VERSION: 1.0

JUNE 2019



BAT PRESENCE/ABSENCE SURVEY REPORT -

ST. WILFRED'S CHURCH, COTTON COLLEGE, COTTON, STAFFORDSHIRE.

MR. C. AMOS.

WDEC288

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Protected Species Licenses - Bats: England:	CL18 2015-10173-CLS-CLS & 2015-21693-SCI-SCI
Scotland:	2014 32653
Wales:	S085069/1

This report has been prepared with all reasonable skill and diligence, within the terms agreed with the client: Mr. C. Amos (Amos Group Ltd).

Bat Roost Appraisal Survey Date:	31/08/2018
First Dusk Emergence Survey Date:	31/08/2018
Second Dusk Emergence Survey Date:	18/05/2019
Third Dusk emergence Survey Date:	31/05/2019
Dawn Re-Entry Survey Date:	01/06/2019
Report Produced:	04/06/2019
Report Peer Reviewed:	05/06/2019
Report Checked & Signed Off:	07/06/2019
Signed: Mr A. D. Bird	

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EXECUTIVE SUMMARY

WDEC was commissioned by Mr. C. Amos (Amos Group Ltd) to undertake a series of bat surveys at St. Wilfred's Church, Cotton College, Staffordshire, to establish the presence or absence of bats and/or their roosts within that building.

The bat surveys included a Bat Roost Appraisal Survey, completed 31/08/2018, three Dusk Emergence Surveys, completed between 31/08/2018 – 31/05/2019 and a Dawn Re-Entry Survey conducted on the morning of the 01/06/2019.

The exact proposed development of the site was not disclosed to WDEC at the time of the surveys, however, the building surveyed is to be potentially refurbished and developed into multiple dwellings within the original shell of the church.

The site is centred at: OS Grid Reference: SK066463.

Summary of the findings

- Bat Roost Appraisal Survey (BRAS): 31/08/2018

  Evidence of 2 (two) brown long-eared bat (*Plecotus auritus*) feeding roosts were discovered in the main body of the southern part of the church. One feeding roost was found centrally and the other above the small alter at the east end of the south aisle of the church.

  Both suspected feeding perches consisted of droppings (<10) and several wings of the orange underwing moth (*Archiearis parthenias*). Neither roost looked to have been active for some time as both droppings and feeding remnants were very faded and extremely delicate to the touch. It was suspected that they had been in situ for at least 18 months.

  It was concluded that because of the age and condition of the building, coupled with the discovery of bat evidence within the church, further survey effort was necessary to determine the current presence or absence of bats.

- First Dusk Emergence Survey (DES): 31/08/2018

  Although bat activity was prevalent throughout the survey, no bats were observed to leave the main part of the church at any point during the survey. However, 3 (three) (possibly 4 (four)) common pipistrelle bats were observed to emerge from the bell tower.

  Bats of two species; common pipistrelle (*Pipistrellus pipistrellus*) and a brown long-eared bat were also observed to emerge from an adjacent building, and four species of bat were recorded commuting and feeding in and around the site.

- Second Dusk Emergence Survey (DES) 18/05/2019

  As with the first survey, bat activity was frequent in and around the site with four species of bats being recorded. Bats were again observed emerging from adjacent buildings.

  Like the first survey, 3 (three) individual common pipistrelle bats were observed and recorded to leave the louvre window on the west side of the bell tower. Distinct from the behaviour of bats from other buildings on site, the bats from the bell tower, emerged relatively early and did not return during the survey.

- Third Emergence Survey (DES): 31/05/2019
  As with the previous emergence surveys, bat activity was frequent in and around the site with four species of bats being recorded.
  As with the previous surveys 3 (three) individual common pipistrelle bats were observed and recorded to leave the upper bell tower via the louvre window on the east side. As with the previous survey the bats from the bell tower emerged relatively early and did not return for the duration of the survey.
  Bats were again observed emerging from adjacent buildings from what was suspected to be a common pipistrelle maternity roost.

- Dawn Re-Entry Survey (DRES): 01/06/2019
  Bats of three species were observed and recorded commuting through and foraging within the local area.
  No bats were observed and/or recorded either; emerging from or re-entering the church for the duration of the survey.
  However, bats were observed or recorded within close proximity of the church within the old college buildings. Numerous bats were seen re-entering these buildings at several different points.

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A. INTRODUCTION

- The client, Mr. C. Amos (Amos Group Ltd), commissioned WDEC to undertake a series of bat surveys including; a Bat Roost Appraisal Survey (BRAS), 3 (three) Dusk Emergence Survey (DES) and a Dawn Re-Entry Survey (DRES) at St. Wilfred's Church, part of the former Cotton Catholic College complex, Cotton, Staffordshire.
- The potential development of the site consists of the refurbishment of the church and its conversion into multiple dwellings within the shell of the building.
- The initial BRA survey searched all parts of the building, as cited by the client and where safe to do so, for bats, signs of bats and/or features known to be used by bats e.g. all accessible exterior and interior crevices, gaps or holes.
- The BRA survey was conducted within daylight hours on 31/08/2018.
  BRAS surveys can be conducted at any time of the year; however, this was an optimal time to conduct such a survey.
- The findings of the BRAS concluded that there was enough evidence to prompt further survey investigation as required by the National Guidance. According to the Bat Conservation Trust (BCT) at least a further 3 (three) activity surveys were necessary to satisfy the requirements.
- The first DES (conducted the same night as the BRAS: 31/08/2018) consisted of 4 experienced bat surveyors and associated remote Infrared (IR) recording equipment, being strategically placed in and around the church to record and observe any bats emerging from and/or re-entering, any part of the building.
  Bat activity surveys can only be effectively conducted between May and September.
- The second DES was conducted on the evening of 18/05/2019, starting approx. 20 mins before sunset (20:45) and ending approx. 1 hour 30 minutes following sunset (22:35).
- The third DES was conducted on the evening of 31/05/2019 and was complemented the following morning (01/06/2019) by a DRES, which started 2 hours before sunrise (02:50) and was completed 15 mins after sunrise (05:05). A DRES allows the surveyors to observe bats coming back to a building and entering roosts and thus enables surveyors to see clearly define roost entrances.
- All surveys conducted at the site contributed to the conclusions and recommendations within this report. However, surveys of this type can only ever provide a 'snapshot' of the bat activity at the site at the time of those surveys and circumstances may change following this report.
- Health and Safety restrictions or obstructions may limit the ability to find evidence.
  For the most part conditions at St. Wilfred's Church were good and restrictions were found to be minimal. However, during the BRAS some parts of the church were inaccessible and were not searched, namely; the south roof of the nave and the north roof of the south aisle, and above the first floor of the bell tower.
- WDEC has prepared this report for the named client's use only.
- Ecological reports have a limited shelf life. Natural England (NE) usually expects reports for European Protected Species and/or Priority Species to be no more than 18 months old at the time of submission.
- Should the project stop or otherwise cease to proceed within 18 months of this report, an updated survey should be undertaken before any works commence at the site, especially to the roofs, in order to check for any changes that may have occurred on site.

A1 Aims of the Study:

- Conduct a comprehensive BRAS on the cited building at the site, both externally and internally in search of any evidence of bats and/or bat roosts.
- Conduct a series of bat activity surveys of the cited building at the site, in search of any evidence of bat activity, i.e. bats emerging from and/or re-entering any part of the building, and to monitor bat activity around the site.
- Set out the legislative and/or policy protection afforded to any protected species and/or priority species associated with the site. Primarily bats, however, other species may be recorded or observed, i.e. barn owl (*Tyto alba*).
- Present an assessment of any potential ecological impacts on protected species and/or priority species of the development within the site based on the survey findings.
- Provide recommendations for any further surveys if considered necessary.
- Provide recommendations on mitigation, compensation and/or enhancement measures that are likely to be required to ensure that the proposed development will be acceptable in planning terms and will comply fully with current wildlife legislation.

  Summary of legislation and National Planning Policy that protects bats in England:

  1) Conservation of Habitats and Species Regulations 2017.
  2) Wildlife and Countryside Act 1981 as amended.
  3) Countryside and Rights of Way Act 2000.
  4) Natural Environment and Rural Communities Act 2006.
  5) National Planning Policy Framework ("NPPF") 2018.
  6) ODPM Circular 06/05.

  The legislation within 1 – 4 above makes it illegal to:

  - Intentionally or deliberately kill, injure or capture bats.
  - Deliberately disturb bats, whether at roost or not.
  - Damage, destroy or obstruct access to bat roosts.
  - Possess or transport a bat or any part of a bat, unless acquired legally.
  - Sell, barter or exchange bats, or any part of a bat.

A bat roost is well-defined by the legislation as the 'resting place' of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing where a bat or bats rest, feed or sleep.

This report sets out the results of the survey and in the context of any known ecological interest identified as a result of the desk study including the Local Biological Records Search, sets out the approach necessary to ensure that effects on any identified ecologically sensitive receptors are avoided or ameliorated.
This should ensure that the proposed development of the site will be acceptable with reference to the planning process and legal framework relating to ecological resources.

A2 Description of the Project and Background Information:

- The potential development of the site consists of the refurbishment of St. Wilfred's Church, a 19th century Gothic revivalist building which has stood empty and unused for approx. 25 years, to a building fit for purpose. The conversion of the building will involve the interior becoming multiple dwellings within the shell of the building. It is supposed that the exterior of the building will remain much as it is.
- The church is typical in style and constructed in a traditional manner; sandstone walls, blue slate roofs with substantial windows and doors.
- Bat surveys are a necessary part of the planning process in such developments and were commissioned to ascertain the presence or absence of bats (and/or other protected species and/or priority species) at the site.

The survey preparation was enhanced by a baseline desk study including ecological data search centred at: Ordnance Survey Grid Reference SK066463:

- All maps and aerial satellite imagery sourced from Ordnance Survey and/or Google Earth Pro.
- Habitat and species data sourced from MAGIC[1].
- Habitat and data sourced from the National Biodiversity Network Atlas (NBNatlas)[2].
- Specific local bat data sourced from: Staffordshire Ecological Records Centre.
- All other local data sourced from: Local Wildlife Trust websites.

[1] MAGIC:
The MAGIC website provides geographic information about the natural environment from across government. The information covers rural, urban, coastal and marine environments across Great Britain.
MAGIC provides links to other sources of data in order to make best use of a wide range of information available on other websites.
MAGIC partnership organizations: Department for Environment, Food and Rural Affairs, Historic England, Natural England, Environment Agency, Forestry Commission, Marine Management Organisation.

[2] NBN:
The NBNatlas acts as a "data warehouse" for biodiversity information for millions of individual records, covering plants, mammals, birds and invertebrates inputted by organisations, companies, ecologists, Wildlife Trusts etc. from all over the UK. The use of NBNatlas data in commercial ecological reports is not permitted under the NBN code of conduct. However, the NBNatlas was consulted prior to the survey to establish a baseline.

B. SURVEY INFORMATION

All surveys within the site were conducted by a professional and suitably qualified, experienced and licensed ecologist, with the assistance of three additional experienced bat surveyors for the DES and DRES.
All surveyors at the site employed the correct tools and techniques in accordance with the BCT National Guidelines and the bat survey guidelines set out by CIEEM.

All surveys were conducted within the best practice guidelines as cited by:

- The Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed): Collins, J (ed), 2016
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- Jonathan Howard et al (2009). Bats in Traditional Buildings. English Heritage, The National Trust & Natural England, London.
- National Planning Policy Framework, 2018. NPPF.
- The Chartered Institute of Ecology and Environmental Management. CIEEM, 2016.

B1 Pre-existing Information re: Bats on Site

Pre-existing information on the protected species and/or priority species (specifically bats) related with this site held by organisations such as Staffordshire Ecological Records Centre, were consulted for the purpose of this study. This specific information can be found at C2. All other relevant information was gleaned from freely available data within the public domain as stated at A2.
NB: Some information is sensitive and appears in summary within C2 and Appendix AP2. The detailed data can be requested from WDEC if required.

