion into the surveyed building will also be submitted to Northumberland County Council.
 - To ensure that the biodiversity net gain features are installed and installed correctly.

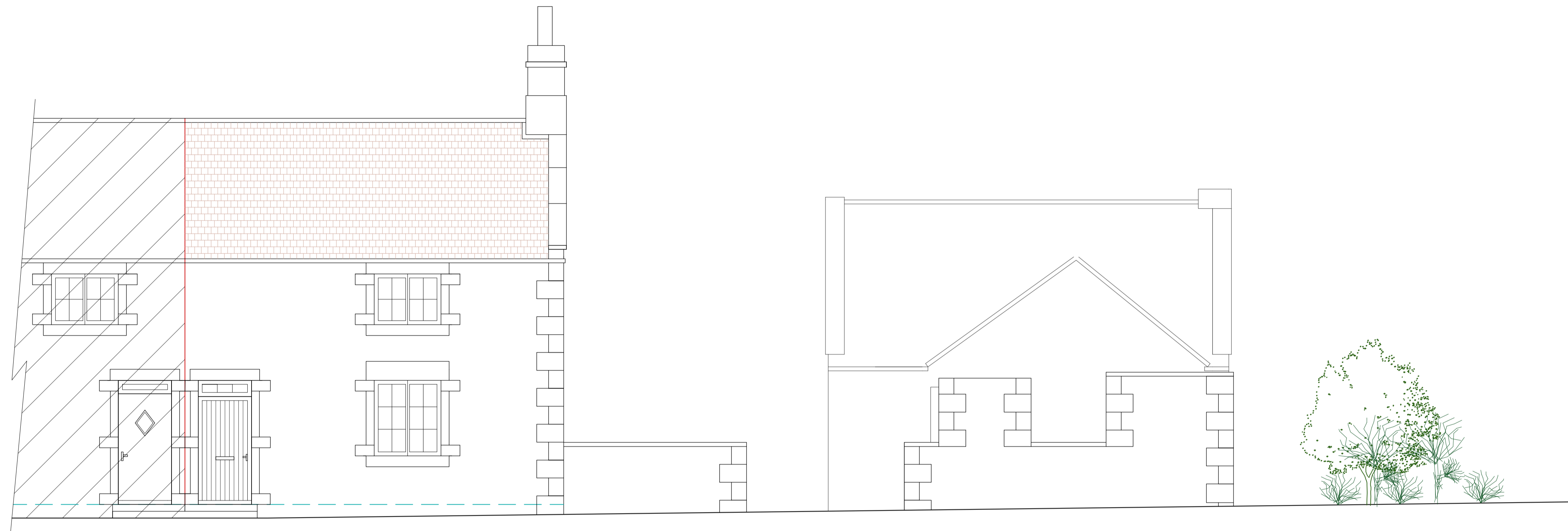


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Appendix 1 – Architectural Plans



Existing West Elevation
View from road.

Carter-Smith
Planning Consultants

Carter-Smith Planning Consultants
1st Floor, Heppcott House
Coopers Lane, Morpeth
NE61 6JT

Tel: 0771896722
Email: ian@carter-smithplanning.com
Web: carter-smithplanning.co.uk

Customer: Mr. John Young

Title: Existing Road Elevation

Site Address:
4 Redsteads Cottages,
Christon Bank, ALNWICK,
Northumberland, NE66 3ES.

