

Bat Survey Report

North Farm, Hallington

October 2022

Version: 1 Final for client

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McGinn Ecology and Arb Services

Document Control

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This report was prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM)'s Code of Professional Conduct by McGinn Ecology and Arb Services Ltd. and issued to our client, Sarah Harrison of Harrison Architects Studio Ltd. on behalf of Colin Caygill for the purpose of supporting an application for full planning permission for the development of North Farm, Hallington, Northumberland, NE19 2LW.

The recommendations and conclusions provided in this report are the professional opinions of McGinn Ecology and Arb Services Ltd. and are based on survey conditions at the time of survey, desk study data received, legislation, policy and technical guidance current at the time of writing.



McGinn Ecology and Arb Services

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1 Summary

McGinn Ecology and Arb Services Ltd. was commissioned by Sarah Harrison of Harrison Architects Studio Ltd. on behalf of Colin Caygill on 5th August 2022 to undertake a bat risk assessment of North Farm, Hallington, Northumberland, NE19 2LW upon request from the local planning authority in relation to a full planning application to develop the site by conversion of a perpendicular barn including a small corner infill extension between the barn and main house, over two storeys to form a single dwelling..

A desk study was completed and a Bat Risk Assessment was undertaken by Paul McGinn in August 2022. Habitats identified within the site boundary included; buildings, hardstanding, ornamental flowerbeds, hedgerows and semi-improved amenity grassland. The site is considered to offer suitable habitat for nesting common garden birds, hedgehog and foraging and commuting bats. The building has been classified as ‘moderate’ risk to support roosting bats due to the presence of features that have the potential to be used by roosting bats, therefore a further single dusk emergence survey and single dawn re-entry survey were recommended in line with BCT guidelines to attain further data during the active bat season and confirm the presence or absence of bats using the site for the purpose of roosting bats within the structures and is to be undertaken between May and September in accordance with BCT Guidelines.

These recommended surveys were undertaken at dusk on 11th August and dawn on the 2nd September 2022 focusing on the barn and western half of the farm house. The results from the survey showed high bat activity recorded during both survey by all surveyors. The majority of bats recorded during the survey were primarily from common and soprano pipistrelle bat species with several registrations of; noctule, daubentons, brown long eared and whiskered/Brandts bat species.

No bats were observed emerging or re-entering from the building proposed for renovation during the entirety of both surveys however a bat roost of six soprano pipistrelle was identified on the farm house.

No further bat surveys or EPS licence are recommended in regards to the proposals on the building proposed for renovation due to the proposals not being likely to have any impact on the known roost within the farm building or the local bat population however, some activities relating to construction have the potential to impact bats and recommendations are made below to ensure no bats are affected due to the proposed works.

Other recommendations are also made in section 7 to enhance the biodiversity interest of the site, including recommendations in relation to nesting birds and foraging and commuting bats.

2 Introduction

2.1 Background

McGinn Ecology and Arb Services Ltd. was commissioned by Sarah Harrison of Harrison Architects Studio Ltd. on behalf of Colin Caygill on 5th August 2022 to undertake a bat risk assessment of North Farm, Hallington, Northumberland, NE19 2LW upon request from the local planning authority in relation to a full planning application to develop the site by converting a former stable block/barn and adjoining it to the main house.

The results of the bat risk assessment (undertaken on 8th August 2022) survey identified the building as having moderate potential for bats to use to roost due to several potential roost features observed during the risk assessment survey. Consequently, it was recommended that the building was subject to a single dusk emergence survey and single dawn re-entry survey to determine the presence or absence of roosting bats within the structures and were to be undertaken between May and September in accordance with BCT Guidelines, these surveys were commissioned on 10th August 2022 and undertaken on the 11th August and 2nd September 2022.

This report sets out the results of the Bat Risk Assessment Survey and Bat Emergence Survey, identifies the requirements for any further survey work including a European Protected Species (EPS) licence, advises on any mitigation measures required in line with relevant legislation and planning policy and makes recommendations for avoidance, mitigation and enhancement to ensure no net loss to biodiversity as a result of the proposed development.

2.2 Site Context

The site is located in the centre of the hamlet of Hallington Northumberland at central grid reference NY 98453 75858. It consists of a single two storey farmhouse with detached barn/workshop including amenity/garden areas and driveways. Habitats within the site boundary consisted of; buildings, hard standing, amenity grassland with a very low sward height, hedgerows and ornamental flower beds.

The surrounding area is primarily comprised of a mixture of agriculture and pasture farmland on all aspects of the site boundary and sparsely populated with only a few farms and isolated houses in the vicinity. Some small areas of woodland are also located within the area and generally follow watercourses however large woodland are absent from the immediate area. The closest waterbody to the site is Hallington reservoir which has a network of hydrological features starting from this source.

The site location is shown in Figure 1 and the site boundary and building reference plan is shown in Figure 2 below.

Figure 1 Site location plan (marked by red circle)