B2 Objective

The primary objective of the study was to record all evidence of bats and/or bat roosts within the cited building at the site as stated within Section A1 of this report, informing the client of any likely potential impacts and forming the basis for any necessary future surveys and/or mitigation strategies.

B3 Field Survey Methodology

B3.1 Bat Roost Appraisal Survey (BRAS)

- The assessment of the church allowed for a detailed inspection searching for bats, evidence of use by bats e.g. live or dead bats, bat droppings and/or feeding remains etc. and features known to be used by bats for roosting e.g. gaps, crevices and holes within any part of the building.
- The BRAS at the site was conducted at an optimal time of year for this type of survey and included all parts of the buildings where access was unhindered and deemed safe to do so.
- The survey involved a thorough search of the exterior (including the roofs from ground level) and the individual parts of the interior, including the bell tower to the first floor.
- The ecologists on site searched for any evidence of bats and/or bat roosts within all gaps, cracks and crevices discovered, searching for signs including; live and/or dead bats, bat droppings, fur grease marks, scratch marks, urine staining, etc. All gaps deemed worthy of further investigation were probed where necessary and safe to do so, using a Bosch endoscope, operated under licence.
- All evidence gathered was analysed and correlated within office conditions.

B3.2 Dusk Emergence Surveys (DES) & Dawn Re-Entry Survey (DRES)

- The DES employed 4 surveyors and remote recording equipment, strategically positioned around the site. The surveys commenced approx. 20 minutes before sunset and concluded approx. 1 hours 30 minutes following sunset.
- The DRES employed 4 surveyors and remote recording equipment, strategically positioned around the site. The survey commenced approx. 2 hours before sunrise and concluded approx. 15mins after sunrise.
- All surveys were conducted at an optimal time of year for these types of surveys, in appropriate weather conditions using all the correct methodologies and included all relevant parts of the site.
- During the activity surveys, the surveyors watched for any emerging/re-entering bats, recording the time, species and numbers, using full spectrum bat detectors.
- Two infrared cameras were positioned within the church to record any bat activity within the interior.
- Notes were also made of any other bat activity observed, such as commuting or foraging around the area and/or bats using other adjacent buildings.
- All evidence gathered was analysed and correlated within office conditions.

B3.3 Equipment Used

The ecologists used varying equipment to aid the surveys which included:

- Bushnell IR night-vision binoculars
- Powerful 900 lumen – 1 million candlepower flash-lights
- Bosch endoscope
- FlirOne thermal imaging cameras
- Canon EOS 70D camera with appropriate lenses
- 3 x Echo Meter Touch Pro, Full Spectrum bat detectors and a BatBox Duet bat detector with Roland recorder.
- 2 x Sony Handycam recorders with infrared (IR) night vision and additional IR lighting rigs.
- All the correct safety equipment and PPE

B3.4 Timings

All field surveys were conducted on the dates as cited in Table 1 below and all took place in optimal weather conditions.

Table 1: Survey Times and Conditions

St. WILFRED'S CHURCH	BRAS	DES: 1	DES: 2	DES: 3	DRES
DATE OF THE SURVEYS	31/08/2018	31/08/2018	18/05/2019	31/05/2019	01/06/2019
START TIME	15:15	20:00	20:45	21:15	02:50
FINISH TIME	17:00	22:00	22:35	22:45	05:05
WEATHER: TEMPERATURE	20°C	13°C	15°C	16°C	09°C
WEATHER: CLOUD COVER	70%	80%	100%	30%	10%
WEATHER: PRECIPITATION	0	0	0	0	0
WEATHER: WIND	0	2	0	2	1
SUNSET:	N/A	20:14	21:04	21:29	N/A
SUNRISE:	N/A	N/A	N/A	N/A	04:48

B3.5 Species Potential

Table 2: Roosting features (likelihood) of bat presence assessed against Collins (2016) guidelines *Source: Adapted from Collins (2016) pp 35, Table 4.1.*

Likelihood of bat presence (Habitat Value)	Features that bats can and will use, regardless of evidence being present.
Confirmed Bat Presence	• Bats are found to be present during the survey. • Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	• Pre-20th century or early 20th century construction. • Agricultural buildings of traditional brick, stone or timber construction. • Large and complicated roof void with unobstructed flying spaces. • Large (>20 cm) roof timbers with mortice joints, cracks and holes. • Entrances for bats to fly through. • Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. • Roof warmed by the sun, in particular south facing roofs. • Weatherboarding and/or hanging tiles with gaps. • Low level of disturbance by humans. • Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.
Moderate and Lower likelihood of bat presence.	• Modern, well-maintained buildings or built structures that provide few opportunities for access by bats. • Small, cluttered roof space. • Buildings and built structures comprised primarily of prefabricated steel and sheet materials. • Cool, shaded, light or draughty roof voids. • Roof voids with a dense cover of cobwebs and no sections of clean ridge board. • High level of regular disturbance. • Highly urbanised location with few or no mature trees, parkland, woodland or wetland. • High levels of external lighting.
Negligible likelihood of bat presence.	• No features suitable for roosting, minor foraging or commuting.

Notes on using this table:

1. *The features listed here may not be indicative of use of the site by bats during winter or spring.*

2. *Pre-1914 buildings may present the greatest likelihood of providing roost space for bats due to their design, materials used and age. Pre-1990 buildings, especially when close to good foraging habitat, and with favoured features such as cavity walls and soffits, also have a high likelihood of providing roost sites for some bat species.*

3. *Post-1990 buildings are generally less likely than older buildings to house roosts; however, some modern designs provide access to suitable roosting spaces for bats. Pipistrelles in particular occupy modern buildings and built structures providing that there are suitable access gaps (> 8mm) and provided the structure has appropriate characteristics for roosting.*

Table 3: Species Potential

Species potential as defined by integrating the BCT National Guidelines (2016).	
CONFIRMED	Species have been found to be present during the survey and/or evidence of species activity is found to be present during the survey. e.g. bats heard 'chattering' inside a roost or species discovered.
HIGH	Any buildings, trees or other structures with features of particular significance would be present, e.g. opportunities for protected species re: nesting habitat, roosting opportunities or ponds. Any habitat deemed of a high quality, e.g. for foraging such as; broadleaved woodland, tree-lined watercourses, grazed parkland, site connectivity with the wider landscape, commuting routes e.g. river or stream valleys and hedgerows. Site is close to known locations of records for protected species.
MODERATE	There would be several potential habitat opportunities on site, such as; in buildings, trees or other structures. Habitat which could be used for foraging e.g. trees, shrub, grassland or water. The site could be connected with the wider landscape by linear features that could be used by species commuting e.g. lines of trees and scrub or linked back gardens.
LOW	A small number of less significant habitat opportunities are present. e.g. an isolated habitat such as; a lone tree or patch of scrub used for foraging or shelter, or an isolated site not connected by prominent linear landscape features.
NEGLIGIBLE	No suitable habitats have been recorded within the site.

B3.6 Survey Limitations

- The surveys conducted at the site provide a snapshot of the site at the time of the individual surveys only.
- All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys. However, bats are highly mobile and are unexpectedly discovered from time to time during works following detailed surveys.
- No surveys were conducted in wet or adverse weather.
- All parts of the site were accessed by the surveyors where safe to do so.
  However, due to Health and Safety concerns, no access was gained into the loft space above the high alter, the south roof of the nave, the north roof of the south aisle and the upper parts of the bell tower above the first floor.
- All surveys were conducted with the correct permissions.
- All surveys were conducted at the optimum time of year for the type of surveys necessary.
- If a deviation from the National Guidelines as cited by the BCT has been made during the survey, the reason and justification will be explained within the report.

B3.7 Personnel

The lead ecologist on site was: Anthony D Bird BSc PGDip MCIEEM, an established, qualified, experienced and licensed consultant bat ecologist, trading under the name of Wildlife Discovery Ecological Consultants (WDEC). Registered ecologist with CIEEM and holder of a current Natural England WML-A34 – Level 2 (Class Licence): which allows the licensee to survey for bats using; artificial light, endoscopes, by hand and hand-held static nets.

Assistant ecologists and bat surveyors on site:

BRAS: Mr. A. C. Bird: Ecologist and experienced bat surveyor: NE Licence No:2018-36458-CLS-CLS.
Mr. M. Lidster: Assistant ecologist: 3 years bat surveying experience.

DES and DRES: Mr. A. C. Bird
Mr. M. Lidster
Mr. S. Bird: Assistant ecologist: 7 years bat surveying experience.

The visiting ecologists' conduct on site conformed at all times with industry best practice guidelines as cited by CIEEM and the BCT.

C. RESULTS

C1 Maps of the site

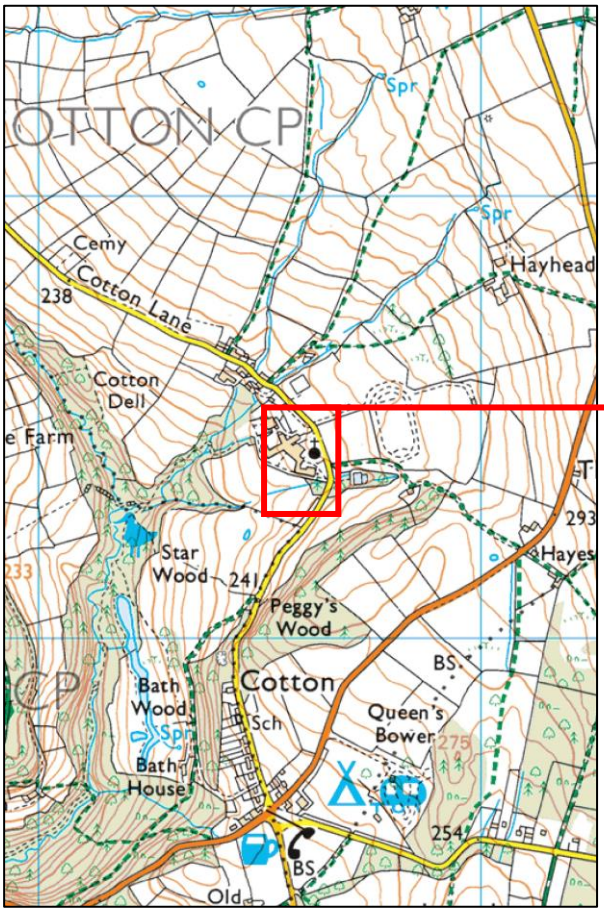


Fig 1: 1:25,000 Ordnance Survey 2019



Fig 2: Cotton Catholic College. St. Wilfred's Church highlighted. OS 2019

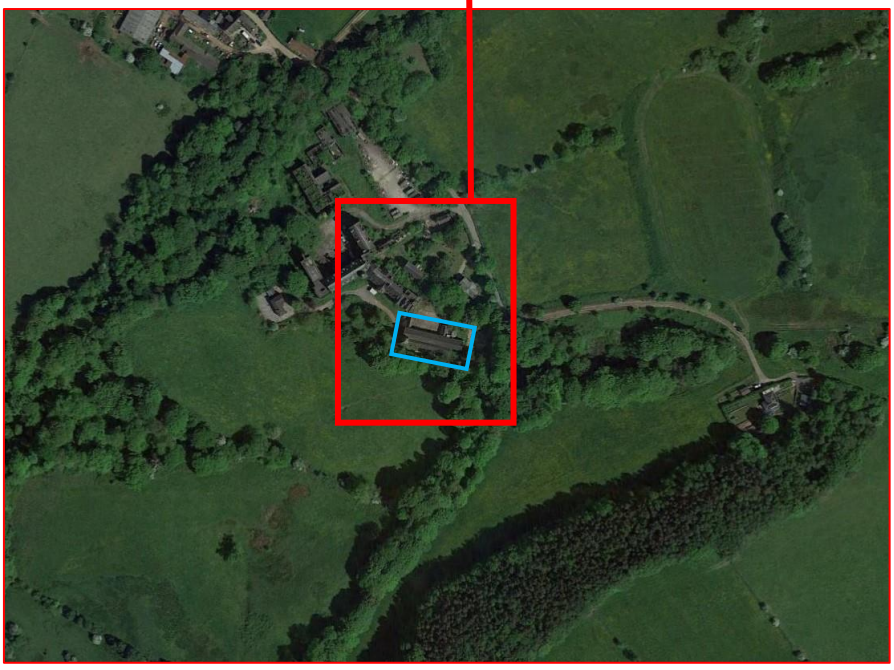


Fig 3: Ordnance Survey 2019. St. Wilfred's Church outlined in blue.

