



Ecological Impact Assessment

11 Hill Street,
Rhosllanerchrugog
Wrexham LL14 1LN
Grid Ref. SJ 2927 4623

EnviroSolution Ltd

16th December 2022

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Survey by:
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1. Summary

The purpose of the report is to assess the potential ecological impacts of a proposed development at 11, Hill Street, Rhosllanerchrugog and advise on any mitigation measures to comply with local planning policy and government legislation.

The proposed scheme involves the demolition of a former dwelling and construction of three new dwellings.

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. One dusk emergence survey was carried out. No evidence of use by bats or birds was found.

A lighting plan should be designed in accordance with the Bat Conservation Trust guidelines: <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Reasonable Avoidance Measures should be taken with regard to great crested newts (GCN) (page 8)

Bat and bird boxes are recommended as enhancement (page 9)

If any birds should gain access to the buildings and begin constructing nests during the development, then the work in that area must stop until the young have left the nests.

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

Disclaimer

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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 Marcus Ansloos.

The site, at 11 Hill Street, Rhosllanerchrugog comprises a semi-detached house surrounded by short vegetation on the remaining sides.

The proposed scheme involves demolition of the house and the construction of three new dwellings, one of which will be semi-detached.

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, great crested newt 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

One dusk emergence survey was carried out in accordance with *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)* (Collins 2016) 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. A data search for protected species within 1 km was commissioned from Cofnod and

the results of this are in a separate attachment. Hedgehogs and bat species have been recorded within 500 m.

3.3. Field Survey

The building was examined to establish the presence of or evidence of use by protected species of animals. A risk assessment was made before entering the building. A visual inspection was carried out to assess the potential or actual use by bats, of the exterior and interior of the building. It was 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 23rd August 2022 by Susan Worsfold.

A dusk emergence survey was carried out on 23rd August 2022 by Susan Worsfold and Craig Thomas, an experienced assistant. A further visit was made on 11th November to examine the house interior.

These were done in accordance with *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)* (Collins 2016) 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*)

Frequency division detectors were used to record any bat sounds around the building for later analysis on the computer. These were Peersonic RPA3.

Infrared night vision aids (NVAs) were used alongside observers. These were Nightfox Red night vision goggles, mounted on tripods, with Nightfox XB5 IR torches.

4. Baseline Ecological Conditions/Results

4.1 Designated Sites

The nearest designated site is Stryt Las a'r Hafod/Johnstown Newt Sites (SSSI) 500 m east.

4.2 Habitats

Site: Urban/village location. The building is unoccupied. It is surrounded by short vegetation on the three sides.

Walls of the main building were of stone with no cavity, rendered externally. Those of the extension were breeze block. Doors were of wood, in a good state of repair. Windows were glazed and intact. The roof of the main building was of slate with a wood frame, pitched, with a bitumastic hessian lining. The roof of the extension was flat, lined with wood. There was no loft space since the ceiling of the main building had been removed. There were no verge boards at the gable end but there were some on the extension, and soffits on the main building. The former garden had been excavated and colonised with ruderal vegetation.

Adjacent land: The nearest pond is 620 m from the building. There were no others within 500 m. There is no woodland within 500 m. There are few hedgerows within 500 m.

4.3 Species and Species Groups

Birds

No evidence of use by birds was found.

Bats

No evidence of use by bats was seen. The building was considered to have low potential for use by bats.

Great Crested Newts (GCN)

There were no ponds within 500 m according to maps. Johnstown Newt Sites is approximately 500 m from the site.

Plants

Species found on site were grasses, dock, bramble, nettle, creeping buttercup, white clover, spear thistle, herb robert, rosebay willowherb and dandelion.

No evidence of use by badgers, dormice or other protected species was found and the site was not considered suitable for use by them. No important or rare species of plants were found.

5. Description of the Development

The proposed scheme involves the demolition of the building and construction of three new dwellings with associated access and gardens. Approximately 300 m² of land will be lost or disturbed. A hedgerow will be planted at the east boundary, approximately 20 m.

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. Very little vegetation is to be lost.

Species:

Birds

If any birds should gain access to either building and begin constructing nests during the work, then work in that area must stop until the young have left the nests.

Bats

There is not considered to be any threat to the conservation status of bats or danger of harm to individuals. The site is suitable for foraging and commuting bats.

No crevices should be filled which cannot be seen to be empty. If any bats are found during the development then work in that area must stop and a licensed bat worker must be contacted for advice.

A lighting plan should be designed in accordance with the Bat Conservation Trust guidelines:

<https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Great Crested Newts (GCN)

Due to the close proximity of Johnstown Newt Sites reasonable avoidance measures are taken as described on page 8.