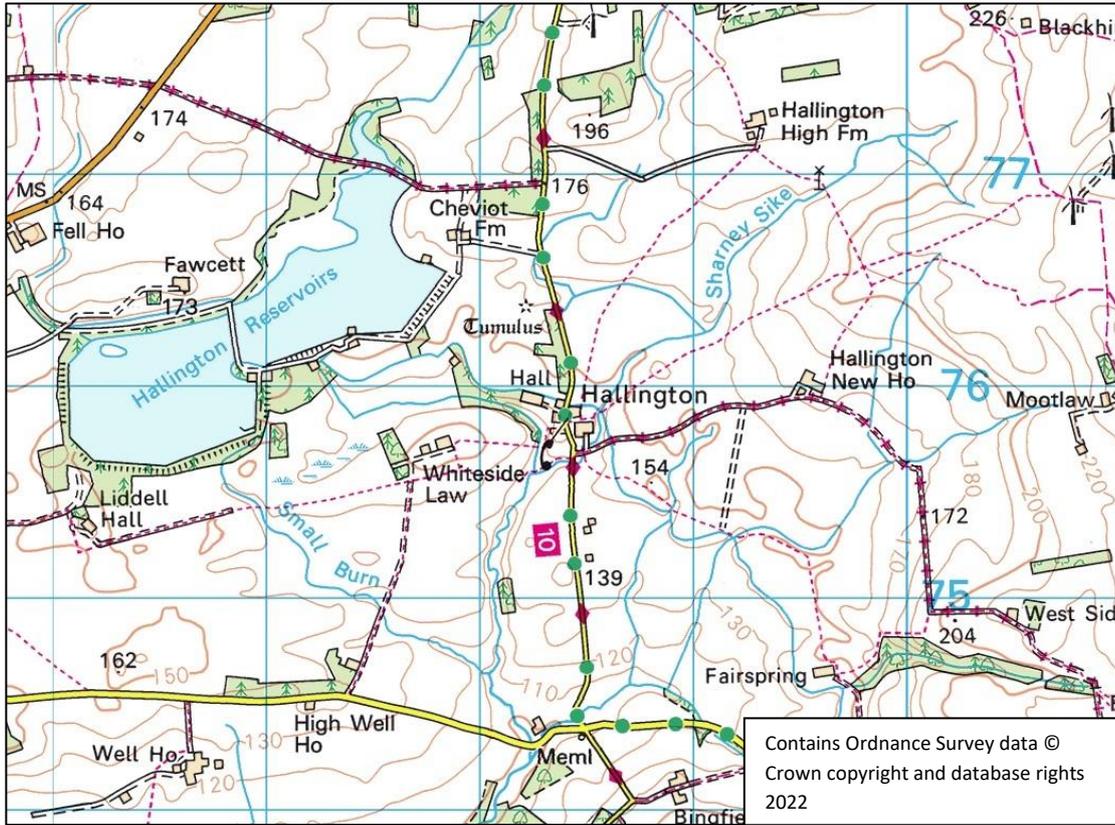
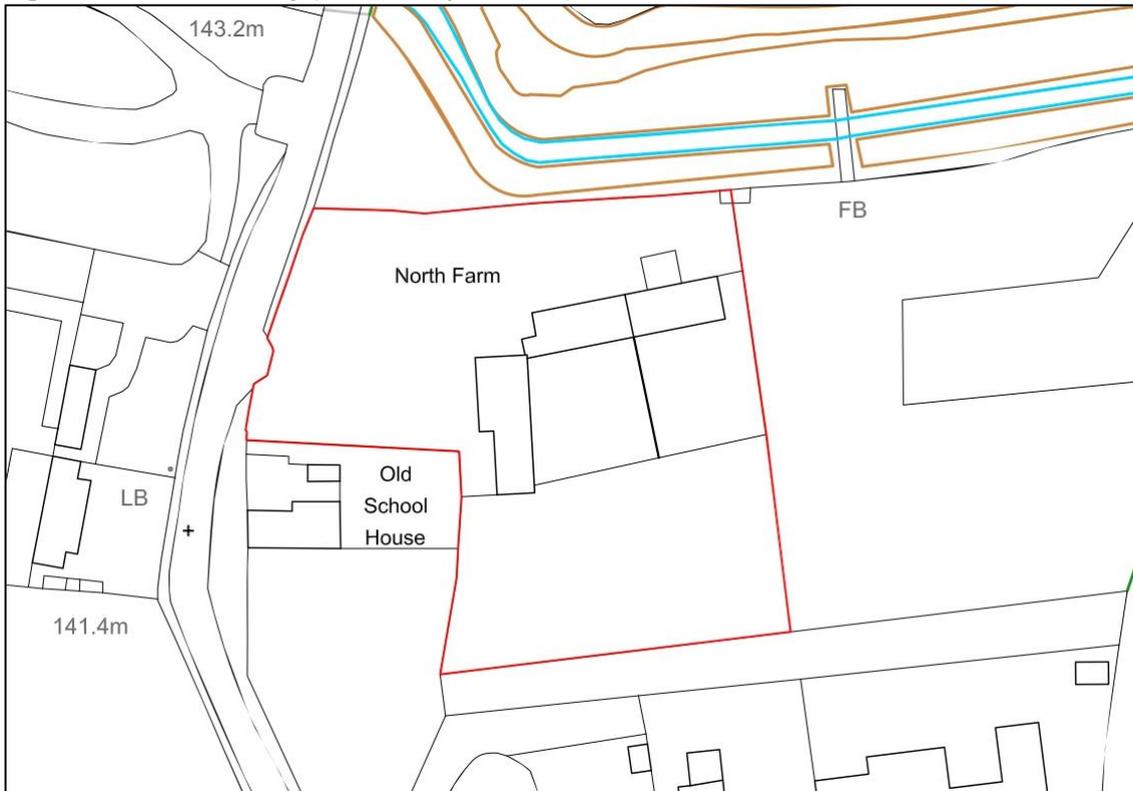


Figure 2 Site boundary (marked by red line)



3 Legislation and Policy

Due to the departure of the UK from the EU there will now follow a transition period until the end of 2021 during which EU legislation and policy will be followed. The only exception to this is that while EU case law from before 31 January 2020 will continue to be relevant to the UK position, any modifications to the law as a result of cases after that date will not be relevant to the UK.

3.1 Legislation

Key legislation of potential relevance to the site includes:

3.1.1 The Conservation of Habitats and Species Regulations 2010 (The Habitats Regulations)

The Habitats Regulations are the principal means by which Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the “Habitats Directive”) is transposed into law for England and Wales.

The Habitats Regulations cover the designation and protection of European sites and the protection of European protected species.

3.1.2 The Wildlife and Countryside Act 1981 (as amended)

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.
- Take or destroy an egg of any wild bird.