C2 Desk Study

The survey preparation was enhanced by the use of a desk study utilising: - aerial images from Ordnance Survey, MAGIC and other freely available information as well as specific bat data supplied by Staffordshire Ecological Records Centre.

Table 4: Local and National Species Records and Habitats & Species Designations

All designations are sourced within 2km of the site: SK066463		
MAGIC – Authoritative Geographic Information – Defra – www.magic.gov.uk		
Land Based Designations		
Statutory	Hoften's Croft Meadows Local Nature Reserve	• 1.5km NE
	Bath Pasture SSSI	• 360m SW
	Rue Hill SSSI	• 1.9km NE
Habitat Designations		
Grassland		
Priority Habitats Inventory	Good Quality Semi-Improved Grassland	• 370m E • 460m SE • 530m W • 740m SW • 840m N • 1.2km NW
	Lowland Dry Acid Grassland	• 390m SW • 1.5km NW
	Lowland Meadow	• 360m SW • 540m W • 1.4km NE
	Lowland Calcareous Grassland	• 1.2km NE
	Purple Moor Grass and Rush Pasture	• 1.2km E
	Coastal and Floodplain Grazing Marsh	• 1.9km SW
Heathland		
Priority Habitats Inventory	Lowland Heathland	• 1.5km W
Woodland		
Priority Habitat Inventory	Ancient Woodland	• 200m S • 210m S • 210m SE • 220m W
	Deciduous Woodland & National Forest Inventory: Broadleaved Woodland	• Adjacent to the site • 50m N • 300m E • 340m NE
	Traditional Orchard	• 1.2km SW • 1.3km NW
Species Designations		
The area is designated for: Birds: Grassland Assemblage Category 2 – Farmland Birds: Upland Breeding Bird Area for CS England		Lapwing (V*anellus vanellus*) Grey Partridge (*Perdix perdix*)

Table 4: Local and National Species Records and Habitats & Species Designations cont…

Local Records Data: Staffordshire Ecological Records Centre. Please see Appendix AP2.		
European Protected Species (Bats) recorded within 2km of the site: 2010 – Present Day		
Identified Species	Number of Records	Relevant Notes
• Common pipistrelle (*Pipistrellus pipistrellus*) • Noctule bat (*Nyctalus noctula*) • Brown long-eared bat (*Plecotus auritus*) • Soprano pipistrelle (*Pipistrelle pygmaeus*)	• 18 • 3 • 2 • 1	There are no records of bats being observed or recorded within the survey site.
Other unidentified species: • Myotis • Bats	 • 5 • 14	As above

C3 Bat Surveys:

C3.1 Local Environment Assessment.

Table 5: Local Environment Assessment re: Potential Species Presence.

	Description	Assessment & Comment	Species Potential
Local Environment Assessment	• The surveyed site is situated approx. 700m north of the village of Cotton, 5.5km NE of the town of Cheadle and 11km west of the town of Ashbourne, Derbyshire. • The site is centred at grid reference SK066463 and is surrounded by grassland fields, grazed by livestock and mature woodlands. • There are definitive linear features, such as hedgerows, tree lines and a water course all within the immediate landscape. • There is a line of mature common lime trees (*Tilia x vulgaris*) immediately adjacent to the church, which form an avenue to the south of the building. These trees were surveyed for potential bat features (PRF) in January 2019. That survey concluded that none of the trees surveyed (reported within report WDEC272) had any PRFs and all were negative for any evidence of bats. Some of these trees have now been pruned and/or felled as part of the development. • There are numerous substantial buildings within the immediate vicinity, part of the abandoned former Cotton Catholic College complex, of which St. Wilfred's church is part. All these buildings were considered to have a high potential for bats. • It is suspected from the historical evidence available that the buildings on site date from the late 18th and early 19th centuries and have been left empty and decaying since the college was abandoned in 1987.	There is no previous recorded evidence to suggest that bats have roosted within the church and the recorded data for the surrounding area is sparse. However, the overall local habitat was assessed as favourable and as having a high potential for bats to forage, commute and possibly roost within the buildings within the site, including the church and possibly within the trees within the immediate local area.	HIGH

St. Wilfred's Church was built in the Gothic revival style c1873, with a broach bell tower, and is part of a substantial complex of buildings that shape the former Cotton Catholic College.
According to anecdotal evidence, the buildings within the site including the church have been redundant since 1987, thus presenting an ideal opportunity for wildlife and especially bats to colonise them.

C3.2 Bat Roost Appraisal Survey (BRAS)
Conducted 31/08/2018.

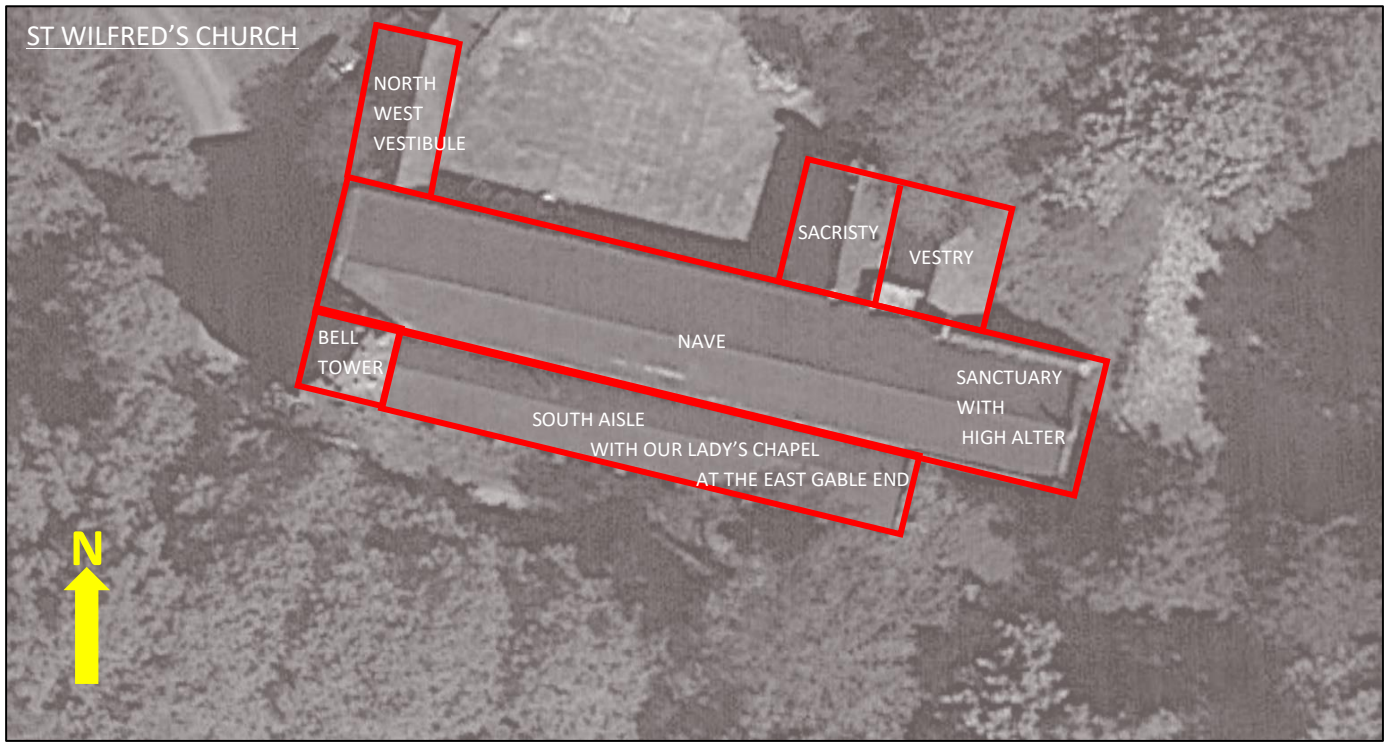


Fig 4: St. Wilfred's Church.

Table 6: Building Survey Results:

Exterior	Description	Assessment & Comment	Species Potential
St. Wilfred's Church	• St. Wilfred's Church is built from sandstone with a blue slate roof and is for the most part in very good condition. • There are four pitched roofs, which for the most part were assessed as being in good condition. • There is evidence that emergency roofing works to stabilise and prevent on-going decay (at the apex of the roof of the south aisle, the vestibule and the sacristy) have been carried out in the recent past. • However, for the most part the tiles on all the roofs appear to be tight, with few obvious gaps. • Where gaps in the tiles were discovered, these appear to be filled with cobwebs or other natural debris.	As below	MODERATE

Table 6: Building Survey Results: cont…

Exterior	Description	Assessment & Comment	Species Potential
St. Wilfred's Church	• No evidence of bats, such as scratch marks, fur grease marks, etc. were observed on the roofs. • However, there were obvious limitations to surveying the roofs of St. Wilfred's comprehensively. The whole of the north side of the south aisle roof could not be seen, and part of the south side of the nave roof was also obscured from ground level. The rest of the roofs were surveyed from ground level and those parts of the roof reachable from ladders were thoroughly searched. The steeple is entirely made of stone and was not accessible but was also surveyed from the ground. • The church has numerous substantial windows and doors. The frames of which are all intact and have no obvious gaps. • Several windows do have glass missing which would allow access to the interior for wildlife. • All the glass from the main window at the west end of the nave is missing creating a huge space for birds and bats to potentially enter the building. Please see Fig 18 in AP1. • There is a purpose-built hole at the apex of the nave's gable end, which will also allow wildlife access. Please see Fig 12 in AP1. • No evidence of bats (e.g. droppings, staining, etc.) was discovered anywhere on the exterior of the building.	Despite no evidence of bats being discovered on the exterior of the church, the survey assessed the building to have a moderate potential for bats as cited within the National Guidance, as bats may utilise the many potential gaps within the windows, etc. to access the building. The roof was not entirely surveyed. The south side of the nave roof and the north side of the south aisle roof could neither be accessed or seen from ground level. It was concluded that there could be other roosting opportunities within these areas that remained unseen.	MODERATE
Interior	**Description**	**Assessment & Comment**	**Species Potential**
Vestry & Sacristy	• Both the vestry and sacristy are single storey, with concrete floors, bare brick walls and are open to the roof felt above and the exposed timber beams. • Both these rooms have been worked upon extensively in the recent past. Evidence of water damage on the floor suggests why there has been emergency works carried out. There is a new roof with under felting above the exposed timber beams and the walls have been taken back to the bare stone and brick. Please see Figs 32 and 33 in AP1. • Both these rooms have been cleaned and swept in the recent past. • No evidence of bats was discovered within these rooms. • The walls have numerous gaps, cracks and crevices, within them, all of which were searched and probed (where necessary) with an endoscope.	Despite no evidence of bats being discovered within the interior of either the vestry or sacristy, the survey assessed both these rooms to have a low potential for bats as cited within the National Guidance as bats may utilise the gaps within the walls and or exposed timbers, although, this was assessed as highly unlikely.	LOW