Residual Effects

No significant residual effects anticipated.

Reasonable Avoidance Measures with Regard to Great Crested Newts

It is a criminal offence to harm a great crested newt.

Great crested newts (GCN) spend most of their time on land, returning to still water only to breed once they are mature at about 3-4 years of age.

They may travel more than kilometre from their breeding pond.

They move about mostly at night, and by day creep underground or beneath shelter such as stones or logs.

They hibernate during the winter, which is generally from the beginning of November until late March, depending on the weather. Hibernation is underground in burrows made by other small animals or beneath substantial cover such as large stones or piles of logs.

1. An inspection of the area to be affected and immediately surrounding area will be undertaken by a suitably licensed GCN worker before the start of any clearance or ground preparation.
2. A tool box talk will be given to all contractors before work starts, including identification, legislation and ecological importance of GCN
3. If any potential refuges such as piles of rubble or logs need to be moved before work starts, care must be taken when moving them. This should be done by hand.
4. Vegetation will be trimmed and maintained at 10 cm and kept as short as possible.
5. If any trenches cannot be filled the same day they will need a ramp of earth at the ends of the trenches, to the full depth of each trench, so that newts can climb out. It is not sufficient to leave a piece of wood against the sides, which would allow small mammals to escape, but not newts, which are not good climbers. The trenches must be inspected carefully before infilling, and any animals carefully removed and released into the surrounding area (but see paragraph 10 below).
6. Building materials should be stored clear of the ground (say, on pallets) so as to avoid crushing any animals which might seek refuge under them, when the materials are lifted. Any such storage must be on the drive or other hard surface, and not on a lawn or other soft surface.
7. Bulk materials should be used on the same day as delivery where possible to reduce the likelihood of GCN taking shelter underneath.
8. Any open pipework should be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal is trapped.
9. Any excavated material which is not replaced on the same day must either be removed from the site or stored on a hard surface and covered with an impermeable membrane, such as a plastic sheet or tarpaulin, and the edges of the sheet secured so that no amphibians can gain access.
10. If any great crested newt is discovered in the area of the work, then work in that area must stop and a licensed great crested newt worker contacted immediately for advice.
11. A copy of these measures should be displayed on site for the duration of the work

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16th December 2022

7. Compensation

N/A

8. Enhancement Recommendations

A woodcrete crevice dwelling bat box to be fitted externally to each new building at the south gable ends. Further information is given in the bat box information pack available at <https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes>.

One woodcrete nest suitable for small birds such as robin, blackbird, tit species and sparrow to be fitted to each new building at the north gable ends:

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.

The new hedgerow should be planted with at least four native species, such as ash, field maple, rose, hazel, hawthorn, oak, blackthorn or holly.

9. Ecological Constraints

None identified.

10. Monitoring

Not considered necessary.

11. Conclusions

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

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/>

Collins J. (Ed) (2016) *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)*. The Bat Conservation Trust, London

Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora available at: jncc.defra.gov.uk

English Nature (2001) *Great Crested Newt Mitigation Guidelines* Peterborough: English Nature

Gent A.H, Gibson S.D (eds) (1998) *Herpetofauna Workers' Manual*. Peterborough: Joint Nature Conservation Committee

Great crested newts: surveys and mitigation for development projects available at: <https://www.gov.uk/great-crested-newts-surveys-and-mitigation-for-development-projects>

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

Langton, T., Beckett, C., Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Halesworth: Froglife

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

Mitchell-Jones, A. J. (2004) *Bat Mitigation Guidelines*, Peterborough: English Nature

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

Natural England available at: <https://www.gov.uk/government/organisations/natural-england>

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*) *Herpetological Journal* 10 (4), 143-155.

UK BAP Priority Habitats available at: jncc.defra.gov.uk

Wildlife and Habitat Conservation available at: <https://www.gov.uk/topic/environmentalmanagement/wildlife-habitat-conservation>

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

Appendix 13.1: Activity Surveys

23/8/22*Observer or area*

Sue Worsfold (SW) south east corner

Craig Thomas (CT) north east corner

Equipment

Peersonic RPA3 + Nightfox Red NVA

Peersonic RPA3 + Nightfox Red NVA

Bats recorded:

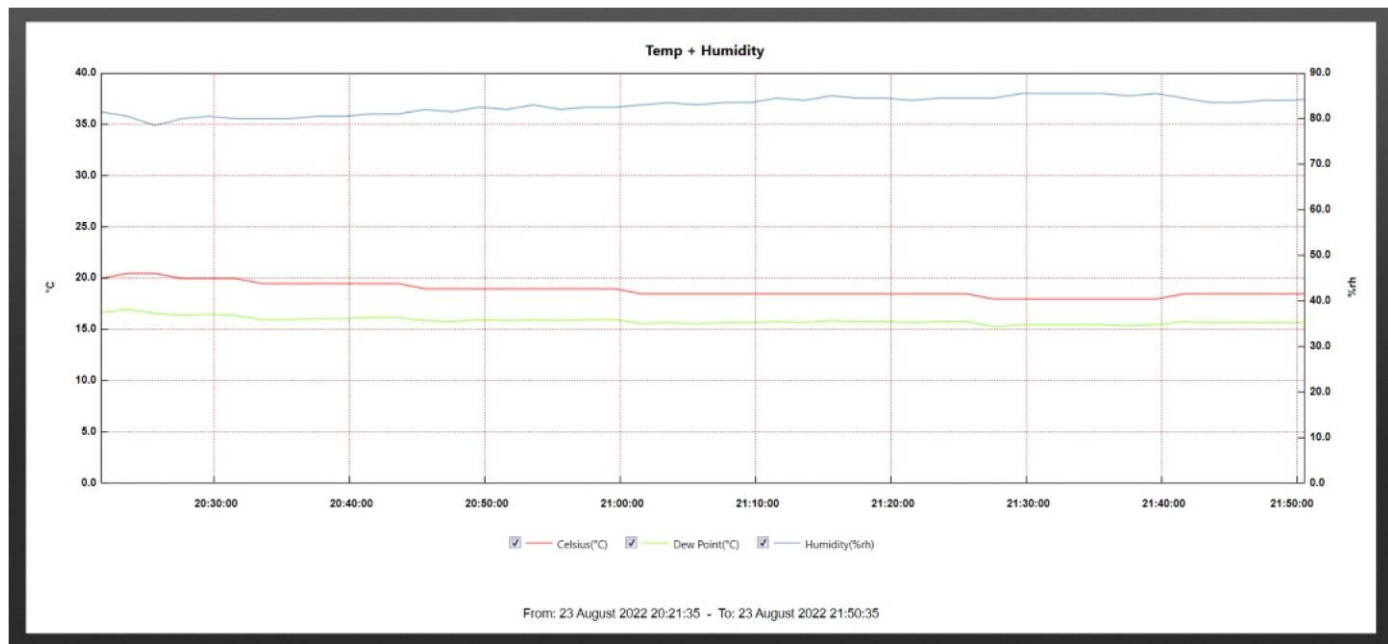
Common pipistrelle (*Pipistrellus pipistrellus*) (first recording 20.57) Noctule
(*Nyctalus noctula*)

<i>Observer or Area</i>	<i>Time</i>	<i>Number of Bats and Observation</i>	<i>Identification from visual or correlation with sonograms</i>
SW+CT	20:57	1 bat foraging near building	Common pipistrelle
SW+CT	20:59-21.35	1 bat fairly frequent foraging near building	Common pipistrelle

Appendix 13.2: 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
23/8/22	20:20	20:05	21:50	20	81	18	85	90	0

