Ecological Impact Assessment at a Former Presbyterian Church, Castle Street, Holt, Wrexham LL13 9YW Grid Ref. SJ 4094 5376 On 25th September 2023

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1. Summary

The purpose of the report is to assess the potential ecological impacts of a proposed development at a former presbyterian church in Holt, and advise on any mitigation measures to comply with local planning policy and government legislation.

The proposed scheme involves the renovation and conversion of the building to a dwelling, with associated parking.

The building and adjacent land were examined to establish the presence of or evidence of use by protected species of animals. A visual inspection was carried out to assess the potential or actual use by bats and birds, of the exterior and interior of the building. One dusk emergence survey was carried out.

If any birds should gain access to the building and begin constructing nests during the development, then the work in that area must stop until the young have left the nests.
A further emergence survey for bats will be needed at a more optimum time of year, i.e. between May and September.

Bat and bird boxes will be fitted and a new hedgerow planted as enhancement/Net Biodiversity Benefit. Compensation for bats may be needed following the results of the second emergence survey.

If the recommended mitigation and enhancement measures are taken for all other species there should be a net gain in biodiversity and no net loss of nesting sites, nor any danger of harm to any species.

2. Introduction

Susan Worsfold BSc (Hons) ACIEEM is an experienced wildlife surveyor, licensed bat worker and voluntary bat roost visitor. Registration number CLS0895 2015-12555-CLS-CLS (CL15 Bat Roost Visitor Level 1) and registration number CLS 0895 2015-12556-CLS-CLS (CL18 Bat Survey Level 2) (Natural England) and S086005/1 (Natural Resources Wales);
Licensed great crested newt worker, registration number 2016-19947-CLS-CLS (NE)
and S086057/1 (NRW)
This report was commissioned by Conway Properties.
The site, at Holt Church, Holt comprises a former church with extension surrounded by hard standing and short vegetation with some shrubs and trees.
The proposed scheme involves the renovation and repair of the church and conversion to residential.
The purpose of the report is to identify and address any significant ecological effects which are likely to occur as a result of the proposed development. This is necessary to comply with local planning policy and government legislation and avoid any offence being committed. Also, to describe any compensation, mitigation and enhancement measures which should be taken.

3. Methodology

3.1. Scope of the Assessment

The report incorporates a bat roost and nesting bird assessment, while also searching for use or potential use by any rare, threatened, endemic and non-native invasive species which might be associated with such a site in accordance with:
The Conservation of Habitats and Species Regulations 2017 and listed in:
Schedule 2. European protected species of animals
Schedule 5. European protected species of plants
The protection of Badgers Act 1992
Protected species which might be associated with such a site include bats, reptiles and amphibians, badgers and birds.
One dusk emergence survey was carried out in accordance with *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)* (Collins 2016); UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S. 2023) and the Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (*Bat Conservation Trust, May 2022*)

3.2. Desk Study

Wrexham Planning Portal was consulted for a review of previous ecological surveys carried out in the area. Magic Maps was consulted for the presence of designated sites and protected habitats.

3.3. Field Survey

The church and extension were examined to establish the presence of or evidence of use by protected species of animals. A risk assessment was made before entering. A visual inspection was carried out to assess the potential or actual use by bats, of the exterior and interior of the buildings. They were searched systematically for any signs of bats, including droppings, rub marks and urine stains at entrances to roosts and insect remains, such as moth or butterfly wings. Crevices were checked where possible.
Powerful lamps (LED Lenser H14 and P7) were used for examination under eaves. Binoculars were used to examine parts which were not otherwise accessible. Photographs were taken of all areas and those of relevance are shown in the appendices.

The preliminary survey was carried out on 25th September 2023 by Susan Worsfold.

A dusk emergence survey was carried out on 25th September 2023 by Susan Worsfold, Craig Thomas, an experienced assistant, and David Thomas, who is in training.
Frequency division detectors were used to record any bat sounds around the building for later analysis on the computer. These were Peersonic RPA3 and Echo Meter EM3.
The whole building
was in view of the observers for the duration of the survey and infrared night vision aids (NVAs) were used alongside observers or to provide extra detail on areas of interest. These were Nightfox Red and Nightfox Whisker night vision goggles, mounted on tripods, with Nightfox XB5 IR torches. Footage from these was examined after light had deteriorated to a point where observers could no longer rely on their vision, and also to reinforce certainty about potential emergences noted by observers.