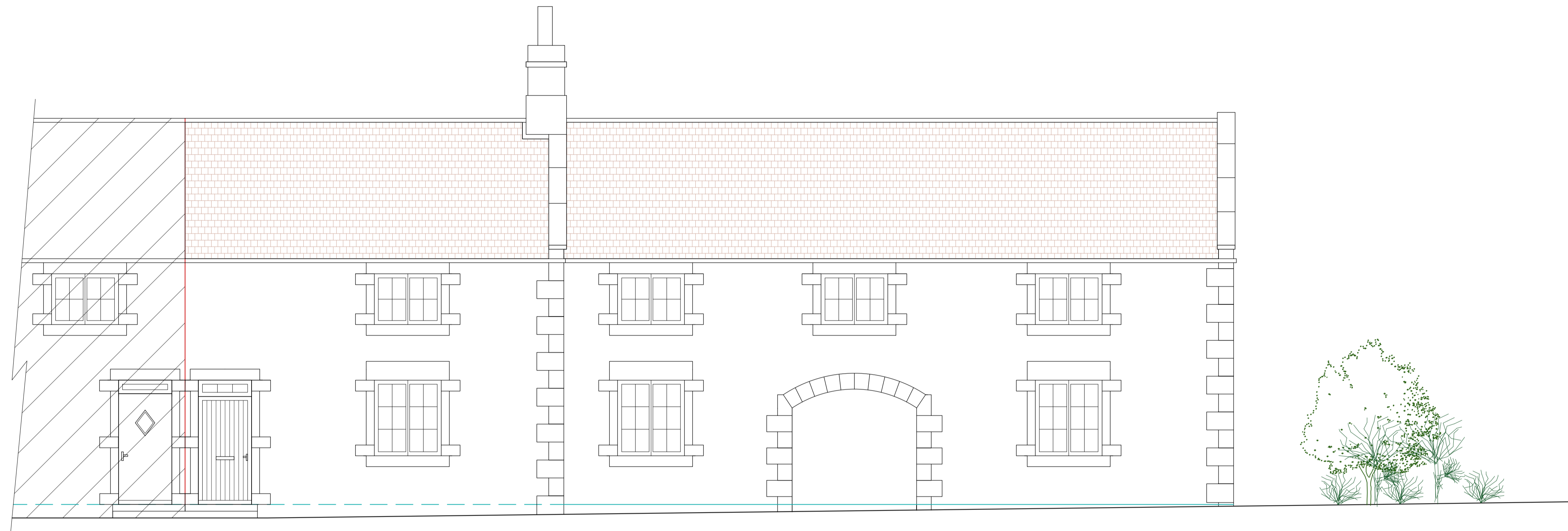
Drawing No. JR293 - 20

Scale: 1:50 @ A1

Date: 25/07/2022

Drawn By: Ian Rutherford

Check all critical construction dimensions, if in doubt ASK. Drawings produced for the purpose of planning approval ONLY. All structural elements to be checked by a structural engineer. Drawing remains the property of **Ian Rutherford Surveying**.



Proposed West Elevation
View from road.

Carter-Smith
Planning Consultants

Carter-Smith Planning Consultants
1st Floor, Heppcott House
Coopers Lane, Morpeth
NE61 6JT

Tel: 0771896722
Email: ian@carter-smithplanning.com
Web: carter-smithplanning.co.uk

Customer: Mr. John Young

Title: Proposed Road Elevation

Site Address:
4 Redsteads Cottages,
Christon Bank, ALNWICK,
Northumberland, NE66 3ES.