Birds listed on Schedule 1 of the act are also protected from disturbance whilst nesting.

The Act prohibits certain methods of killing, injuring, or taking wild animals and 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 listed on Schedule 5.

3.1.3 The Natural Environment and Rural Communities (NERC) Act 2006

Under Section 40 of the NERC Act 2006, decision-makers such as public bodies including local and regional authorities must have regard to the conservation of biodiversity in England when carrying out their normal (e.g. planning) functions. Section 41 requires the Secretary of State to publish a list of Habitats and Species of Principal Importance to help guide decision makers in undertaking their duty. The list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

3.1.4 The Protection of Badgers Act 1992

Under the Protection of Badgers Act 1992, which is the main legislation protecting badgers *meles meles* in England, it is an offence to wilfully kill, attempt to kill, take, injure, dig for or interfere with a badger sett (any structure or place which displays signs indicating current

use by a badger). It is also an offence to destroy or damage a sett (or any part thereof), obstruct access to a sett, cause a dog to enter a sett or disturb a badger while occupying a sett.

3.1.5 The Wild Mammals (Protection) Act 1996

This Act offers a form of protection to all wild species of mammals and is more of an animal welfare than conservation Act.

3.1.6 Town and Country Planning Act 1990 (Tree Preservation) (England) Regulation 2012

Trees in conservation areas are given protection from cutting down, topping, lopping, uprooting, wilful damage to or wilful destruction of protected trees. Trees in a conservation area that are not protected by a Tree Preservation Order (TPO) are protected by the provisions in section 211 of the 'Town and Country Planning Act 1990'.

Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a check should be made with the Local Planning Authority to see if the trees are covered by a TPO or if they are within a Conservation Area. Any requirement for a felling license should be confirmed for removing trees that are not covered by exceptions under amended regulations. If applicable, then statutory permission is required before any works can take place. When appointing a tree surgeon, only properly qualified and experienced contractors should be used, who have adequate Public Liability and Employer's Liability Insurance. All tree work should be carried out according to 'BS 3998: 2010 Tree Work – Recommendations'.

3.2 National Planning Policy

Section 15 of the National Planning Policy Framework NPPF (Ministry of Housing, Communities & Local Government, 2018) outlines government policy in relation to the conservation and enhancement of the natural environment through the planning process, acting as guidance for local planning authorities and decision-makers.

Paragraph 170 of the NPPF states that: *Planning policies and decisions should contribute to and enhance the natural and local environment by:*

a) Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan).

b) Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.

c) Maintaining the character of the undeveloped coast, while improving public access to it where appropriate.

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

e) Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.

f) Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

The Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within The Planning System, which should be read in conjunction with the NPPF states:

It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.

3.3 Local Planning Policy

The Northumberland Local plan (January 2019) lists several policies relating to Biodiversity, Geodiversity and Protected Species as saved policies, including Policy ENV 2 which states:

- Development proposals affecting biodiversity and geodiversity will minimise their impact and net gains for biodiversity will be secured by: a. Avoiding significant harm through location and/or design. Where significant harm cannot be avoided, applicants will be required to demonstrate that adverse impacts will be adequately mitigated or, as a last resort compensated for; b. Securing net biodiversity gains and/or wider ecological enhancements through new development.
- Where sites are designated for their biodiversity or geodiversity, planning decisions will reflect the hierarchical approach set out in Policy ENV 1.
- In the case of Local Wildlife and Geological Sites and Local Nature Reserves: The Local Plan should be read as a whole. Proposals will be judged against all relevant policies. Northumberland Local Plan - Publication Draft (January 2019) 193 10. Environment9 Permission will be refused if the proposed development would adversely affect them, unless it can be demonstrated that the benefits of the a. development clearly outweigh the harm to the nature conservation value of the site. b. Where permission can be granted in accordance with (3)(a) above, planning conditions or obligations will be used to protect the site's remaining nature conservation interest and to provide appropriate compensatory measures for the harm caused.
- The Council expects the ecosystem approach to be applied in development through: a. The conservation, restoration, enhancement, creation and/or (where appropriate) the re-creation of priority habitats and the habitats of priority species; b. The protection and enhancement of all ecological networks and links to promote migration, dispersal and genetic exchange, including the South East Northumberland Wildlife Network, as shown on the Policies Map, including its linkages with

Newcastle and North Tyneside; c. Measures that will buffer or extend existing sites of ecological value, support the development of the Border Uplands Nature Improvement Area and Northumberland Coalfield Nature Improvement Area or contribute to national or local biodiversity objectives; d. Minimising any adverse effects on habitats and species caused by the wider impacts of development and its associated activities including: i. Disturbance; or ii. The inadvertent introduction of non-native species; or iii. Reductions in water quality; or iv. Other forms of pollution that would adversely affect wildlife; The above to be achieved through precautionary measures including appropriate buffer zones and developer contributions to the Coastal Mitigation Service within zones shown on the Policies Map; e. Maximising opportunities to incorporate biodiversity in and around development through additional built-in or planted features; and f. Securing the continued management of those ecological features created, restored or enhanced as a result of development.

- Harm to geological conservation interests will be prevented and, where appropriate, opportunities for public access to those features will be provided.

3.4 Local Biodiversity Action Plan

The Northumberland Biodiversity Partnership is a collection of organisations and individuals working together to conserve, enhance and promote biodiversity in Northumberland. The Northumberland BAP enables partners to focus resources and develop local projects in order to conserve and enhance the threatened habitats and species. Action at a local level in Northumberland helps to contribute to the conservation of English, UK and worldwide biodiversity.