Table 6: Building Survey Results: cont…

Interior	Description	Assessment & Comment	Species Potential
North West Vestibule	• The northwest vestibule is a simple corridor from the church's main interior connecting the church to the college buildings to the northwest. Please see Fig 30 in AP1. • There are two rooms at the end of the corridor; a storeroom and a toilet. • The vestibule is sealed from the outside, all windows and doors are tight within their frames with no visible gaps along the full length of this part of the building. • The floor is stone and/or concrete, the walls are plastered and the ceiling is also plastered within the exposed timber beams. • This part of the church is in very good condition and is obviously being used for storage. • No evidence of bats was discovered anywhere on the interior of the northwest vestibule.	No evidence of bats was discovered within the interior of the northwest vestibule and sacristy. The survey assessed this part of the church to have a negligible potential for bats as cited within the National Guidance.	NEGLIGIBLE
Nave	• The nave is the most substantial part of the church, measuring approx. 40m in length, 8m in width and 15m to the apex of the ceiling. • For the most part the nave is secure and in good repair, although there is evidence that water has damaged the roof and floor at points. There is evidence that emergency works have been carried out in the recent past to repair this damage to the roof. • The nave is typical of its time and style; paved stone floors overlaid with ornate terracotta tiles, plastered walls (timber clad to 1.5m), large stone pillars/archways (which separate the nave from the south aisle) and the ceiling is tightly clad with stained timber planks, above ornate timber beams. • No obvious gaps were discovered anywhere within the ceiling or walls. • Large Gothic arched windows adorn the walls, some of which have missing or damaged panes. The largest window on the west wall is missing most of the glass. Please see Fig 18 AP1. • No evidence of bats was discovered anywhere within the nave.	Despite no evidence of bats being discovered within the nave, the survey assessed this part of the building to have a moderate potential for bats as cited within the National Guidance, as bats could enter the building through any of the damaged windows and utilise any gaps within the roof timbers.	MODERATE
Bell Tower	• The bell tower is situated at the extreme southwest corner of the church and is entirely made of stone, including its spire. • It has two floors, both of which have timber floors. • The first level is reached by a stone spiral staircase and is suspected to be where the pull rope for the bell/s would have been stored out of reach. • The second level is reached by ladders and is the bell housing, although this level was deemed too dangerous to enter.		

Table 6: Building Survey Results: cont…

Interior	Description	Assessment & Comment	Species Potential
Bell Tower	• The windows in the bell tower are glazed up to the first floor. From here on upwards the windows are open, some of which are louvred. Please see Figs 14 and 15 in AP1. • No evidence of bats was discovered anywhere within those parts of the bell tower surveyed (to the first level). However, it was evident that above this level, the tower is open to wildlife and there appeared to be numerous cracks and crevices within the stone work that could not be comprehensively investigated.	No evidence of bats was discovered within the interior of the bell tower. However, the tower was not entirely surveyed, thus there could be other roosting possibilities within those areas that remain unseen. For this reason, the survey assessed this part of the church to have a moderate potential for bats as cited within the National Guidance.	MODERATE
Sanctuary	• The Sanctuary is situated at the extreme east of the church and would have been the area of the church to house the high alter. • The height of the ceiling above the sanctuary is approx. 12m to the apex as there is a large curved loft space above. • The loft could not be surveyed for two reasons: 1) it was too high for safe ladder usage. 2) the loft hatch was deemed too small to enter. • The floor is again paved with stone, overlaid by ornate terracotta tiles and carpet in places. The walls are plastered and painted and the ceiling is ornately boarded out with wooden inlays. • There were no obvious gaps anywhere within the sanctuary for bats to roost within. • The windows fit tight within their frames and the glass is intact. • However, it is suspected that the loft above the sanctuary can be accessed both from the interior (Please see Fig 23 in AP1) and from the exterior (Please see Fig 12 in AP1), making this space a potential roosting feature for bats, especially brown long-eared. • No evidence of bats was discovered anywhere within the sanctuary.	Despite no evidence of bats being discovered within the sanctuary, the survey assessed this part of the building to have a moderate potential for bats as cited within the National Guidance, as bats could enter the building through any of the damaged windows and utilise the loft space above the high alter above the sanctuary.	MODERATE

Table 7: Building Survey Results

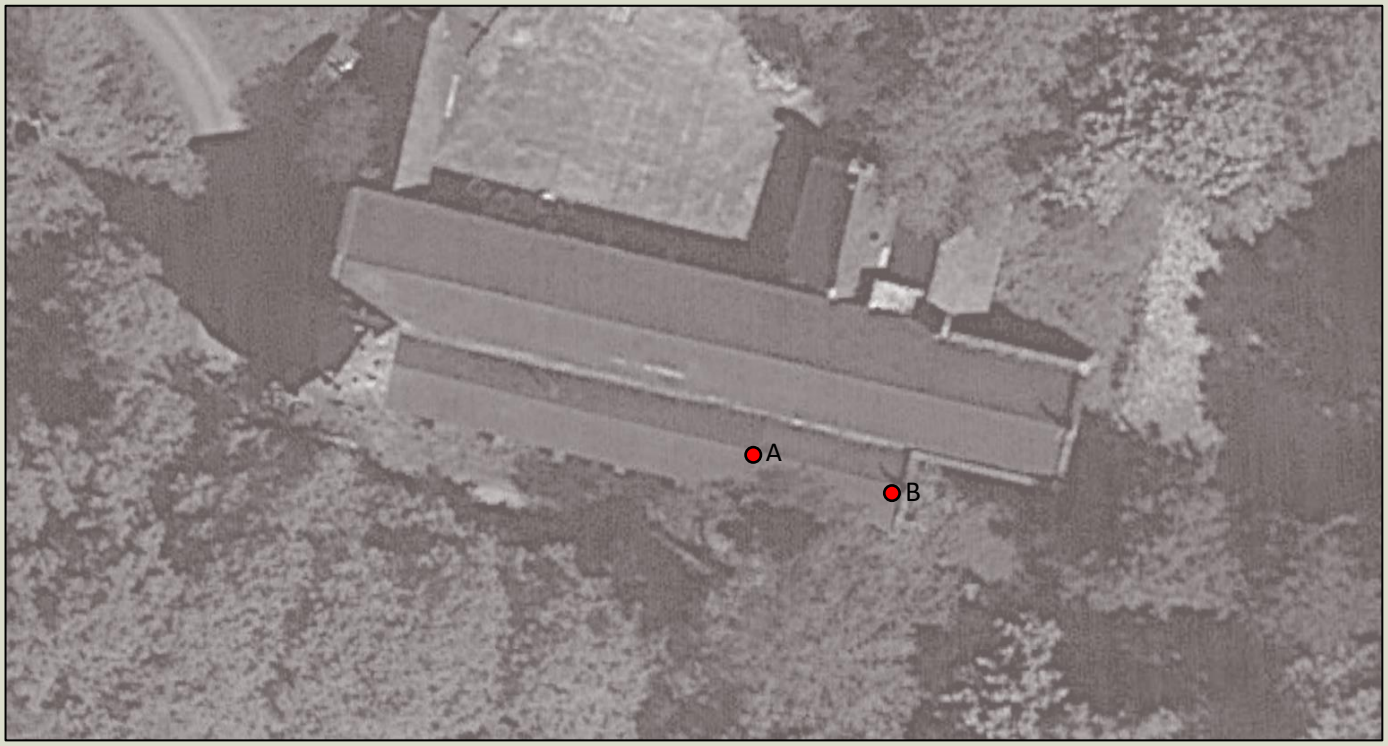
Interior	Description	Assessment & Comment	Species Potential
South Aisle	• The south aisle runs parallel to the nave and is separated only by six stone pillars/archways. • The south aisle has the same floors, wall and ceiling construction as the nave, however, is approx. only 10m to the apex of the roof. • It has a smaller alter at its east end: 'Our Lady's Alter' which is marble and has a stone base. • Evidence of 2 (two) bat feeding perches were discovered within this part of the church. • Bat droppings and feeding remnants (orange underwing moth wings) were found under one of the central beams. This feeding perch consisted of <15 droppings and 24 (twenty-four) wing pieces. This amounts to a bat or bats consuming 6 (six) moths at this point. Please see Fig 6 below. • Bat droppings and feeding remnants were also discovered on the alter. Please see Fig 7 below. • From this feeding perch above the alter, bats had consumed 8 (eight) orange underwing moths and deposited <20 droppings. • However, both sets of droppings and feeding remnants were deemed to be old and suspected of being in situ for at least 18 – 24 months, as they were very degraded, and covered with a thick layer of dust. The droppings were grey and dull, and the moth wings were faded. All were delicate to touch and crumbled almost instantaneously. • This evidence was assessed to prove that at some time in the past brown long-eared bats have entered and used the interior of the church to perch and feed, as the droppings and feeding remnants are typical of this species. • No other evidence of bats was discovered anywhere else within the south aisle of the building.	Evidence of bats (brown long-eared) were discovered at two points within the south aisle. Although the survey assessed this part of the building to have a confirmed historic presence of bats, it was concluded that this evidence was at least 18 months old and didn't give a true representation of bat activity within the church at the time of the survey.	CONFIRMED
Summary of the Findings of the BRAS			
The findings of the BRAS indicated that bats have used the church in the past, to perch and feed, however, this was not surprising given the numerous potential access points. However, apart from the two historic brown long-eared bat feeding perches discovered within the south aisle, no other and/or more recent evidence of roosting bats was discovered anywhere else within the church or upon the exterior. In line with the national guidance, the overall appearance and condition of the building, the fact that not all the building could be comprehensively investigated (the roofs of the nave and south aisle, the upper bell tower and the loft above the main alter), the evidence that bats had used the building in the past and the amount of favourable			

habitat in very close proximity, St. Wilfred's Church was assessed as having an overall moderate to high potential for bats.

Therefore, it was concluded that the building would require further survey effort which would include a series of 4 further surveys, consisting of 3 dusk emergence and 1 dawn re-entry surveys, to adequately gauge the bat activity at the church.

Exercising a concept of proportionality and pragmatism, it was agreed that the first DES at the church would be conducted the same night as the BRAS, with the others to be completed in the summer of 2019.

Fig 5: St. Wilfred's Church: Bat evidence discovered



Old brown long-eared bat droppings and feeding remenants discovered within the south aisle ● Roost conclusion: feeding perches:



Fig 6: Brown long-eared bat evidence found at position A



Fig 7: Brown long-eared bat evidence found at position B

C3.3 First Dusk Emergence Survey

Table 8: First Dusk Emergence Survey: 31/08/2018

Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 1: (S1)	Southeast corner of the church.	20:00 – 22:00	• A single Noctule bat (NB) (*Nyctalus noctula*) was recorded commuting over the site at 20:00. • A single common pipistrelle (CP) (*Pipistrellus pipistrellus*) was observed and recorded emerging from the east louvre window on the bell tower at 20:01. • A single CP was recorded foraging along the tree line south of the church at 20:14. • A single Leisler's bat (LB) (*Nyctalus leisleri*) was recorded commuting north to south through the site at 20:15. • A single CP was recorded foraging along the road side east of the site at 20:18. • A single CP was recorded foraging within the site at 20:21. • A single NB was recorded commuting over the site at 20:23. • A single CP was recorded foraging within the site at 20:27. • Two Brandt's bats (BB) (*Myotis brandti*) were recorded commuting through the site at 20:29. • A single CP was recorded foraging within the site at 20:34. • A single CP was recorded foraging within the site at 20: 41. • A single unidentified Myotis spp was recorded commuting through the site at 20:54. • A single brown long-eared bat (BLE) was recorded foraging along the tree line south of the church at 20:59. • A single CP was recorded commuting along the tree line at 21:12. • A single CP was recorded foraging within the site at 21:14. No other bat activity was observed or recorded by S1.
Surveyor 2: (S2)	Southwest corner of the church.	As above	• A single NB was recorded commuting over the site at 20:00. • A single common pipistrelle CP was suspected to emerge from the bell tower (north or east side) at 20:01. • Two CP bats were observed and recorded to emerge from the louvre window on the west side of the bell tower at 20:15. • Two CP bats was recorded foraging around the cedar tree at the west of the church at 20:21. • A single NB was recorded commuting over the site at 20:22. • A single CP was recorded foraging to the south of site at 20:24. • A single CP was recorded foraging to the south of the site at 20:29. • Two BB were recorded commuting to the south of the church at 20:29. • A single CP was recorded foraging within the site at 20:36. • Two CP were recorded foraging within the site at 20: 44. • A single BB was recorded commuting to the south of the site at 20:53. • A single BLE was recorded foraging along the tree line south of the church at 20:57. • A single CP was recorded commuting along the tree line at 21:10. • A single BLE was recorded foraging along the tree line south of the church at 21:14. • A single CP was recorded foraging around the cedar tree at 21:15. No other bat activity was observed or recorded by S2.