4. Baseline Ecological Conditions/Results

4.1 Designated Sites

The nearest designated site is River Dee and Bala Lake (SSSI and SAC) 200 m east.

4.2 Habitats

Site: Village location, residential area. The building is surrounded by short vegetation on all sides, with some shrubs and trees.
Church: A Grade II listed building in a good state of repair. The main part of the church and school room were, one storey with an inaccessible loft space. Walls were of sandstone, lined with plaster internally. Doors and windows were intact. The roof was of slate, pitched, lined with plaster. The roof of the single storey extension was flat felt. There were no soffits or verge boards. There is a sandstone belfry at the south corner.
Garden: There is a small garden/parking area to the west which is colonised by small numbers of orange hawkweed, bindweed, dandelion, herb robert, ragwort, rose, common vetch, holly, clover, grasses, bramble, purple loosestrife, rhododendron, white dead nettle, conifer, common nettle, red valerian and buddleia. There were two apple trees at the west entrance and two yew trees at the east entrance. There is also a very small, partly vegetated area at the east end of the church. There were semi-mature ornamental trees and shrubs forming the west and north boundary along with a low stone wall. The east boundary was fenced and there was a wall at the south boundary.
Adjacent land: There are no ponds with 250 m according to maps. There is no significant woodland nearby but there is a good network of hedgerows surrounding the site, and several trees. The immediate surroundings are residential. The river Dee is 200 m east.

4.3 Species and Species Groups

Birds
No bird nests were found in the buildings and no birds were seen to be using the buildings.

Bats
The church was considered to have moderate potential for use by bats but there was no evidence of use by them. The extension was not thought to have any potential for bat use. No bats were seen to emerge from the church or extension. Very few bats were seen or recorded foraging on or near the site. A further emergence survey is needed between May and August to determine whether bats are using the building.

Reptiles and Amphibians
None seen on site. There are no ponds with 250 m. There is some foraging potential but no shelter on site suitable for use by reptiles and amphibians.

5. Description of the Development

The proposed scheme involves the renovation and conversion of the building to a dwelling, with associated parking. This will involve intrusive work to the roof and walls, including installation of roof lights on both pitches. The single story modern extension at the west will be demolished and a new, smaller extension constructed in its place. All trees will be retained.

6. Assessment of Effects and Mitigation Measures

Designated Sites:
It is not considered that the proposal will have any significant impact on any designated sites due to the small scale of the development and distance from the sites.
Habitats:
No priority habitat is affected by the proposal. General precautions should be taken during removal of vegetation to avoid harm to any small mammals, reptiles or amphibians which might be foraging.

Species:

Birds
There should be no impact on birds as long as none gain access to the church and begin building nests while work is in progress. If this happens, work in that area must stop until the young have left the nests.

Bats
To be determined on completion of the emergence surveys.

Residual Effects
No significant residual effects anticipated but those for bats to be determined on completion of the emergence surveys.

7. Compensation

To be decided on completion of bat surveys.

8. Enhancement Recommendations and Net Biodiversity Benefit

Bats: One woodcrete crevice dwelling bat box to be fitted at the south west side.
Birds: One woodcrete nest suitable for small birds such as robin, blackbird, tit species and sparrow to be fitted at the north west gable end:
House Sparrow Terrace - Wooden (or woodcrete) nest box with 3 sub-divisions to support 3 nesting pairs. To be placed under the eaves. Entrance holes: 32mm diameter. Dimensions: H310 x W370 x D185mm. Also suitable for tits, redstarts and spotted flycatchers. Place at least 2 m from the ground.
Approximately 15 m of mixed native species hedgerow will be planted at the northwest boundary, see page 14. This will comprise four native species, including hawthorn, beech and hornbeam.

9. Ecological Constraints

The emergence survey was carried out late in the season, however it still provides valuable data and will be balanced by a further survey between May and August.

10. Monitoring

To be decided on completion of bat surveys.

11. Conclusions

A further emergence survey is needed between May and August to determine whether bats are using the building.