The action Plans for Northumberland include the following habitats and species;

Habitats

Blanket Bog, Brownfield, Land Built Environment, Calaminarian Grassland, Coastal Heathland, Fen, Marsh & Swamp, Gardens & Allotments, Heather Moorland, Lowland Heathland, Lowland Meadows & Pastures, Maritime Cliffs & Slopes, Native Woodland, Ponds, Lakes & Reservoirs, Recreational & Amenity Spaces, Reedbeds, Rivers & Streams, Rocky Shore, Reefs & Islands, River, Saline Lagoons, Saltmarsh & Mudflat, Sand Dunes, Transport Corridors, Trees & Hedges, Upland Hay Meadows and Whin Grassland.

Species

Barn Owl, Bats, Black Grouse, Coastal Birds, Common Seal, Dingy Skipper, Dormouse, Farmland Birds, Freshwater Fish, Freshwater Pearl Mussel, Garden Birds, Great Crested Newt, Grey Seal, Hedgehog, Otter, Red Squirrel, Jelly Lichen, Upland Waders, Violet Crystalwort, Water Rock Bristle, Water Vole and White Clawed Crayfish.

4 Methodology

4.1 Desk Study

Records of bats within 2 km of the site were obtained from ERIC Northeast and included data gathered by Northumberland Bat Group and a check of the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.defra.gov.uk) for information regarding granted EPS licences for bats within 2 km of the site was undertaken. Aerial images and Ordnance Survey maps were also examined to identify potential bat commuting and foraging routes as well as any other potential roosting locations within the immediate vicinity of the site to help determine the likelihood of bats being present on site or to be potentially impacted by the proposed development.

4.2 Bat Risk Assessment

The Bat Risk Assessment was undertaken by Ecologist, Paul McGinn (Natural England Bat Licence Number 2015-18602-CLS-CLS) on 8^h August 2022. The survey focused on the building within the site boundary as shown in Figure 2 and followed methodologies set out in the Bat Conservation Trust (BCT)'s Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition (Collins, 2016) (hereafter referred to as 'BCT Guidelines'), English Nature's (now Natural England) Bat Mitigation Guidelines (Mitchell Jones, 2004) and the JNCC Bat Workers Manual, 3rd Edition (Mitchell-Jones & McLeish (Eds), 2004).

The interior and exterior of the building were examined to identify any suitable potential roosting features, bat access points to suitable roosting locations or signs of use of the buildings by bats, such as droppings, live or dead bats and staining. Binoculars and a high-powered hand torch (LED lenser P7) were used to aid the inspection and a bat detector (Echometer Touch Pro 2) was also active throughout the survey to pick up any daytime bat calls which may have been audible from any roosts present.

The building's suitability to support roosting bats was assessed and assigned to be either of 'negligible', 'low', 'moderate' or 'high' suitability for roosting bats in accordance with BCT guidelines. Also, in accordance with BCT Guidelines, the assigned category determined the recommended scope and timings of further presence / absence survey in order to give confidence in a negative survey result, as detailed within Table 1 below.

Table 1 Recommended scope and timings for further bat presence / absence surveys to give confidence in a negative survey result (adapted from Tables 7.1 and 7.3, BCT Guidelines)

Roost Suitability	Recommended Survey Scope and Timing
Negligible	None
Low	One dusk emergence or dawn re-entry survey during May to August for structures. No further survey for trees.

Moderate	One dusk emergence AND one separate dawn re-entry survey spaced at least two weeks apart during May to September. At least one survey conducted between May and August.
High	Three separate surveys including at least one dusk emergence and one dawn re-entry spaced at least two weeks apart during May to September. At least two of the surveys conducted between May and August.

Weather conditions during the survey are provided within Table 2 below.

Table 2 Weather conditions during bat risk assessment survey

Temperature	23°C
Precipitation	None
Wind	NE 10mph (gust 15mph)
Cloud cover	20%
Humidity	60%

During the field survey the site was assessed for its suitability to support any other protected or notable species, including but not limited to the following:

- Nesting birds.
- Hedgehog.

Any field signs or sightings of protected or notable species noted during the survey were also recorded.

4.3 Bat Emergence Survey

The bat surveys were undertaken by Ecologists Paul McGinn, Michelle McGinn, Krzysztof Dabrowski, Laura Lindsley, Jonathan Pounder, Andrew Pounder, David Pounder and Georgina Coleman on 11th August and 2nd September 2022 as per recommendations from the bat risk assessment of the site.

The survey was conducted in accordance with methodologies set out in the Bat Conservation Trust (BCT)'s Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition (Collins, 2016) (hereafter referred to as 'BCT Guidelines'), English Nature's (now Natural England) Bat Mitigation Guidelines (Mitchell Jones, 2004) and the JNCC Bat Workers Manual, 3rd Edition (Mitchell-Jones & McLeish (Eds), 2004).

The survey commenced 15 minutes before sunset and continued for 1.5 hours after sunset focusing on the building and walls with surveyors positioned with vantage points to observe all aspects of the buildings proposed for works. Batbox duet and Echometer touch 2 Pro bat detectors were used for the survey to identify any bats observed during the survey and record the echolocations for further analysis if necessary. Notes were made on any bat flight lines, numbers and behaviour including any potential roost locations.

Weather conditions during the survey are provided within Table 3 and timings provided in Table 4 below.

Table 3 Weather conditions during bat surveys

	11/08/2022	02/09/2022
Temperature	21°C (start), 19°C (end)	12°C (start), 11°C (end)
Precipitation	None	None
Wind	S 1mph (gust 4mph)	ESE 3mph (gust 7mph)
Cloud cover	10%	100%

Table 4 Bat survey timings

	16/08/2022	30/08/2022
Start	20:37	04:46
Sunset/Sunrise	20:52	06:16
Finish	22:22	06:16

Any field signs or sightings of protected or notable species noted during the survey were also recorded.

4.4 Limitations

No limitations or constraints were placed on the bat risk assessment survey or the bat emergence surveys with all aspects visible during the surveys undertaken in optimum conditions.

5 Results

5.1 Desk Survey

Designated Sites

A check of the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.defra.gov.uk) for information regarding statutory designated sites located within 2km of the site was undertaken along with analysis of an environmental data report from the environmental records information centre (ERIC).