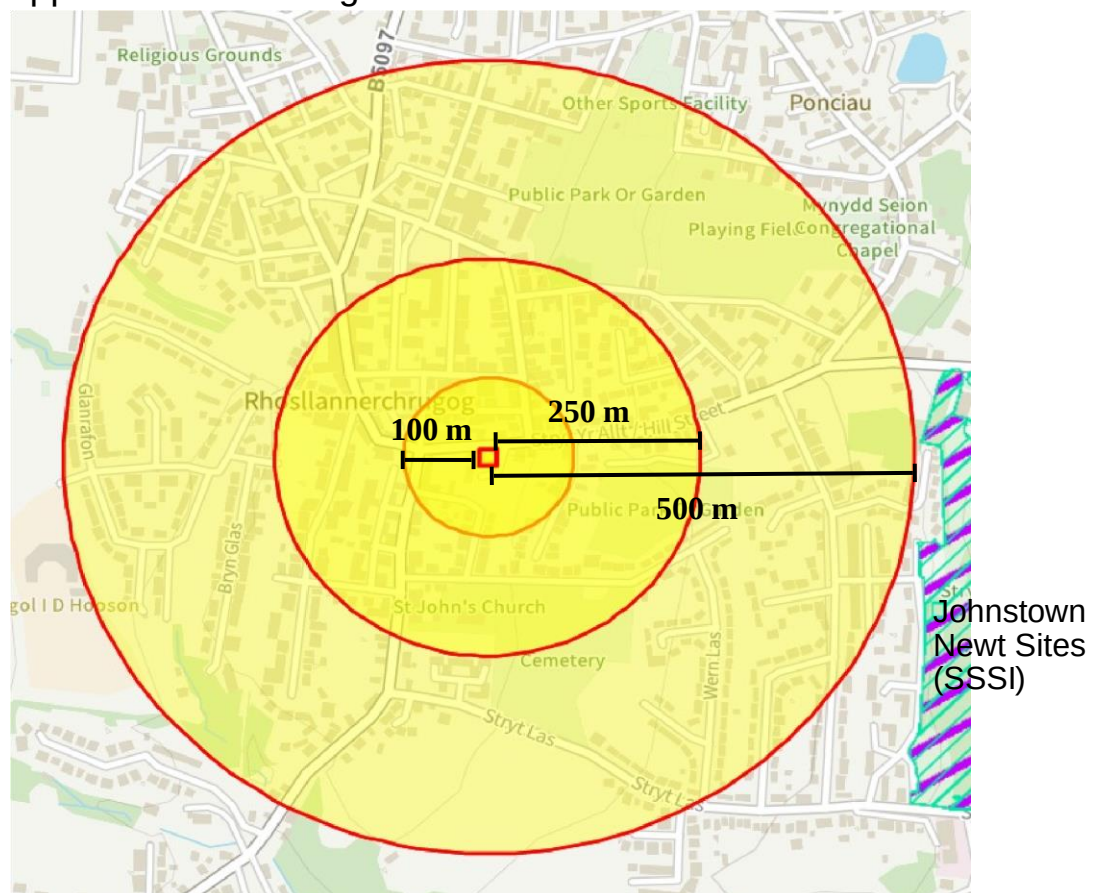
Intermittent light drizzle for the duration of the survey



Appendix 13.3: Aerial Photograph Showing Position of Observers



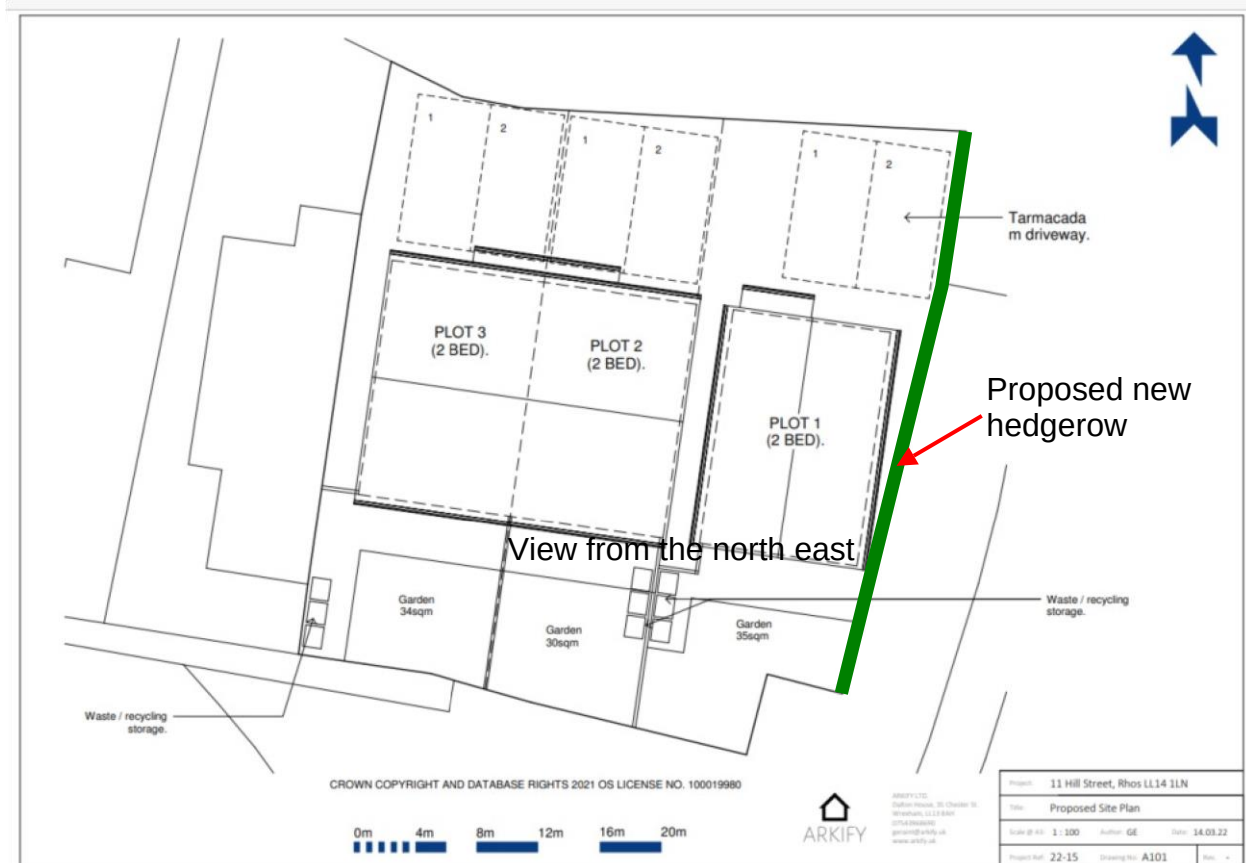
Appendix 13.4: Designated Sites and Zones of Influence