12. Bibliography

Bat Conservation Trust available at: http://www.bats.org.uk

BCT and ILP Guidance Note 8 Bats and Artificial Lighting available at: https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

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Google Maps available at: https://maps.google.com/maps

Magic Maps available at: http://magic.defra.gov.uk

Mitchell-Jones, A. J. and McLeish, A. P. (2004) *Bat Worker's Manual,* Peterborough: Joint Nature Conservation Committee

Natural Resources Wales available at: https://naturalresources.wales/?lang=en

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield

Wildlife and Habitat Conservation available at: https://www.gov.uk/topic/environmental-management/wildlife-habitat-conservation

Wrexham Council Planning Portal available at: http://planning.wrexham.gov.uk/Planning/lg/GFPlanningSearch.page

Appendix 13.1: Emergence Survey

Survey Conditions

Date	Sunset/ Sunrise	Start Time	End Time	Temp. Start °C	Relative Humidity Start %	Temp. End °C	Relative Humidity End %	Cloud %	Wind 0-6	Rain
25/9/23	19:04	18:50	20:35	17	85	15	79	80	0	None

25/9/23

Observer or area	*Equipment*
Susan Worsfold (SW) west end	Peersonic RPA3 + Nightfox Whisker NVA
Craig Thomas (CT) north east corner	Peersonic RPA3 + Nightfox Red NVA
David Thomas (DT) south east corner	Echo Meter EM3+ + Nightfox Red NVA

Bats recorded:

1st bat: Common pipistrelle (*Pipistrellus pipistrellus*)

Other species:
Noctule (*Nyctalus noctula*)

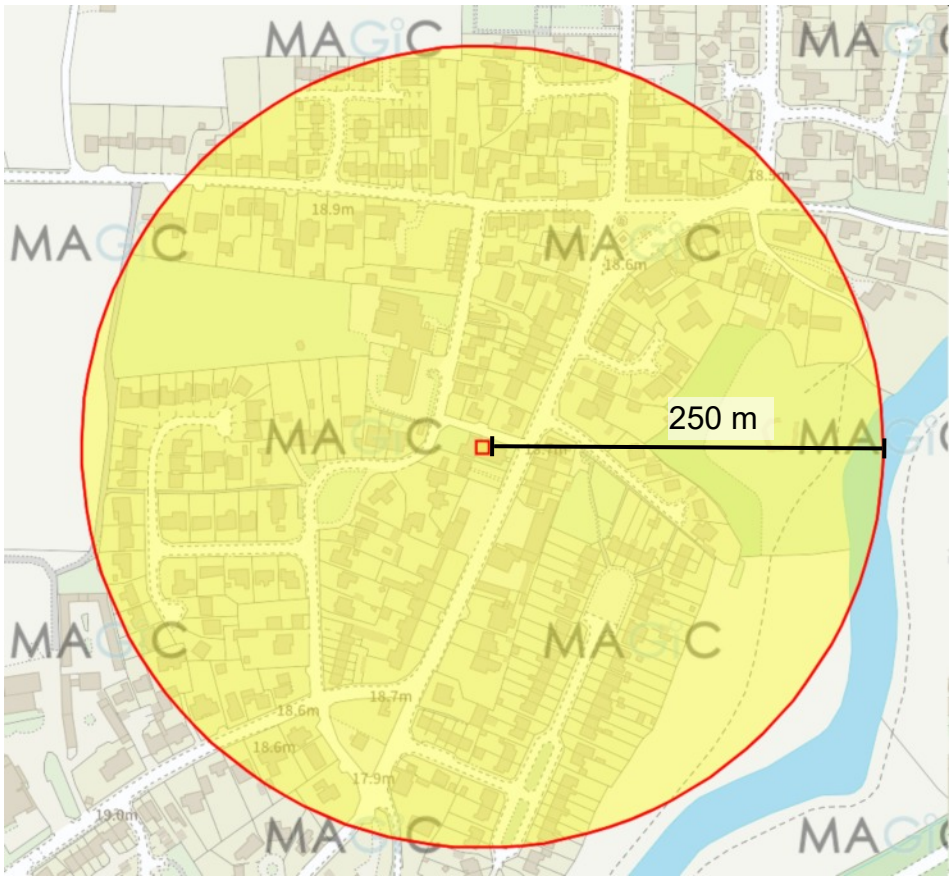
Observer or Area	*Time*	*Number of Bats and Observation*	*Identification from visual or correlation with sonograms*
SW	19.50	1 from behind then W to E	Common pipistrelle