No statutory designated sites or non-statutory sites are located within 2km of the site.

Bats

ERIC Northeast returned 60 records of bats within 2 km of the site from within the past 10 years as detailed within Table 5 below, of these records approximately 30% were from a series of driven transect surveys and included mainly pipistrelle species commuting.

The search block included the small hamlet of Hallington and the surrounding area with the majority of the search area encompassing open farm-land. The number of records returned were of a relatively low number most likely due to the area being largely uninhabited and subject to fewer surveys as a result.

Six of the eight bat species “normally occurring” in North East England appear on the list with the most recent record being registrations of unconfirmed myotis species, natterer's and both common and soprano pipistrelle species from a static recorder 1.5km south in 2019.

The closest record to the site is of two soprano pipistrelle commuting approximately 120 meters north of the site with closest roost (unknown count of natterers and common pipistrelle) located approximately 1.5km south of the site, the data also included one other record of a roosts in this same location consisting of an unknown count of common pipistrelle bats.

Table 5 Records of bats from within 2 km of the site returned by Durham Bat Group

Protected Species	Closest Record to the site	Number of Records	Roosts within 2KM	Most Recent Record	Level of Protection HR 2010 / WCA 1981 NERC /UK BAP
Noctule	Commuting 1500m SE	2	0	2019	WCA 1981, NERC, UK BAP, Local BAP
Common pipistrelle	Commuting 440m NE	36	5	2019	WCA 1981, NERC, Local BAP

Soprano pipistrelle	Commuting 120m N	10	0	2017	WCA 1981, NERC, UK BAP, Local BAP
Natterers	Foraging 1500m SE	3	0	2019	
Brown Long Eared <i>Plecotus auritus</i>	Foraging 1500m SE	1	0	2018	WCA 1981, NERC, UK BAP
Myotis Sp.	Commuting 1100m NE	8	0	2019	
HR 2010		The Conservation of Habitats and Species Regulations 2010			
WCA 1981		Wildlife and Countryside Act 1981 (as amended) The Natural Environment and Rural Communities Act 2006			
NERC		The Natural Environment and Rural Communities Act 2006, UK Species of principle Importance (S14)			
BAP		Bat Action Plan			

5.2 Bat Risk Assessment

5.2.1 Roosting Bats

The site included a farmhouse with detached barn/workshop, the farmhouse is currently occupied by the current owner with the barn split in to an open fronted barn and workshop.

Barn

The barn, which is the structure proposed for renovation as part of the proposals is comprised of a larger two storey section to the north (building B) adjoined to a single storey former stable completing the southern half of the building (building A). Both these building was constructed from rough stone with timber roof joists with the roof clad in slater tiles, the tiles on building A were new after repair work to the building from storm Arwen in early 2022, no membrane was present behind the roof tiles. Two potential bat roost features (PRFs) were observed on the barn building in the form of gaps between the fascia board and walls (photos in appendix A). A single bat dropping was found on the wall beneath these features.

Farmhouse

The farm house was of identical construction as the barn structure with stone walls, wooden roof timbers and slate tiles. Internally the eastern half the roof void in this building had been plastered all round with no access from outside. The western half of this roof void was

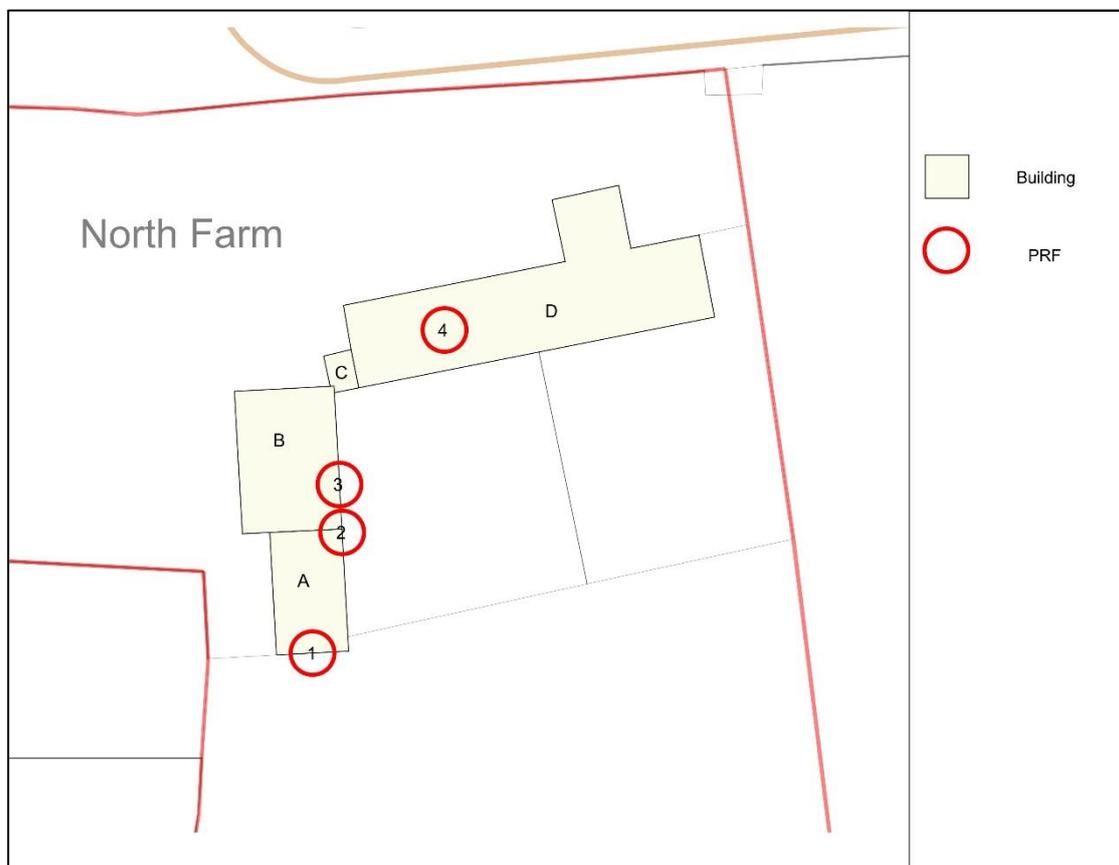
separated by a small door and internally the roof was unlined with bare slate tiles visible and roof insulation visible under missing floor boards. The underside of the four roof vents on the ridge were visible from inside the void although a section waterproof membrane has been installed under to presumably deter elements from the building, below two of these features a small gathering of bat droppings was present (approximately 50 individual droppings) with some samples still fresh and believed to be within 24 hours old from their appearance (photos in appendix A).