Table 8: First Dusk Emergence Survey: 31/08/2018 cont…

Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 3: (S3)	Northwest corner of the church.	As above	• A single NB was recorded commuting over the site at 20:00. • A single common pipistrelle CP was observed to emerge from the north louvre window of the bell tower at 20:01. • Two CP bats were observed and recorded to emerge from the louvre window on the west side of the bell tower at 20:14. • A single CP was recorded commuting to the north of the site at 20:17. • A single NB was recorded commuting over the site at 20:21. • A single CP was recorded foraging to the north of site at 20:23. • A single CP was recorded commuting to the north of the site at 20:26. • A single CP was recorded foraging within the site at 20:28. • A single CP was recorded commuting to the north of the church at 20:31. • A single CP was recorded foraging within the site at 20:39. • Two CP was recorded foraging within the site at 20: 45. • A single BB was recorded commuting through the site at 20:52. • A single BLE was recorded commuting to the north of the church at 20:55. • A single CP was recorded commuting to the north of the church at 21:04. • A single CP was recorded commuting along to the north of the church at 21:10. • A single BLE was recorded foraging within the site at 21:12. • A single CP was recorded foraging within the site at 21:15. No other bat activity was observed or recorded by S3.
Surveyor 4: (S4)	Northeast corner of the church	As above	• A single NB was recorded commuting over the site at 20:00. • A single common pipistrelle CP was recorded and observed commuting to the north of the site at 20:11. • A single CP was recorded commuting to the north of the site at 20:14. • A single CP was recorded commuting to the north of the site at 20:17. • A single CP was recorded foraging to the east of the site at 20:20. • A single NB was recorded commuting over the site at 20:22. • A single CP was recorded foraging to the north of site at 20:23. • A single CP was recorded commuting to the north of the site at 20:27. • A single CP was recorded foraging within the trees immediately north of the church at 20:28. • A single CP was recorded commuting to the north of the church at 20:31. • A single CP was recorded foraging within the site at 20:39. • Two CP was recorded foraging within the site at 20: 47. • A single BB was recorded commuting through the site at 20:52. • A single BLE was recorded commuting to the north of the church at 20:55. • A single BLE was recorded foraging to the east of the church at 20:58. • A single CP was recorded commuting to the north of the church at 21:05. • A single CP was recorded commuting along to the north of the church at 21:10. • A single CP was recorded foraging within the site at 21:15. No other bat activity was observed or recorded by S4.

Table 8: First Dusk Emergence Survey: 31/08/2018 cont…

Remote Recording	Position	Survey Times	Bat Activity Recorded
IR Camera 1. IR Floodlight rig.	Within the nave, recording any activity in and around the loft entrance above the alter.	For the duration of the survey.	• No bats were recorded emerging from or entering into the internal loft space.
IR Camera 2. IR Floodlight rig.	Positioned at the west end of the south aisle, recording any activity within the church.	As above	• No bats were recorded flying within any part of the church.

Summary of the survey findings

Fig 8: St. Wilfred's Church: Bat Activity observed and recorded during first dusk emergence survey.



Five species of bats were observed in and around the site. However, only one species (common pipistrelle) was observed to emerge from the church during the survey. An estimated four individual bats were observed and recorded to leave the bell tower at three points, using the louvre windows.
No bat activity was recorded from the interior of the church by the infrared cameras.
S2 and S3 suspected that bats were emerging from adjacent buildings to the northwest of the church.

C3.4 Second Dusk Emergence Survey

Table 9: Second Dusk Emergence Survey: 18/05/2019

Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 1: (S1)	Southeast corner of the church.	20:45 – 22:35	• A single CP was recorded commuting along the tree line south of the church at 21:03. • A single CP was recorded commuting along the tree line south of the church west to east at 21:05. • A single NB was recorded commuting over the site at 21:06. • A single CP was recorded commuting along the tree line south of the church west to east at 21:10. • A single NB was recorded commuting over the site at 21:21. • A single CP was recorded commuting eat to west along the tree line south of the church at 21:24. • A single BLE was recorded foraging along the tree line south of the church within the field at 21:26. • A single CP was recorded foraging along the tree line south of the church within the field at 21:29. • A single CP was recorded foraging around the yew tree east of the church 21:41. • A single CP was recorded foraging within the site at 22:04. • A single CP was recorded foraging along the tree line south of the church within the field at 22:14. • A single BLE was recorded commuting along the tree line south of the church at 21:16. • A single BLE was recorded commuting along the tree line south of the church at 22:20. No other bat activity was observed or recorded by S1.
Surveyor 2: (S2)	Southwest corner of the church.	As above	• A single CP was observed to emerge from the bell tower louvre window on the south side at 20:51. • A single soprano pipistrelle (SP) (*Pipistrellus pygmaeus*) was recorded commuting over the site at 20:52. • An unidentified bat (no call) was observed to emerge for the same window as the CP at 21:00. • A single CP was recorded commuting to the south of the site at 21:04. • Three CP bats were observed and recorded to emerge from the louvre window on the west side of the bell tower at 21:14. • Two CP bats was recorded foraging around the cedar tree at the west of the church at 21:21. • A single NB was recorded commuting to west of the site at 21:26. • A single CP was recorded foraging to the west of the church at 21:30. • A single CP was recorded foraging to the southwest of the site at 21:32. • Two CP were recorded foraging to the west of the church at 21:44. • A single CP was recorded foraging to the west of the church at 21:49. • Two CP were recorded foraging to the west of the church site at 21:54. • A single BLE was recorded foraging to the southwest of the site at 22:21. • Two CP and an SP were recorded foraging west of the church at 22:22. • A single CP was recorded foraging to the southwest of the site at 22:26. • ***Bat activity was also observed and recorded by S2 from adjacent buildings. Approx. 15 bats emerged, some re-entering within 30 minutes.***

Table 9: Second Dusk Emergence Survey: 18/05/2019 cont…

Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 3: (S3)	Northwest corner of the church.	As above	• A single NB was recorded commuting north of the site at 21:14. • ***Approx. 6 CP observed to emerge from the adjacent building at 21:16 – 21:32.*** • Two CP bats were observed and recorded foraging within trees to the north of the church at 21:42. • A single CP was recorded commuting to the north of the site at 21:50. • A single CP was recorded commuting over the site at 21:52. • A single CP was recorded foraging to the north of site at 21:56. • A single CP was recorded commuting to the north of the site at 22:04. • A single CP was recorded foraging within the site at 22:08. • A single CP was recorded commuting to the north of the church at 22:17. • A single CP was recorded foraging within the site at 22:18. • Two CP were recorded foraging within the site at 22:20. • A single CP was recorded commuting through the site at 22:24. • A single BLE was recorded commuting to the north of the church at 22:24. • A single CP was recorded commuting to the north of the church at 22:27. • A single BLE was recorded foraging within the site at 22:28. • A single CP was recorded foraging within the site at 22:30. No other bat activity was observed or recorded by S3.
Surveyor 4: (S4)	Northeast corner of the church	As above	• A single NB was recorded commuting over the site at 21:15 • A single common pipistrelle CP was recorded and observed commuting to the north of the site at 21:16. • A single CP was recorded commuting to the north of the site at 21:17. • A single CP was recorded foraging to the east of the site at 21:18. • A single NB was recorded commuting over the site at 21:21. • A single CP was recorded foraging to the north of site at 21:24. • A single CP was recorded commuting to the north of the site at 21:25. • A single CP was recorded foraging within the trees immediately north of the church at 21:28. • A single CP was recorded commuting to the north of the church at 21:32. • A single CP was recorded foraging within the site at 21:37. • Two CP were recorded foraging within the site at 21:38. • A single CP was recorded commuting through the site at 22:01. • A single CP was recorded commuting to the north of the church at 22:08. • A single BLE was recorded foraging to the east of the church at 22:25. • A single CP was recorded commuting to the north of the church at 22:26. • A single CP was recorded commuting along to the north of the church at 22:27. • A single CP was recorded foraging within the site at 22:30. No other bat activity was observed or recorded by S4.

Table 9: Second Dusk Emergence Survey: 18/05/2019 cont…

Remote Recording	Position	Survey Times	Bat Activity Recorded
IR Camera 1. IR Floodlight rig.	Within the nave, recording any activity in and around the loft entrance above the alter	For the duration of the survey.	• No bats were recorded emerging from or entering into the loft the internal space.
IR Camera 2. IR Floodlight rig.	Positioned at the west end of the south aisle, recording any activity within the church.	As above	• No bats were recorded flying within any part of the church.

Summary of the survey findings

Fig 9: St. Wilfred's Church: Bat Activity observed and recorded during second dusk emergence survey.



Four species of bats were observed in and around the site. However, only one species (common pipistrelle) was observed to emerge from the church during the survey. An estimated six individual bats were observed and recorded to leave the bell tower at three pints, using the louvre windows.
No bat activity was recorded form the interior of the church by the infrared cameras.
S2 and S3 observed numerous bats emerging from and returning to adjacent buildings (<20) to the northwest of the church.

C3.5 Third Dusk Emergence Survey

Table 10: Third Dusk Emergence Survey: 31/05/2019

Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 1: (S1)	Southeast corner of the church.	21:15 – 22:45	• A single CP was observed to emerge from the east louvre window on the bell tower at 21:31 • A single CP was recorded commuting along the tree line south of the church west to east at 21:33. • Two CP bats were observed to emerge from the east louvre window on the ball tower at 21:35. • A single NB was recorded commuting over the site at 21:39. • A single CP was recorded commuting along the tree line south of the church west to east at 21:40. • A single NB was recorded commuting over the site at 21:51. • A single CP was recorded commuting east to west along the tree line south of the church at 22:03. • 4 (four) CP bats were recorded foraging along the tree line south of the church and within the field constantly from 22:11 until the end of the survey. • A single CP was recorded foraging around the yew tree east of the church, between S1 and S4 from 22:26 until the end of the survey. • A single CP was recorded foraging to the east of the site at 22:34. • A single BLE was recorded commuting along the tree line south of the church at 22:43. • A single BLE was recorded commuting along the tree line south of the church at 22:45. No other bat activity was observed or recorded by S1.
Surveyor 2: (S2)	Southwest corner of the church.	As above	• A single CP was observed to commute through the site at 21:26. • Three CP bats were observed and recorded commuting to the south of the site at 21:29. • A single CP was observed and recorded to commute through the site at 21:31. • A single SP was recorded within the site at 21:40. • From 21:50 until the end of the survey several (<4) CP were observed and recorded constantly foraging to the immediate west of the church. • A single BLE was recorded foraging to the southwest of the site at 22:38. • ***Bat activity was also observed and recorded by S2 from adjacent buildings. Approx. 12 bats emerged, some re-entering within 30 minutes. This behaviour is very similar to that of DES 2.*** No other bat activity was recorded by S2.
Surveyor 3: (S3)	Northwest corner of the church.	As above	• A single CP observed commuting through the site at: 21:39. • A single CP observed commuting through the site at: 21:50. • ***Approx. 9 CP observed to emerge from the adjacent building between 21:50 – 22:03.*** • Three CP bats were observed and recorded foraging within trees to the north of the church at 22:07. Constant CP activity in this area throughout the survey. • A single CP was recorded commuting through the site at 22:23. • A single Nathusius pipistrelle bat (NP) (*Pipistrellus nauthusi*) was recorded foraging within the site at 22:37. No other bat activity was recorded by S3.