Appendix 13.2: Aerial Photograph Showing Position of Observers



Bat detector, Night Vision Aid and observer

Appendix 13.3: Designated Sites and Zones of Influence



Appendix 13.4: Site Plans

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APPROX SITE AREA: 0.076 hectares (0.188 acres)
BASED ON ASSUMED BOUNDARY ON O.S. MAP – SITE SURVEY REQUIRED TO CHECK ACTUAL AREA

McCORMICK ARCHITECTURE
THE MOORINGS, ROWTON BRIDGE ROAD, CHRISTLETON, CHESTER. CH3 7AE
TEL: 01244 550500
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Client:
GARY CONWAY

Project:
FORMER PRESBYTERIAN CHURCH
HOLT

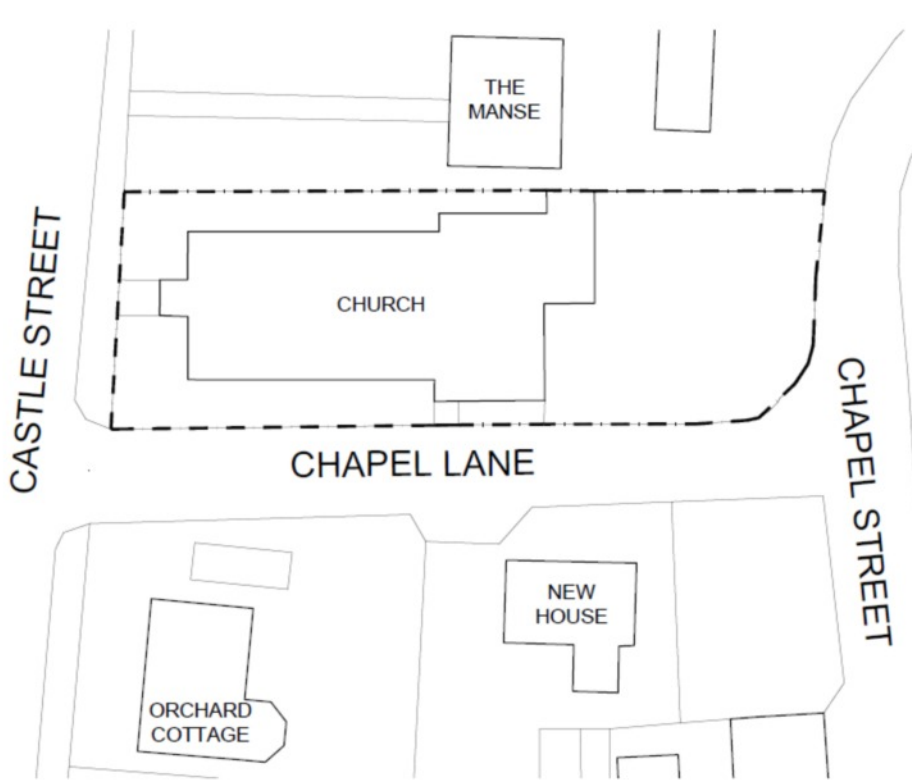
Detail:
SITE LOCATION PLAN

Status:
FOR INFORMATION

Drawn By:	Date:	Scale:
DCI	13/6/23	1:1250 @ A3

Checked By:	Date:	Signature:
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Client:
GARY CONWAY

Project:
FORMER PRESBYTERIAN CHURCH
HOLT

Detail:
EXISTING SITE PLAN

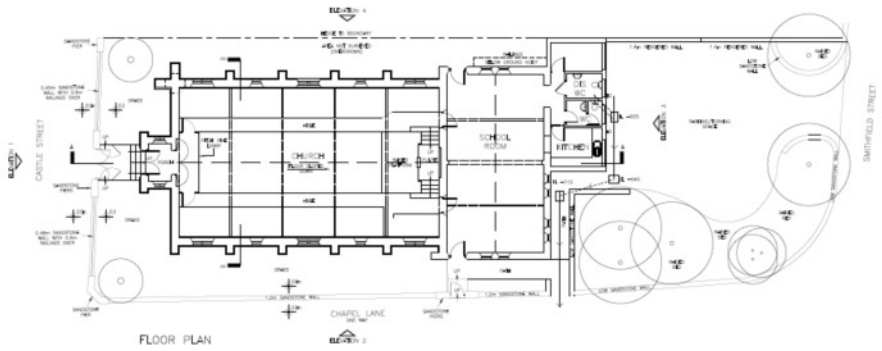
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Checked By:	Date:	Signature:
PM	13/06/23	P. McCORMICK