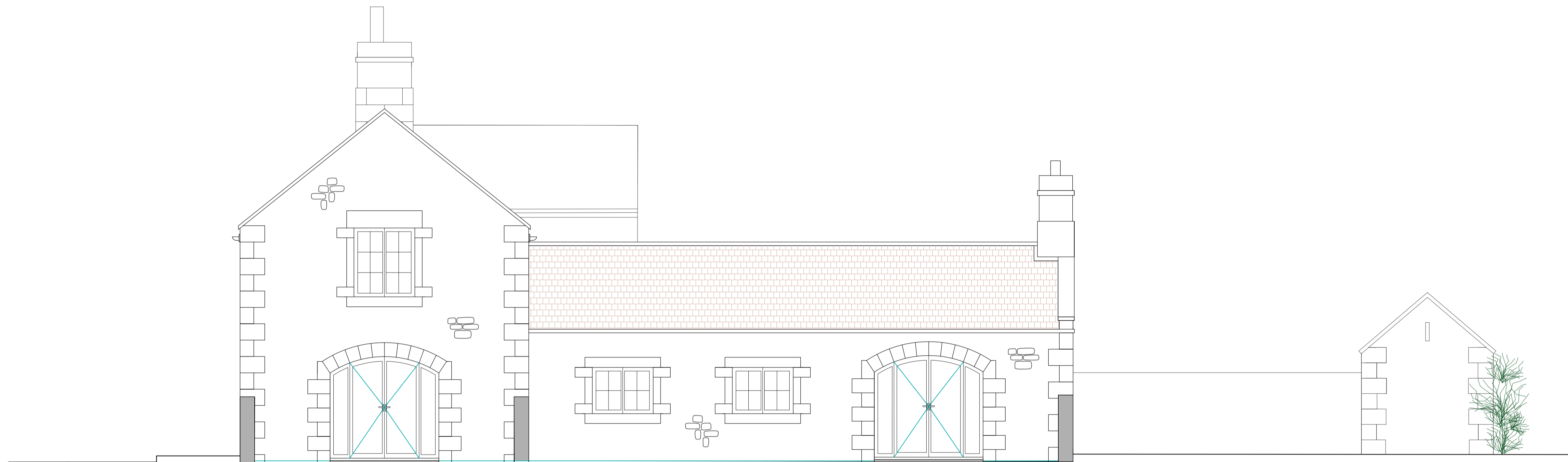
Drawing No. JR293 - 21

Scale: 1:50 @ A1

Date: 25/07/2022

Drawn By: Ian Rutherford

Check all critical construction dimensions, if in doubt ASK. Drawings produced for the purpose of planning approval ONLY. All structural elements to be checked by a structural engineer. Drawing remains the property of **Ian Rutherford Surveying**.



Proposed South Elevation

Carter-Smith
 Planning Consultants
 1st Floor, Heppcott House
 Coopers Lane, Morpeth
 NE61 6JT
 Tel: 0771896722
 Email: ian@carter-smithplanning.com
 Web: carter-smithplanning.co.uk

Customer: Mr. John Young

Title: Proposed Side Elevation

Site Address:
 4 Redsteads Cottages,
 Christon Bank, ALNWICK,
 Northumberland, NE66 3ES.