Table 10: Third Dusk Emergence Survey: 31/05/2019 cont…

Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 4: (S4)	Northeast corner of the church	As above	• A single NB was recorded commuting over the site at 21:27. • A single common pipistrelle CP was recorded and observed commuting to the north of the site at 21:39. • A single CP was recorded commuting to the north of the site at 21:41. • A single CP was recorded foraging to the east of the site at 21:42. • A single NB was recorded commuting over the site at 21:43. • A single CP was recorded foraging to the north of site at 21:44. • A single CP was recorded commuting to the north of the site at 21:47. • A single CP was recorded foraging within the trees immediately north of the church at 21:54. • A single NB was recorded commuting to the north of the site at 22:10. • Several CP bats recorded constantly foraging within the site from 22:12 – end of the survey. • A single NP was recorded commuting through the site at 22:20. • A single CP was recorded commuting to the north of the church at 22:28. • A single BLE was recorded foraging within the site at 22:37. No other bat activity was observed or recorded by S4.
Remote Recording	Position	Survey Times	Bat Activity Recorded
IR Camera 1. IR Floodlight rig.	Within the nave, recording any activity in and around the loft entrance above the alter	For the duration of the survey.	No bats were recorded emerging from or entering into the loft the internal space.
IR Camera 2. IR Floodlight rig.	Positioned at the west end of the south aisle, recording any activity within the church.	As above	No bats were recorded flying within any part of the church.

Table 10: Third Dusk Emergence Survey: 31/05/2019 cont…

Summary of the survey findings
Fig 10: St. Wilfred's Church: Bat Activity observed and recorded during third dusk emergence survey.



Individual surveyor positions S3
Infrared camera positions IR1
Common pipistrelle emergence points
Noctule bat
Soprano pipistrelle
Brown long-eared bat
Nathusius pipistrelle
Common pipistrelle Activity

Five species of bats were observed in and around the site. However, only one species (common pipistrelle) was observed to emerge from the church during the survey.
Three individual bats were observed to leave the bell tower from the same point, using the east louvre window.
Again, no bat activity was recorded form the interior of the church by the infrared cameras.
S2 and S3 observed numerous bats emerging from and returning to adjacent buildings to the west of the church.

C3.6 Dawn Re-Entry Survey

Table 11: Dawn Re-Entry Survey: 01/06/2019

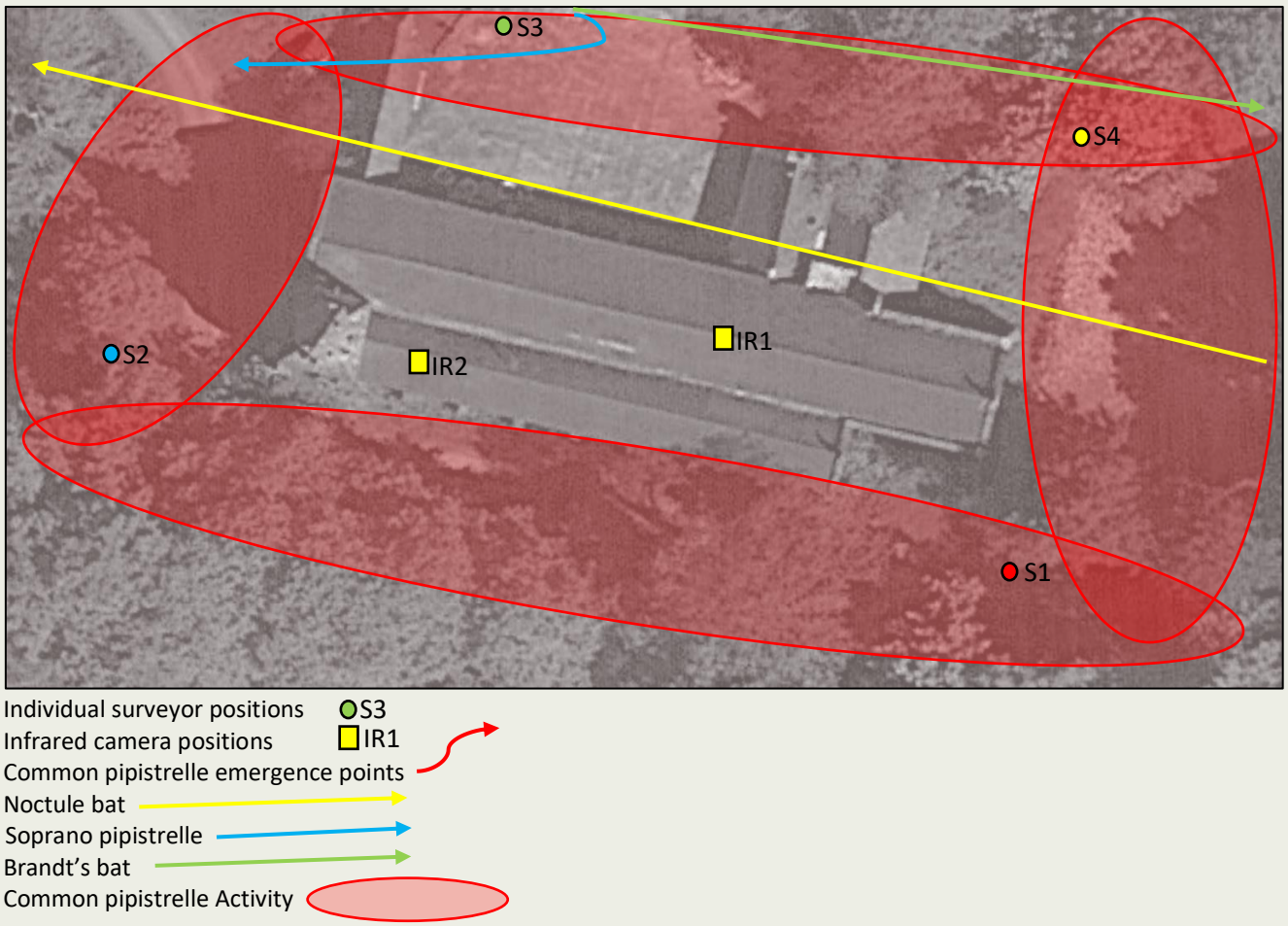
Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 1: (S1)	Southeast corner of the church.	02:50 – 05:05	• CP foraging and socialising activity recorded along the tree line south of the church from: 02:50 – 03:30. • A single CP was recorded commuting along the tree line south of the church west to east at 03:35. • A single NB was recorded commuting over the site at 03:35. • A single NB was recorded commuting over the site at 03:38. • A single CP was recorded commuting along the tree line south of the church at 04:17. • A single myotis spp was observed and recorded foraging along the tree line south of the church within the field at 04:29. • A single CP was recorded foraging along the tree line south of the church within the field at 04:29. • A single CP was observed and recorded commuting east of the church 04:45. • A single CP was observed and recorded commuting through the site at 05:00. • A single CP was observed and recorded commuting through the site at 05:01. No other bat activity was observed or recorded by S1.
Surveyor 2: (S2)	Southwest corner of the church.	As above	• CP foraging and socialising activity recorded around the cedar tree and buildings west of the church from: 02:50 – 04:20. • A single NB was recorded commuting over the site at 03:35. • A single NB was recorded commuting over the site at 03:38. • 2 CP bats were observed and recorded commuting along the tree line south of the church east to west at 03:45. • A single BB was recorded foraging along the tree line south of the church at 04:20. • A single CP was recorded foraging within the site west of the church at 04:24. • A single CP was observed and recorded commuting west to east, south of the church 04:35. • A single CP was observed and recorded commuting through the site at 04:48. • A single CP was observed and recorded commuting through the site at 04:55. • No other bat activity was observed or recorded by S2. • ***Bat activity was also observed and recorded by S2 from adjacent buildings. Approx. 7 bats re-entered the building at various points.***
Surveyor 3: (S3)	Northwest corner of the church.	As above	• CP foraging and socialising activity recorded constantly to the north and west of the church, especially between the buildings to the northwest of the site from 02:50 to approx. 04: 15. • A single NB was recorded commuting over the site at 03:36. • A single NB was recorded commuting over the site at 03:40. • A single CP bats was observed and recorded commuting along the tree line north of the church east to west and between the buildings at 03:43. • A single CP was recorded foraging along the tree line north of the church at 04:10. • A single SP was recorded commuting through the site at 04:12.

Table 11: Dawn Re-Entry Survey: 01/06/2019 cont…

Surveyor	Position	Survey Times	Bat Activity Observed
Surveyor 3: (S3)	Northwest corner of the church.	As above	• A single CP was recorded foraging within the site west of the church at 04:14. • A single CP was observed and recorded commuting east to west, north of the church 04:27. • A single CP was observed and recorded commuting through the site at 04:41. • A single CP was observed and recorded commuting through the site at 04:53. • No other bat activity was observed or recorded by S3. • ***Bat activity was also observed and recorded by S3 from adjacent buildings. Approx. 3 bats re-entered the building through a window central on the east elevation.*** No other bat activity was observed or recorded by S3.
Surveyor 4: (S4)	Northeast corner of the church	As above	• CP foraging and socialising activity recorded along the tree line north and east of the church from: 02:50 – 04:00. • A single CP was recorded commuting through the site at 03:43. • A single NB was recorded commuting over the site at 03:35. • A single NB was recorded commuting over the site at 03:37. • A single CP was recorded commuting through the site at 04:13. • A single CP was observed and recorded foraging through the site at 04:20. • A single CP was recorded commuting through the site at 04:33. • A single CP was observed and recorded commuting north of the church 04:42. • A single CP was observed and recorded commuting through the site at 05:01. • A single CP was observed and recorded commuting through the site at 05:05. No other bat activity was observed or recorded by S4.
Remote Recording	Position	Survey Times	Bat Activity Recorded
IR Camera 1. IR Floodlight rig.	Within the nave, recording any activity in and around the loft entrance above the alter	For the duration of the survey.	No bats were recorded emerging from or entering into the loft the internal space.
IR Camera 2. IR Floodlight rig.	Positioned at the west end of the south aisle, recording any activity within the church.	As above	No bats were recorded flying within any part of the church.

Table 11: Dawn Re-Entry Survey: 01/06/2019 cont…

Summary of the survey findings
Fig 11: St. Wilfred's Church: Bat Activity observed and recorded during dawn re-entry survey.



Four species of bats were observed in and around the site.
No bats were observed to re-enter the church during the survey.
No bat activity was recorded from the interior of the church by the infrared cameras.
S2 and S3 observed numerous bats re-entering the adjacent buildings to the west of the church.

D. CONCLUSIONS

- According to National Guidelines, as provided by the BCT, the results of the BRAS conducted at the church confirmed that the building had a high potential for bats to inhabit some areas within the church.
  The discovery of historic and desiccated droppings and feeding remnants (suspected of being at least 18 months old), typical of brown long-eared bats, verified that one or two brown long-eared bats had used the church in the past to perch and feed.
  Both feeding perches were found within 10m of each other at the east end of the south aisle.
  No other evidence of bats roosting within the interior or on the exterior of the church was discovered.
  However, on the strength of the findings of the BRAS, namely; the old feeding perches, the age and condition of the building, the immediate surroundings (old abandoned buildings, mature trees, woodland and pasture) and the fact that the church was not fully surveyed due to inaccessibility and/or health and safety concerns, further survey effort was considered vital to assess the potential bat activity at the church and to try to establish any possible bat roosts unseen in the BRAS.
  It was assessed that 3 (three) DES and 1 supplementary and additional DRES should confirm or refute the findings of the initial survey.

  It was concluded that only 1 DES could be achieved within the 2018 bat activity season, the other surveys would be completed in 2019 (May – June).