Job No:	Drg No:	Revision:
4235/1	A(050)02	

Appendix 13.4: Existing and Proposed Floor Plan and Sections



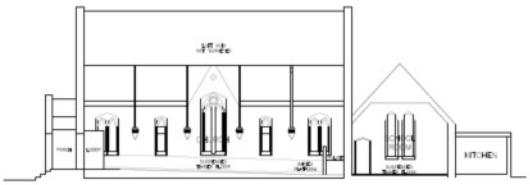
FLOOR PLAN



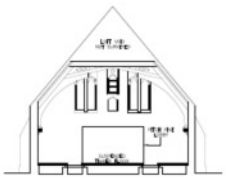
BOUNDARY WALL TO CASTLE STREET



BOUNDARY WALL TO CHAPEL LANE

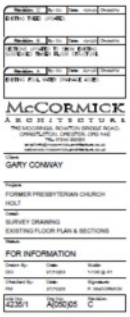


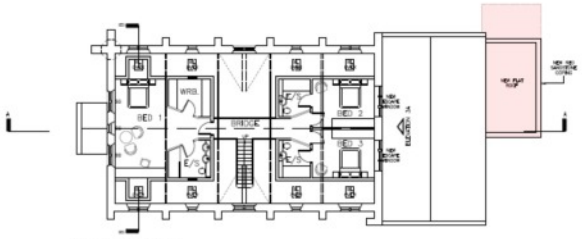
SECTION A–A



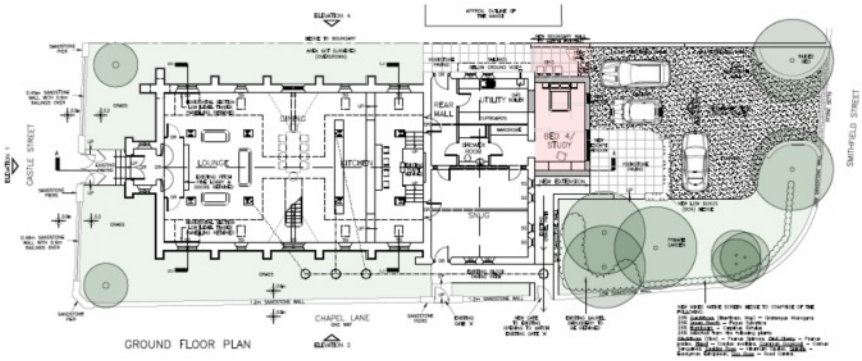
SECTION B–B







1ST FLOOR PLAN



GROUND FLOOR PLAN



EXISTING PITCH PINE LOBBY TO BE RETAINED.

EXISTING MAIN ENTRANCE DOORS TO BE RETAINED.



EXISTING REAR EXTERNAL DOORS TO BE RETAINED.



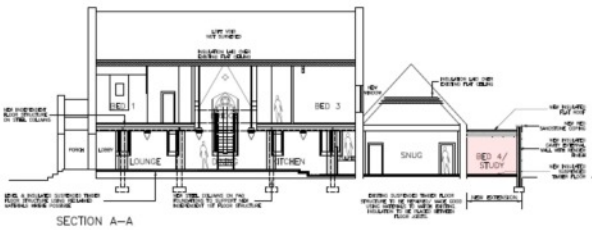
EXISTING INTERNAL DOORS TO BE RETAINED.