Habitats within the site boundary consisted of; buildings, hard standing, ornamental flower beds, hedgerows and amenity grassland with a very low sward height, a small water course associated with Hallington reservoir runs around the north, east and south ownership boundary.

Figure 4 below shows the building references location of the above PRFs with photographs in Appendix A.

Conclusions and recommendations regarding further surveys of bats are made below in sections 6 and 7.

Figure 4 Potential bat roost features with building references (PRF)



5.2.2 Foraging and Commuting Bats

The site and the surrounding area both offer a range of moderate to optimum foraging and commuting habitats for bats with an abundance of greenspaces on the form of gardens and tree lined fields, some small pockets of woodland are also present within the search area along with a hydrological network of watercourses emanating from Hallington Reservoir located approximately 850m west.

The site overall is therefore assessed as being of moderate suitability for foraging and commuting bats.

5.2.3 Other Protected Species

No other protected species or signs of their presence were observed during the surveys.

5.3 Bat Emergence/Re-entry Surveys

11th August 2022

The first of the surveys was a dusk bat emergence survey and was undertaken in optimum conditions with a survey start temperature of 12°C. The survey started at 20:37 with the first bat recorded at 20:44 and identified as soprano pipistrelle species foraging above the surveyor's head on the western site boundary. Activity picked up from sunset with observations of both common and soprano pipistrelle and noctule bats foraging and commuting over the site

At 21:06 a single soprano pipistrelle emerged from a vent ridge (#6 on survey result plan) tile on the farmhouse roof and flew off in a northerly direction, a second soprano pipistrelle was also observed emerging from a different ridge vent (#7 on survey result plan) at 21:10 and again flew off in a northerly direction, then between 21:12 and 21:29 a further four soprano pipistrelle emerged from the first roost point (#6 on survey result plan) giving a total of six bats emerging from the roost in the farmhouse. During this period and until the end of the survey a further thirty-five registrations from bats made from predominantly common and soprano pipistrelle but also included some observations of brown long eared, daubentons and whiskered/brandt's bats foraging and commenting around the site.

2nd September 2022

The second bat survey was a dawn re-entry survey undertaken on the building in optimum conditions, with a survey start temperature of 12°C.

The first bat recorded was a foraging soprano pipistrelle at 04:55 but was heard and not seen by surveyors. A further sixteen registrations of heard but not seen bat activity were recorded until 05:28 when light levels rose to visibility level and comprised common and soprano pipistrelle and noctule species. During the rest of the survey a further thirteen registrations of bats were made and included five observations of soprano and common pipistrelle foraging and commuting over the site with the remainder heard but not seen.

No bats were observed emerging from or re-entering any of the buildings on site during the survey.

Meta data for all of the above surveys can be found in table 1 with survey timings in table 2, all survey data is collated in appendix B

6 Conclusions

The results from the desk study have showed less than expected records of roosting, foraging and commuting bats all across the 2Km search area, this is likely due to lack of surveying and recording efforts as previous data searches in the nearby area have proved to have a moderate-high sized bat population including all eight species regularly occurring in northern England.

The building for development has been assessed as ‘moderate’ suitability for use by roosting bats as the structure has potential suitability to support the species in features identified during the bat risk assessment which did include a single bat dropping on the wall below one feature, it is therefore recommended that the building is subject to one dusk emergence survey and one dawn re-entry survey to confirm the presence or absence of roosting bats within the structure. These surveys can be undertaken between May and September in accordance with BCT Guidelines.

The building was also assessed as being of ‘negligible’ suitability for use by hibernating bats due to the likely condition extremes expected within the structure during winter months.

The results from the two bat activity surveys showed an abundance of activity from six different species of bat and included a six-count soprano pipistrelle roost in the farmhouse adjacent to the building subject to proposals to renovate, this roost has been categorised as a small maternity roost and likely to have been used by a few individuals to rear young, the number of bats within this roost correlate with the number of droppings found within the roof void during the bat risk assessment. The fact that no bats were observed emerging or re-entering from the buildings A and B which are subject to the renovation proposals provides confidence in a negative roost result and it can be concluded that bat roosts are likely absent from this building.

The habitats within and adjacent to the site boundary offer high quality habitat for bats to forage and commute during their nightly activities.

It is concluded that the proposed plans will not have any effect on the bat roost within the adjacent farmhouse due to the extent of the works and the distance between the works and the roost site or commuting or foraging bats due to the extent of the proposals using the same footprint as currently exists however, some activities relating to construction have the potential to impact bats and recommendations are made below to ensure no bats are affected due to the proposed works.

No further bat surveys or EPS licence are recommended in regards to the proposals on this building due to the proposals not being likely to have any impact on the known roost within the farm building or the local bat population.

Recommendations for enhancement measures are also provided to enhance the site for bats upon completion.

7 Recommendations

The following recommendations are made to avoid potential harm to protected or notable species, mitigate for the loss of suitable habitats or habitat connectivity and to enhance the biodiversity interest of the site.