- The first DES was completed at the site on the same evening at the BRAS, using all the correct methodologies and surveyor/IR recording equipment coverage.
  The DES proved negative for any presence of bats within the main body of the church itself, however, 4, possibly 5 common pipistrelle bats were observed and recorded to emerge from the west, east and north upper bell tower louvre windows.
  No other bat emergence was recorded during the survey from any other part of the church or the adjacent buildings.
  Bat activity was recorded all around the site, especially around the mature trees and the corridor of trees to the north and south of the church.

- The second DES was completed in the exact same manner as the first, employing all the same surveyors, equipment and coverage.
  Again, the DES proved negative for the presence of bats within the main body of the church itself. However, as with the first survey, bats were recorded and observed to emerge from the upper bell tower. 5 (five) common pipistrelle bats were seen to emerge from the west louvre window (please see Fig 15 in AP1) and 1 common pipistrelle was seen to emerge from the south louvre window.
  No other bat emergence was recorded during the survey from any other part of the church.
  Bat activity was recorded all around the site, especially from the building to the immediate north west of the church. <20 common pipistrelle bats were observed to leave several points on both the south and east upper windows. Returning bats were also recorded and observed throughout the survey. This behavior suggests that there could be a maternity roost within the adjacent building, with pregnant females or lactating mothers returning to feed.
  Feeding and commuting bats were mostly recorded around the mature trees and the corridor of trees to the north and south of the church.

- The third DES was completed in the exact same manner as the previous emergence surveys, employing all the same surveyors, equipment and coverage.
  Again, the DES proved negative for the presence of bats within the main body of the church itself. However, as with the first survey, bats were recorded and observed to emerge from the upper bell tower. Approx. 3 (three) common pipistrelle bats were seen to emerge from the east louvre window.
  No other bat emergence was recorded during the survey from any other part of the church.
  Bat activity was recorded all around the site, especially from the building to the immediate northwest of the church. <20 common pipistrelle bats were observed to leave several points on both the south and east upper windows. Returning bats were also recorded and observed throughout the survey. This behavioral observation a second time almost certainly suggests that there is a maternity roost within the adjacent building.
  Feeding and commuting bats were mostly recorded around the mature trees and the corridor of trees to the north and south of the church.

- The dawn re-entry survey (DRES) was completed at the site using all the correct methodologies and surveyor/IR recording equipment coverage.
  The DRES proved negative for any presence of bats within the main body of the church itself, and no bats were observed to re-enter any part of the church, including the bell tower for the duration of the survey.
  Bat activity was again recorded all around the site, especially around the mature trees and the corridor of trees to the north and south of the church.
  Bat were also observed and recorded to re-enter the buildings to the immediate northwest of the church.

E. RECOMMENDATIONS

- It is recommended that no further bat survey effort is necessary in regard to bats at the church at this time.
- It is recommended that a Natural England European Protected Species Mitigation Licence will not be needed to complete the development works at the church, if certain restrictions are adhered to. Protected species enhancement at the site to compensate and/or mitigate for any loss of potential roosting habitat could easily be incorporated into the development.

  It is therefore recommended that:

  1) The loft above the high alter at the east end of the nave should remain in situ. The hatch within the church should be closed and sealed from entry and the entrance on the exterior of the church's east gable end (please see Fig 12 in AP1) narrowed. This potential entry point should become a specific bat entrance, with dimensions of 20cm x 10cm. This will allow bats to enter and roost within the loft space unhindered and prevent birds such as jackdaw (*Corvus monedula*) from gaining access to the interior of the church.
  2) Several raised roof tiles should be included along both the roof of the nave and the roof of the south aisle. This will allow access at several points for bats wanting to roost under the tiles at these points and access the loft.
  3) Several raised ridge tiles should be included on both the roof of the nave and the roof of the south aisle to allow access to bats wanting to roost under the tiles at the ridge or gain access to the loft.
  4) The timber cladding on the interior ceilings of both the nave and south aisle should remain in situ, and if necessary repaired like for like, to allow bats to roost between the roof tiles on the exterior and the timber cladding on the interior.
  5) The upper part of the bell tower; from the first floor upwards, should be sealed from access from the floors below and the interior left undeveloped. This part of the church, which has been proved to house roosting bats, will then form the main part of the bat mitigation / compensation measures necessary to avoid the licensing processes.
- If 1 – 5 are unachievable a Natural England European Protected Species Mitigation Licence must be sought.
- It is WDEC's professional opinion, that because of the activity within other buildings in very close proximity of the church (within 30m), and the activity recorded in and around the site, bats may be encountered at the church during the development at the site. Common pipistrelle bats are notorious for their infidelity to their roosts and can change their roosts throughout their active season.

  It is strongly suspected that there is an active maternity roost within the building immediately adjacent to the northwest of the church, which could lead to some bats moving from this location to the church at any time.
- In the event that bats are discovered within the building during any works at the site ***all works must cease immediately*** within that area and a suitably qualified and licensed ecologist must inspect the site as soon as possible to advise accordingly.
- It is recommended that five bat boxes of the correct type are erected at the correct height and position in trees and/or on buildings in and around the site immediately.

  In the unlikely event that bats are discovered during the works at the church, the bat boxes will allow the attending ecologist to remove the bats from danger and deposit the bats in a safe place away from the development but within their home range.
- Please note: If the development is delayed more than eighteen months from the date of this report, it is recommended that the buildings are reassessed by a suitably qualified and experienced ecologist.

F. REFERENCES AND ACKNOWLEDGEMENTS

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The Conservation of Habitats and Species Regulations 2017.

Staffordshire Ecological Records Centre 2018.

- Aerial images: Google Earth.
- Maps: Ordnance Survey
- MAGIC and other freely available information e.g. Natural England's nature on the map website, NBNatlas, etc.

Limitations:

Anthony Bird (Wildlife Discovery Ecological Consultants) conducted the survey/s and authored the resulting report for the client and/or his agent/s in accordance with Wildlife Discovery Ecological Consultant's General Terms and Conditions. It is deliberately stated that the results of the survey/s of which the above report concludes were correct at the time of writing. This report may not be relied upon by any other persons without the prior and express written agreement of Anthony Bird (Wildlife Discovery Ecological Consultants). The conclusions and recommendations contained within this report are also based upon information provided by third parties (as cited above). Information obtained from third parties has not been independently verified by Anthony Bird (Wildlife Discovery Ecological Consultants) and was taken as read.

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APPENDICES

AP1: PHOTOGRAPHS



Fig 12: East gable end of the church. Note entrance to loft area.



Fig 13: South side of the church and line of lime trees

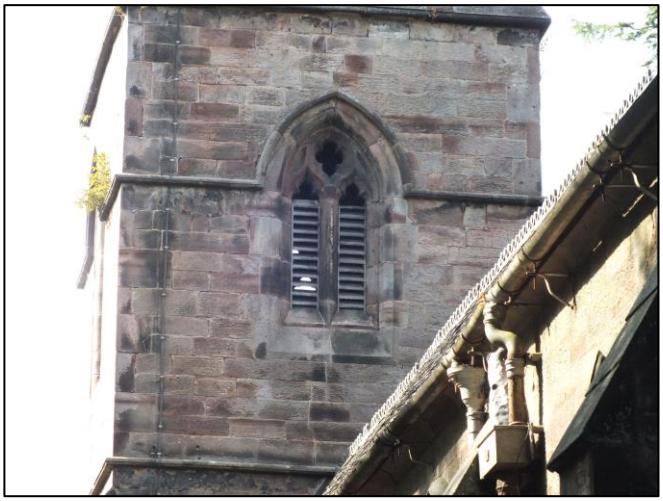


Fig 14: East elevation of the bell tower, including louvre window



Fig 15: West end of church including bell tower and spire.



Fig 16: West end of the church



Fig 17: Exterior of the corridor between the west church and college

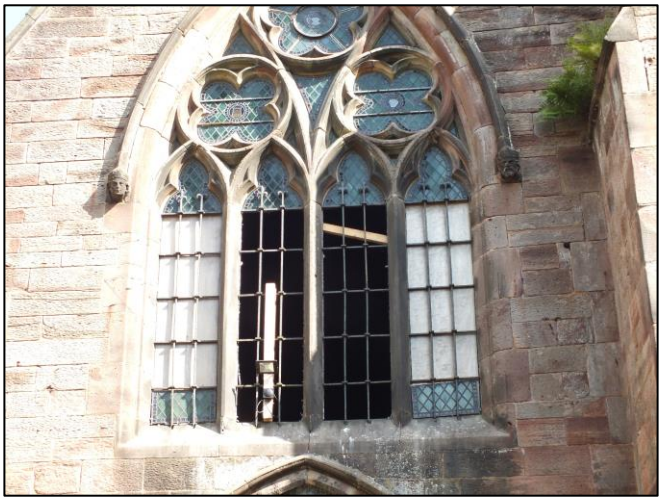


Fig 18: West end main window. Suspected entry point of bats in the past



Fig 19: Exterior east side of the vestry



Fig 20: North side of the church



Fig 21: East end of the nave



Fig 22: West end of the nave



Fig 23: Sanctuary / alter. Note loft above.



Fig 24: Interior church ceiling



Fig 25: Interior church ceiling



Fig 26: West end of the south aisle



Fig 27: East end of the south aisle and 'Our Lady's' alter



Fig 28: Bat droppings and feeding remnants: central south aisle



Fig 29: Bat droppings and feeding remnants on the south aisle alter



Fig 30: Interior of the northwest vestibule



Fig 31: Interior of the vestry



Fig 32: Interior of the sacristy



Fig 33: Bell tower stairwell



Fig 34: First floor of the bell tower



Fig 35: Above the first floor: The bell housing. Inaccessible.