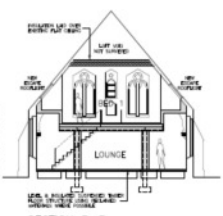


PROPOSED STAIRCASE IMAGES (INDICATIVE ONLY)

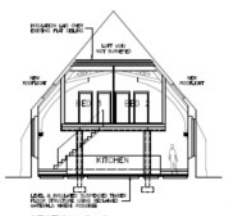




SECTION A–A



SECTION B–B

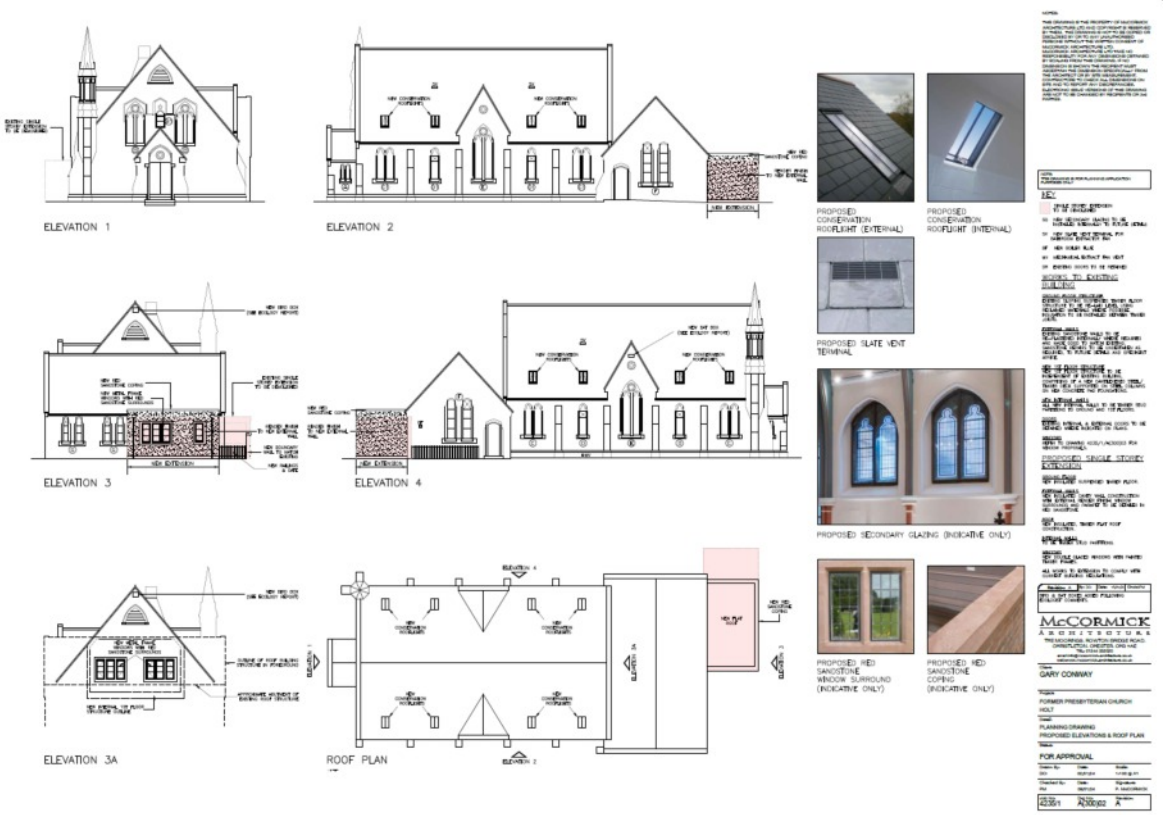


SECTION C–C



Appendix 13.4: Existing and Proposed Elevations





Appendix 13.5: Photographs





View from the west

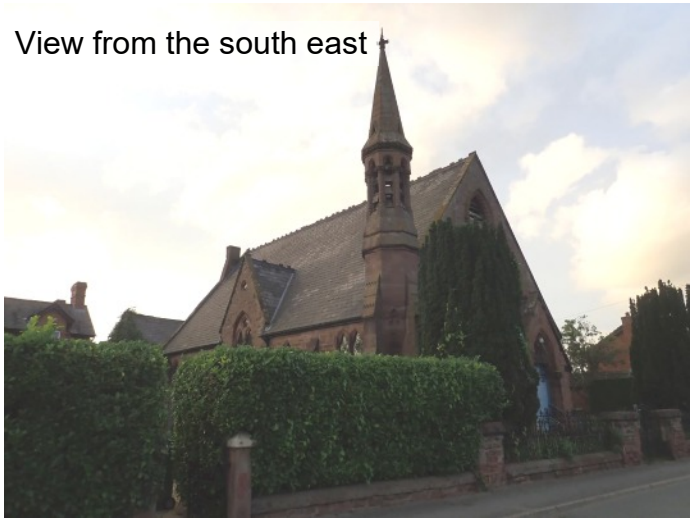




View from the north west



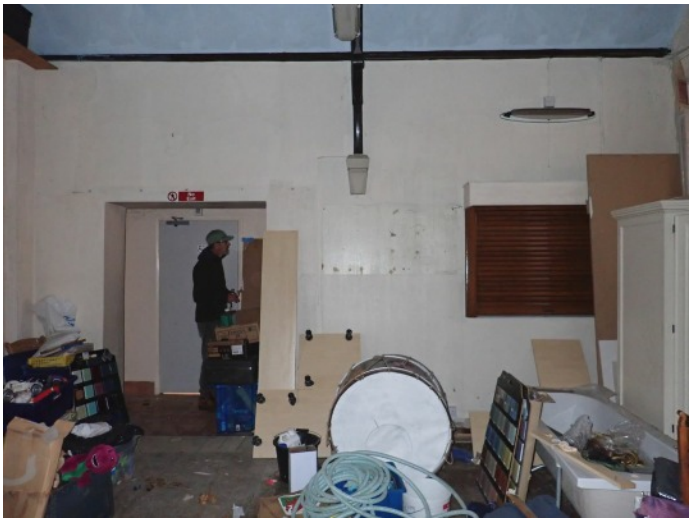
View from the south east



Appendix 13.5: Photographs - Interior











Appendix 13.5: Photographs (Nightfox NVAs)







Appendix 13.6: Legislation Relating to Bats

All species of bats in the UK are European Protected Species (EPS). It is against the law to damage or destroy a bat's breeding site or resting place (known as a roost), or deliberately to capture, kill, injure or disturb a bat

Bats are the only mammals which can fly. They are warm blooded, they suckle their babies and are intelligent, social animals. British bats feed only on insects, of which they consume vast numbers to sustain their energetic lifestyles. A pipistrelle bat can eat up to 3000 midges in a single night!

We have 12 species of bat breeding in Wales. Many of these have suffered severe declines, not just in Britain but throughout Europe.

All British bat species are protected under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. Bats have a unique relationship with humans, sometimes sharing our homes for part of the year. For this reason, Natural Resources Wales (NRW) deals with many hundreds of bat enquiries each year from householders.

Under the Habitats Regulations, it is an offence if you:

deliberately capture, injure or kill any wild animal of an EPS
deliberately disturb wild animals of any such species
damage or destroy a breeding site or resting place of such an animal