Bats

- Works to prepare for the two buildings being adjoined should take place post 1st November and be completed by 31st March and also be supervised by a suitably qualified ecologist to avoid the active bat season and not cause any harm or disturbance to the species
- Demolition of building C should be done so between 1st November and be completed by 31st March and also be supervised by a suitably qualified ecologist to avoid the active bat season and not cause any harm or disturbance to the species
- In the unlikely event a bat is discovered during works then the feature should be carefully replaced, works stopped and a qualified ecologist should be contacted for advice.
- During construction, use of lighting should be avoided wherever possible to minimise any disturbance to commuting or foraging bats during the hours of darkness, where required, lighting should be sensitively placed to avoid boundary features and fitted in a down-lit position.
- Lighting incorporated into the proposed development should be sensitively designed to minimise disturbance to foraging and commuting bats e.g., use of low lux levels and down-lighting
- The installation of a bat box on, or within the fabric of the building's southern aspect or within the ridge via vent ridge tiles as per the farm house bat roosts upon completion should be installed to provide further roosting opportunities for bats, an example model would be Schwegler 1WQ Summer & Winter Bat Roost which would be very suitable for the likes of common and soprano pipistrelle species which were the main bat recorded using the site

Nesting birds

- Clearance of any building or adjacent vegetation within the site in preparation for works should be undertaken outside the nesting bird season (which runs from March to September inclusive) wherever possible. If this is not possible, then the area to be cleared should be inspected by a qualified ecologist to check for the presence of nests within 48 hours prior to works commencing.

Other

- Any excavation dug on site and left overnight should be fitted with an escape plank for any hedgehog, small mammals or amphibians to be able to free themselves without injury.

Enhancement measures

Recommended measures to enhance the biodiversity interest of the site are also provided as follows:

- Additional bat boxes could be added to the building or trees throughout the site to provide further roosting opportunities for bat species using models such as; Schwegler Bat Box 2F (universal) or Schwegler Flat Bat Box 1FF.
- The site could be enhanced for birds by the installation of a variety of bird boxes, these could be installed throughout the site using surrounding trees as well as the building

8 References

- JNCC (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit, Joint Nature Conservation Committee, Peterborough.
- Ministry of Housing, Communities & Local Government (2018) National Planning Policy Framework
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2017) Code of Professional Conduct;
- Collins, J. (2016) Bat Conservation Trust's Bat Survey for Professional Ecologists: Good Practice Guidelines 3rd Edition;
- Joint Nature Conservation Committee (JNCC) (2004) Bat Workers Manual;
- Mitchell-Jones, A. (2004) Bat mitigation guidelines. English Nature.
- CIEEM (2017) Code of Professional Conduct
- The Northumberland Biodiversity Action Plan (January 2008)
- The Northumberland Local plan (January 2019)

Appendix A – Site Photographs

Photo 1: East elevation of barn	Photo 2: South elevation of barn
 A photograph showing the east elevation of a stone barn. The building has a grey slate roof and a large window with a dark frame. The foreground is a gravel area with some potted plants and a green wheelbarrow.	 A photograph showing the south elevation of a stone barn. The building is made of rough-hewn stone and has a chimney. A wooden gate is in the foreground, and trees are visible in the background.
Photo 3: South elevation of farm house	Photo 4: North elevation of farm house showing bat roosts (PRF 4)
 A photograph showing the south elevation of a farm house. The house has a grey slate roof and a chimney. There is a garden with various plants and a white patio umbrella in the foreground.	 A photograph showing the north elevation of a farm house. The house has a grey slate roof and a chimney. Two red circles are drawn on the roof, highlighting bat roosts. A silver car is parked in the foreground.
Photo 5: Building C	Photo 5: PRF 3
 A photograph showing Building C, a stone building with a grey slate roof and a chimney. The building is surrounded by a gravel area and some trees.	 A photograph showing the interior of a building, likely a roof or attic. A red circle is drawn around a wooden beam, highlighting a bat roost. The roof is made of wooden rafters and has a white pipe running across it.

Photo 7: Inside building A



Photo 8: Bat dropping on gutter of barn



Photo 9: PRF 2



Photo 10: Roof void above bat dropping in farm house



Photo 11: Roof void of farm house (bat roost section)



Photo 12: Bat droppings in farm house roof void



Appendix B – Bat Survey Data and Flight Plans

Bat Dusk Emergence Survey		Date	11/08/2022
Site	North Farm, Hallington	Start Time	20:37
Surveyor Name	MM, GC, KD, LL	Sunset	20:52
Detector Used	EMT2 + Duet	End Time	22:22
Temp	21°C (start), 19°C (end)	Precipitation	none
Cloud	10%	Wind	S 1mph (gust 4mph)

Time	Ref	Activity	Species	Number	Comments
20:44	1	Foraging	SP	1	Seen by GC
20:56	2	Foraging	NOC	1	Seen by KD and LL
20:59	2	Foraging	CP	1	Seen by KD, LL and GC
21:00	1	Commuting	SP	1	Seen by GC
21:02	3	Commuting	SP	1	Seen by GC and MM
21:03	n/a	Foraging	NOC	1	Heard but not seen by KD, GC and LL
21:03	4	Foraging	SP	1	Seen by LL
21:04-21:05	5	Foraging	SP	1	Seen by GC and KD
21:06	6	Roost Emergence	SP	1	Seen by GC and MM
21:06	2	Commuting	SP	1	Seen by KD and LL
21:07	2	Commuting	SP	1	Seen by KD and LL
21:07	3	4	Foraging	CP+SP	1+2
21:08-21:14	5	Foraging	SP	1	Seen by GC, KD and LL
21:10	7	Roost Emergence	SP	1	Seen by GC and MM
21:10	4	Foraging	SP	2	Seen by LL
21:11	4	Foraging	CP	1	Seen by LL
21:11	3	Commuting	CP	1	Seen by MM
21:12	6	Roost Emergence	SP	1	Seen by MM
21:16	n/a	Foraging	BLE	1	Heard but not seen by KD and LL
21:18	6	Roost Emergence	SP	1	Seen by GC and MM
21:17-21:23	5	Foraging	SP	1	Seen by GC, KD and LL
21:19	8	Foraging	CP	1	Seen by MM