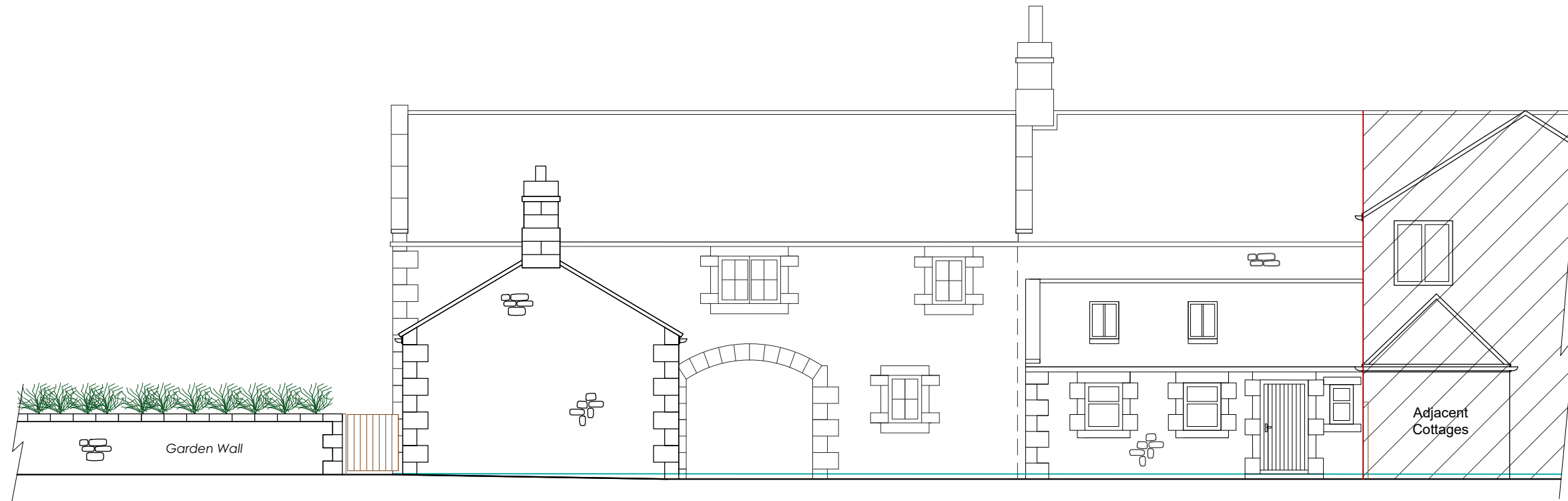
Drawing No. JR293 - 23

Scale: 1:50 @ A1

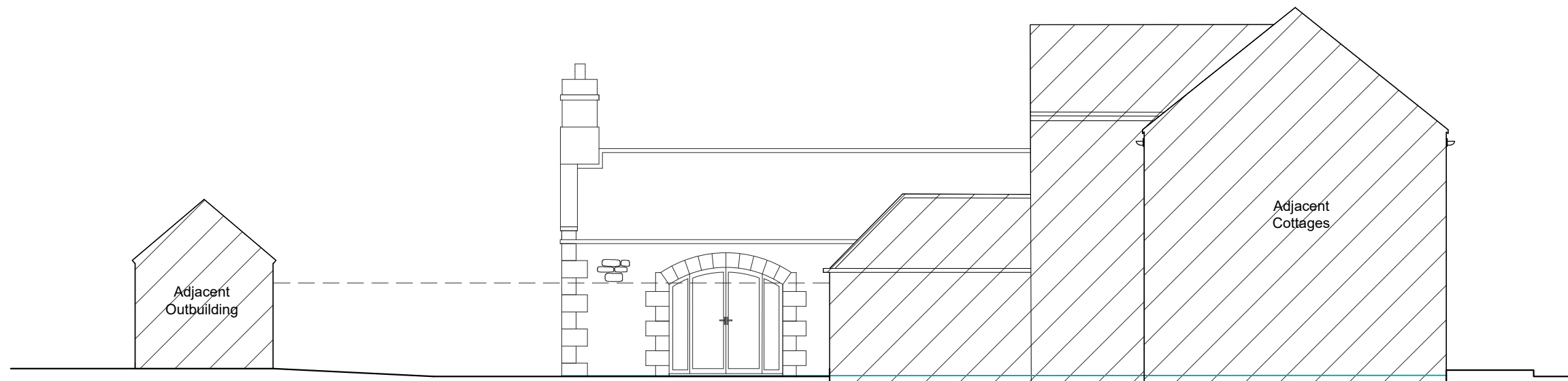
Date: 25/07/2022

Drawn By: Ian Rutherford

Check all critical construction dimensions, if in doubt ASK. Drawings produced for the purpose of planning approval ONLY. All structural elements to be checked by a structural engineer. Drawing remains the property of **Ian Rutherford Surveying**.

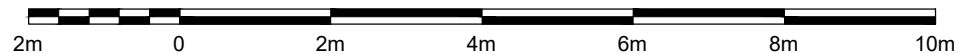


Proposed East Elevation



Proposed North Elevation
Fence in foreground omitted for clarity.

1:100



Carter-Smith
Planning Consultants

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Tel: 07718967722
Email: tony@cartersmithplanning.com
Web: cartersmithplanning.co.uk

Customer: Mr. John Young

Title: Proposed East and North Elevations

Site Address:
4 Redsteads Cottages,
Christon Bank, ALNWICK,
Northumberland, NE66 3ES.