Disturbance includes, but is not limited to, any disturbance which is likely:

1. to impair their ability –
to survive, to breed or reproduce, or to rear or nurture their young, or
in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

2. to affect significantly the local distribution or abundance of the species to which they belong.

Defra and the Welsh Government will publish a joint guidance document on the interpretation of the offences relating to disturbance, and to damage and destruction of breeding sites and resting places.

There are other offences relating to possession, transport and sale.

NRW issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

If you are a householder and have concerns about bats at your property (other than queries related to planning applications or a development), contact the NRW Enquiry Line for advice, telephone 0300 065 3000

Appendix 13.7: Legislation Relating to Birds

All wild birds, their nests and eggs are protected. It is an offence to intentionally:

- kill, injure or take any wild bird,
- take, damage or destroy the nest of a Golden Eagle, White-tailed Eagle or Osprey (even if disused),
- take, damage or destroy the nest of any wild bird whilst it is in use or being built,
- take, damage or destroy an egg or any wild bird,
- possess any live or dead wild bird or the egg of any wild bird, or any derivative

Many rare birds are listed on Schedule 1, which makes it an offence to intentionally or recklessly:

- disturb a Schedule 1 bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturb dependent young of such a bird

Natural Resources Wales (NRW) issues licences for specific purposes, so that you can undertake legitimate work without breaking the law. See ‘Bird licensing’ for more information.