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21:23-21:26	4	Foraging	CP+SP	1+2	Seen by LL
21:20	3	Commuting	CP	1	Seen by GC and MM
21:21	6	Roost Emergence	SP	1	Seen by GC
21:24	n/a	Commuting	NOC	1	Heard but not seen by GC and KD
21:26	5	Foraging	SP + CP	1 + 1	Seen by KD
21:26	8	Foraging	CP	1	Seen by MM
21:27	3	Commuting	SP	1	Seen by GC and MM
21:29	6	Roost Emergence	SP	1	Seen by GC and MM
21:29	n/a	Foraging	W/B	1	Seen by GC and LL
21:30	4	Foraging	SP	1	Seen by LL
21:31	5	Foraging	SP	2	Seen by KD
21:32	8	Foraging	CP	2	Seen by MM
21:34	4	Foraging	SP	1	Seen by LL and KD
21:35	8	Foraging	CP	1	Seen by MM
21:37	1	Foraging	W/B	1	Seen by GC
21:39	4	Foraging	SP	1	Seen by LL
21:40	9	Foraging	DAUB	1	Seen by GC
21:41	4	Foraging	CP	1	Seen by LL
21:45	1	Foraging	SP	1	Seen by LL, MM and KD
21:46	8	Foraging	SP	1	Seen by MM
21:45-21:53	8	Foraging	SP	1	Seen by LL, MM and KD
21:55	n/a	Commuting	NOC	1	Heard but not seen by KD
21:56	3	Foraging	DAUB	1	Seen by MM
21:58	n/a	Foraging	CP	1	Heard but not seen by MM and LL
22:01	4	Foraging	DAUB	1	Seen by LL
22:03	8	Foraging	CP	1	Seen by MM
22:05-22:14	n/a	Foraging	CP	1	Heard but not seen by LL
22:07	n/a	Foraging	DAUB	1	Heard but not seen by MM
22:12	n/a	Foraging	CP	1	Heard but not seen by GC and KD
22:13	8	Foraging	SP	1	Seen by MM
22:15	n/a	Foraging	DAUB	1	Heard but not seen by LL
22:16	n/a	Commuting	NOC	1	Heard but not seen by LL
22:19	n/a	Foraging	SP	1	Heard but not seen by GC and MM
22:21	n/a	Foraging	CP	1	Heard but not seen by LL

CP = Common Pipistrelle, SP = Soprano Pipistrelle, DAUB = Daubentons, NOC = Noctule,
W/B = Whiskered/Brandts, BLE = Brown Long Eared
Surveyors - MM Michelle McGinn, GC Georgina Coleman, KD Krzysztof Dabrowski,
LL Laura Lindsley

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Bat Dawn Re-entry Survey		Date	02/09/2022		
Site	North Farm, Hallington		Start Time	04:46	
Surveyor Name	PM, JP, DP, AP		Sunrise	06:16	
Detector Used	EMT2 + Duet		End Time	06:16	
Temp	12°C (start), 11°C (end)		Precipitation	none	
Cloud	100%		Wind	ESE 3mph (gust 7mph)	
Time	Ref	Activity	Species	Number	Comments
04:55	n/a	SP	1	Foraging	Heard not seen by AP
04:57	n/a	SP	1	Foraging	Heard not seen by JP and DP
04:58	n/a	SP	1	Foraging	Heard not seen by PM
05:00	n/a	SP	1	Foraging	Heard not seen by PM
05:08	n/a	NOC	1	Foraging	Heard not seen by JP and AP
05:08	n/a	SP	1	Foraging	Heard not seen by AP
05:11	n/a	NOC	1	Foraging	Heard not seen by AP and PM
05:11	n/a	SP	1	Foraging	Heard not seen by PM
05:14	n/a	NOC	1	Foraging	Heard not seen by PM
05:15	n/a	NOC	1	Foraging	Heard not seen by PM
05:16	n/a	SP	1	Foraging	Heard not seen by PM
05:18	n/a	SP	1	Foraging	Heard not seen by AP, JP and DP
05:19	n/a	NOC	1	Foraging	Heard not seen by PM
05:21	n/a	SP + CP	1 + 1	Foraging	Heard not seen by PM
05:24	n/a	NOC	1	Foraging	Heard not seen by JP
05:24	n/a	CP	1	Foraging	Heard not seen by DP and AP
05:28	n/a	CP	1	Foraging	Heard not seen by JP, PM, DP and AP
05:29	1	SP	1	Foraging	Seen by AP
05:31	n/a	CP	1	Foraging	Heard not seen by JP and PM
05:33	n/a	NOC	1	Foraging	Heard not seen by DP
05:41	n/a	SP	1	Foraging	Heard not seen by AP and JP
05:44	n/a	CP	1	Foraging	Heard not seen by JP, PM, DP and AP
05:46	n/a	CP	1	Foraging	Heard not seen by PM
05:48	n/a	CP	1	Foraging	Seen by JP, DP and AP
05:50	2	SP	1	Foraging	Seen by PM
05:57	1	SP	1	Foraging	Seen by PM and AP
06:00	4	CP	1	Commuting	Seen by JP and AP

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06:01	4	CP	1	Commuting	Seen by AP
06:02	n/a	SP	1	Commuting	Heard not seen by PM
06:03	n/a	SP	1	Commuting	Heard not seen by PM

CP = Common Pipistrelle, SP = Soprano Pipistrelle, NOC
NOC = Noctule,
Surveyors - PM Paul McGinn, JP Jonathan Pounder, AP Andrew Pounder, DP David
Pounder