Drawing No. JR293 - 13

Scale: 1:100 @ A3

Date: 10/08/2022

Drawn By: Ian Rutherford

Check all critical construction dimensions, if in doubt ASK. Drawings produced for the purpose of planning approval ONLY. All structural elements to be checked by a structural engineer. Drawing remains the property of **Ian Rutherford Surveying**.



Appendix 2 – Environmental Legislation & Convention Relating to Bats



Introduction

The UK has ratified a number of Conventions and implemented legislation pertaining to the protection of bats, either independently or as member state of the European Union. These are defined and summarised below.

Lists of threatened, endangered and extinct species are also provided, together with a summary explanation of each.

Bern Convention (1982)

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. Its aims are 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 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.

The UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework was published in July 2012 and supersedes the Biodiversity Action Plan which lists and prioritises habitats and species and sets national targets to be achieved. The UK Post-2010 Biodiversity Framework includes all the species formally listed under the old UKBAP. The Environmental Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. The former UKBAP identified 391 'Priority' Species Action Plans (SAPs) and 162 Local Biodiversity Action Plans. Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level) and are usually drawn up by a consortium of local Government organisations and conservation charities. UKBAP Bat priority species include Barbastrelle Bat, Bechstein's Bat, Soprano Pipistrelle, Noctule, Brown Long-eared Bat, Greater Horseshoe Bat and Lesser Horseshoe Bat.

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, Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW)

The UK has currently ratified four legally binding Agreements under the Convention, one of which is the Agreement on the Conservation of Populations of European Bats (EUROBATS).

National Planning Policy Framework (2021)



Following the publication of the first revision of the National Planning Policy Framework (NPPF) in March 2012, Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation (2005) has been withdrawn. However, ODPM 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System (the guidance document that accompanied PPS9) has not been withdrawn and, where more detailed guidance is required than is given within the NPPF, local planning authorities will continue to rely on ODPM 06/2005. The NPPF has been revised and was published in July 2021.

The natural environment is covered within the NPPF 2021 in Chapter 15, paragraphs 174-188.

The purpose of the NPPF is to conserve and enhance the natural environment including:

- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*

To protect and enhance biodiversity and geodiversity, plans should:

- *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*

This guidance requires local planning authorities (planning policies and planning decisions) to take account of the conservation of protected species when determining planning applications and makes the presence of a protected species a material consideration when assessing a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Furthermore, the NPPF 2021 still includes the requirement for developments to *improve biodiversity* including ecological *net gain*. In the case of European Protected Species such as bats, planning policy emphasises that strict statutory provisions apply (including the Conservation of Habitats and Species (Amendment) Regulations 2012), to which a planning authority must have due regard.

Where developments requiring planning permission are likely to impact upon protected species it is necessary that protected species surveys are undertaken and submitted to meet the requirements of paragraph 98 of ODPM Circular 06/2005 which states that:

'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'

Potential Special Protected Areas, possible Special Areas of Conservation, listed or proposed Ramsar site should be given the same protection as habitats sites.

Species of Principal Importance in England

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 Barbastrelle Bat, Bechstein's Bat, Soprano Pipistrelle, Noctule, Brown Long-eared Bat, Greater Horseshoe Bat and Lesser Horseshoe Bat.

[The Conservation of Habitats and Species \(Amendment\) \(EU exit\) Regulations 2019](#)

The Conservation of Habitats and Species (Amendment) (EU exit) Regulations 2019 came into force on 1st February 2020 and ensures that the species and habitat protection and standards derived from EU law will continue to apply during the Brexit transitional period. No alterations have been made within the amendment from the Conservation of Habitats and Species Regulations 2017 consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales.

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. The 2012 amendments include that public bodies 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, which include all horseshoe bats *Rhinolophidae sp.* and all common bats *Vespertilionidae sp.*

[Wildlife and 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 WCA makes it an offence to:

- deliberately capture, injure or kill a bat;
- intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- intentionally or recklessly obstruct access to a bat roost; and
- possess or advertise/exchange/sell a bat (alive or dead) or any part of a bat.