AP2: Staffordshire Ecological Records Centre Data

Fig 36: Bat Records Map

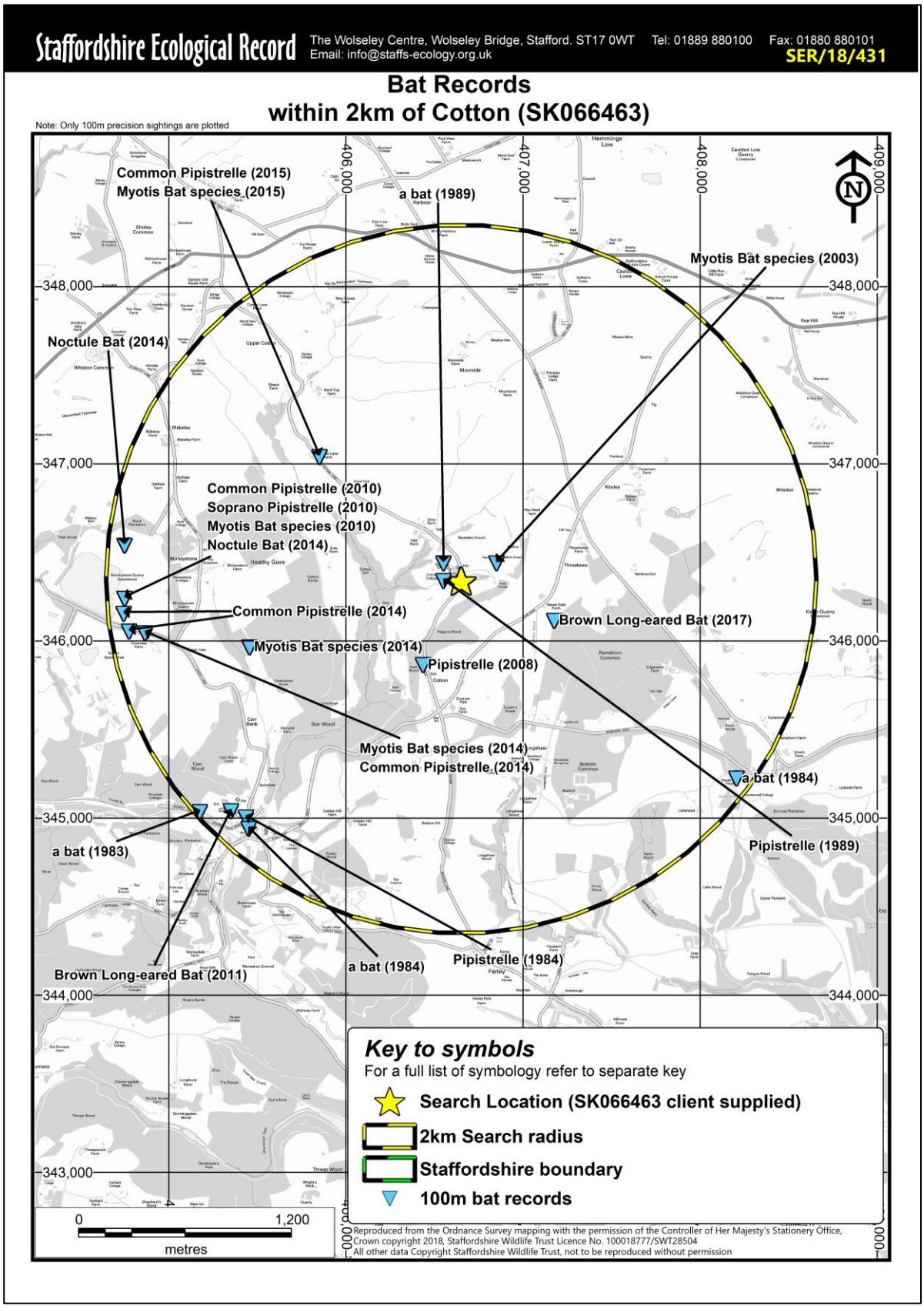


Table 12: Staffordshire Ecological Records Data

This table has been edited for confidentiality. However, full details can be obtained if necessary, on request from WDEC.

List of records for bat species: 2km of Cotton (SK066463) produced 10/9/2018

Scientific Name	Common Name	Location	Grid Ref.	Date	Source	Abundance	Rare	Invasive	StaffsINNS
Chiroptera	a bat	Oakamoor Parish	SK05174504	28/05/1983	Staffordshire Bat Group (SER Records)		No	No	No
Chiroptera	a bat	Oakamoor Parish	SK054449	09/11/1984	Staffordshire Bat Group (SER Records)	1 Count of Adult	No	No	No
Chiroptera	a bat	Oakamoor Parish	SK0545	04/08/1998	Staffordshire Bat Group (SER Records)	1 Count	No	No	No
Chiroptera	a bat	Cotton Parish	SK065464	18/08/1989	Natural England Files	1 Count	No	No	No
Chiroptera	a bat	Wootton Park (overview	SK08204523	August 1984	Staffordshire Bat Group (SER Records)		No	No	No
Myotis	Myotis Bat species	Moneystone Quarry	SK047462	28/07/2010	Consultants (Bow)		No	No	No
Myotis	Myotis Bat species	Moneystone Quarry	SK04864605	02/06/2014	Consultants (Bow)		No	No	No
Myotis	Myotis Bat species	Moneystone Quarry	SK05454597	08/07/2014	Consultants (Bow)		No	No	No
Myotis	Myotis Bat species	Cotton Parish	SK058470	03/05/2015	iRecord	1 Count of Adult	No	No	No
Myotis	Myotis Bat species	Cotton Parish	SK068464	17/06/2003	Staffordshire Mammal Group (3tw/9r6)	1 Count of Adult	No	No	No
Nyctalus noctula	Noctule Bat	Moneystone Quarry	SK047462	02/06/2014	Consultants (Bow)		No	No	No
Nyctalus noctula	Noctule Bat	Moneystone Quarry	SK047462	28/07/2010	Consultants (Bow)		No	No	No
Nyctalus noctula	Noctule Bat	Moneystone Quarry	SK047465	08/07/2014	Consultants (Bow)	3 Count of Adult	No	No	No
Nyctalus/Eptesicus agg.	a bat	Oakamoor Parish	SK0545	04/08/1998	National Bat Monitoring Programme	1 Count	No	No	No
Pipistrellus	Pipistrelle Bat species	Oakamoor Parish	SK0545	04/08/1998	National Bat Monitoring Programme	2 Count	No	No	No
Pipistrellus	Pipistrelle Bat species	Oakamoor Parish	SK0545	07/07/2003	National Bat Monitoring Programme	1 Count	No	No	No
Pipistrellus	Pipistrelle Bat species	Oakamoor Parish	SK0545	11/07/2000	National Bat Monitoring Programme	2 Count	No	No	No
Pipistrellus	Pipistrelle Bat species	Oakamoor Parish	SK0545	25/07/2000	National Bat Monitoring Programme	5 Count	No	No	No
Pipistrellus pipistrellus sensu lato	Pipistrelle	Oakamoor Parish	SK05434501	30/07/1984	Staffordshire Bat Group (SER Records)	10 Count of Adult	No	No	No
Pipistrellus pipistrellus sensu lato	Pipistrelle	Oakamoor Parish	SK06434587	27/08/2008	Staffordshire Bat Group (SER Records)	1 Count of Juvenile	No	No	No
Pipistrellus pipistrellus sensu lato	Pipistrelle	Cotton Parish	SK065463	31/08/1989	Staffordshire Bat Group (SER Records)	1 Count	No	No	No
Pipistrellus pipistrellus sensu lato	Pipistrelle	Farley Parish	SK0745	2004	SER General Records 2004		No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Moneystone Quarry	SK04744616	08/07/2014	Consultants (Bow)	2 Count of Adult	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Moneystone Quarry	SK047462	28/07/2010	Consultants (Bow)		No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Moneystone Quarry	SK04774606	08/07/2014	Consultants (Bow)		No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Moneystone Quarry	SK04864605	02/06/2014	Consultants (Bow)		No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Moneystone Quarry	SK04864605	08/07/2014	Consultants (Bow)		No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	03/07/2002	National Bat Monitoring Programme	25 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	03/07/2002	Staffordshire Bat Group (SER Records)	25 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	04/08/1998	National Bat Monitoring Programme	10 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	04/08/1998	Staffordshire Bat Group (SER Records)	10 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	07/07/2003	National Bat Monitoring Programme	5 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	07/07/2003	Staffordshire Bat Group (SER Records)	5 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	11/07/2000	National Bat Monitoring Programme	4 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	11/07/2000	Staffordshire Bat Group (SER Records)	4 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	15/07/1998	National Bat Monitoring Programme	4 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	15/07/1998	Staffordshire Bat Group (SER Records)	4 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	25/07/2000	National Bat Monitoring Programme	3 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Oakamoor Parish	SK0545	25/07/2000	Staffordshire Bat Group (SER Records)	3 Count	No	No	No
Pipistrellus pipistrellus sensu stricto	Common Pipistrelle	Cotton Parish	SK058470	03/05/2015	iRecord	3 Count of Adult	No	No	No
Pipistrellus pygmaeus	Soprano Pipistrelle	Moneystone Quarry	SK047462	28/07/2010	Consultants (Bow)		No	No	No
Plecotus auritus	Brown Long-eared Bat	Oakamoor Parish	SK053450	28/06/2011	Consultants (EvE)	x 3 Count	No	No	No
Plecotus auritus	Brown Long-eared Bat	Cotton Parish	SK07174612	18/05/2017	NE Licence Returns	2 Count of Adult	No	No	No

AP3: Legislation and Legal Status for Referenced Species

- ***Wildlife & Countryside Act 1981 (& as amended)***

  Subject to the provisions of this Part, a person is guilty of an offence if he/she intentionally or recklessly—

  (b) disturbs any such animal while it is occupying a structure or place which it uses for shelter or protection; or

  (c) obstructs access to any structure or place which any such animal uses for shelter or protection.

- ***Conservation of Habitats and Species Regulations 2017***

  Part 3, regulation 41, paragraph (1) of the *Conservation of Habitats and Species Regulations 2010 (& as amended)* states that

  A person who—

  (a) deliberately captures, injures or kills any wild animal of a European protected species,

  (b) deliberately disturbs wild animals of any such species,

  (c) deliberately takes or destroys the eggs of such an animal, or

  (d) damages or destroys a breeding site or resting place of such an animal, is guilty of an offence.

  Part 3, regulation 41, paragraph (2) states that disturbance of animals includes in particular any disturbance which is likely:

  (a) to impair their ability—

  (i) to survive, to breed or reproduce, or to rear or nurture their young, or

  (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

  (b) to affect significantly the local distribution or abundance of the species to which they belong.

  The offence in the paragraph above applies regardless of the stage of the life of the animal in question.

  Under the terms of the *Habitats Directive*, developments that would result in a breach of the protection afforded to European Protected Species (EPS) may nevertheless be allowed by derogation under *Article 16* which is transposed by *Regulation 44* of the *Conservation of Habitats and Species Regulations 2010 (& as amended)*. By derogation, licences may be issued for certain prescribed purposes listed in *Regulation 44(2)(a)-(g)* where the licensing authority is satisfied that two tests are met, which are set out in *Regulation 44(3)*:

  1. A licence must not be issued unless there is no satisfactory alternative; and
  2. It must not be issued unless the action authorised by the licence would not be detrimental to maintaining the population of the species concerned at a favourable conservation status in its natural range.

- ***Natural Environment and Rural Communities (NERC) Act 2006***

  Under the *Natural Environment and Rural Communities (NERC) Act 2006* a Planning Authority has a duty to conserve biodiversity. This duty is set out at Section 40, which states:

  "(1) Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

  (2) In complying with subsection (1), a Minister of the Crown, government department or the National Assembly for Wales must in particular have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992.

  (3) Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat…"

- **National Planning Policy Framework (NPPF*)* 2012 (DCLG, 2012)**

  In the most basic terms, Paragraph 109 of the NPPF states that:

  "*The planning system should contribute to and enhance the natural and local environment by... minimising impacts on biodiversity and providing net gains in biodiversity where possible...*"

  In addition, Paragraph 117 identifies the need for planning policies to identify and map components of local ecological networks (both designated sites and stepping stones in between), and promote the preservation, restoration and enhancement of UK BAP Priority Habitats and ecological networks, whilst also promoting the protection and recovery of Priority Species.

❖ **Office of the Deputy Prime Minister (ODPM) Circular 06/2005**

Biodiversity and geological conservation - Statutory obligations and their impact within the planning system.
(DCLG, 2005)
ODPM Circular 06/2005 states:
"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."
Therefore:
"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."
However:
*"Bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is reasonable likelihood of the species being present **and** affected by the development."*

❖ **Circular 02/99: Environmental Impact Assessment. 1999 (DCLG, 1999)**

❖ **The code of Practice for Planning and Development**
British Standard for Biodiversity – BS42020: 2013

➢ **Legislation in Summary**

Bats

All 18 species of bat common in the U.K (17 known to be breeding) and their roosts are afforded full protection by both UK and European laws and are fully protected under the Wildlife and Countryside Act 1981 as amended through inclusion in Schedule V. All bat species in the UK are also included in Schedule II of the Habitats Regulations 2010 which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("EC Habitats Directive") which defines European protected species of animals.
Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.
This combined legislation makes it an offence to:

1. Intentionally or deliberately kill, injure or capture bats.
2. Deliberately disturb bats, whether at roost or not.
3. Damage, destroy or obstruct access to bat roosts.
4. Possess or transport bats, unless acquired legally.
5. Sell, barter or exchange bats.

A bat roost is defined by the Bat Conservation Trust Publication Bat Surveys—Good Practice Guidelines 2nd Edition as "the resting place of a bat" (BCT 2012). Generally, however, the word roost is interpreted as "any structure or place, which any wild bat uses for shelter or protection."
Bats tend to re-use the same roosts; therefore, legal opinion is guided by recent case law precedents, that a roost is protected whether or not the bats are present at the time. This can include for summer roosts, used for breeding; or winter roosts, used for hibernating.