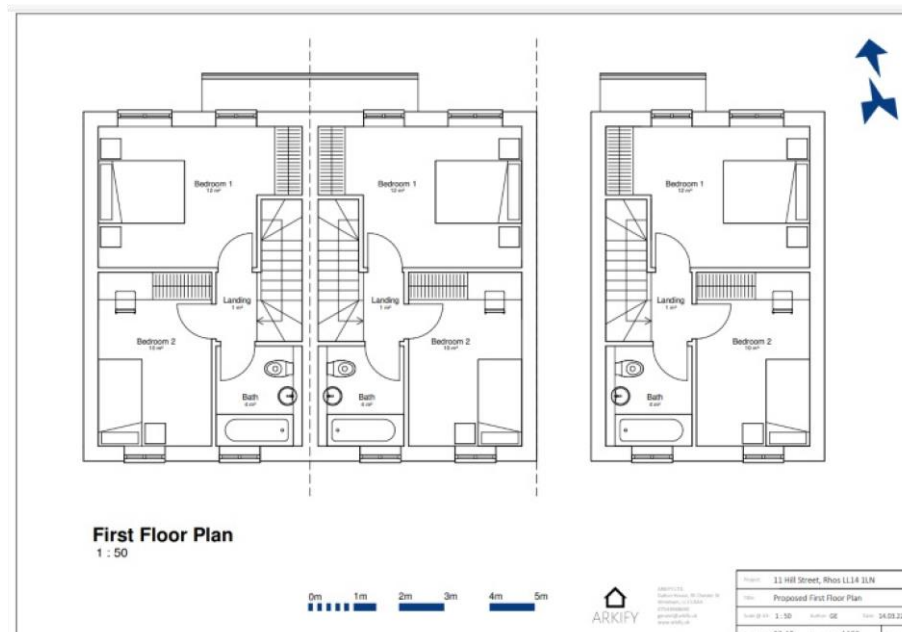
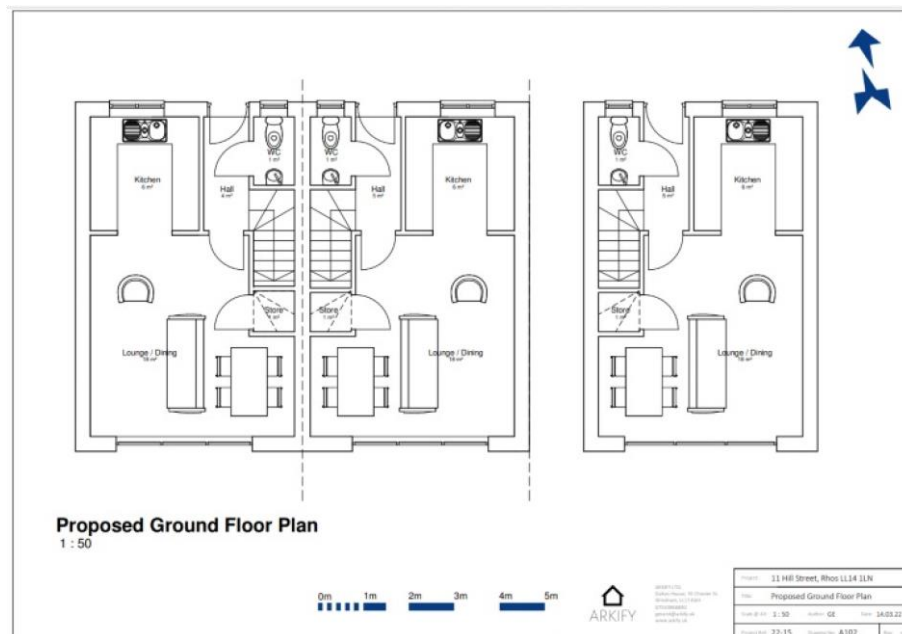
Appendix 13.5: Location Plan



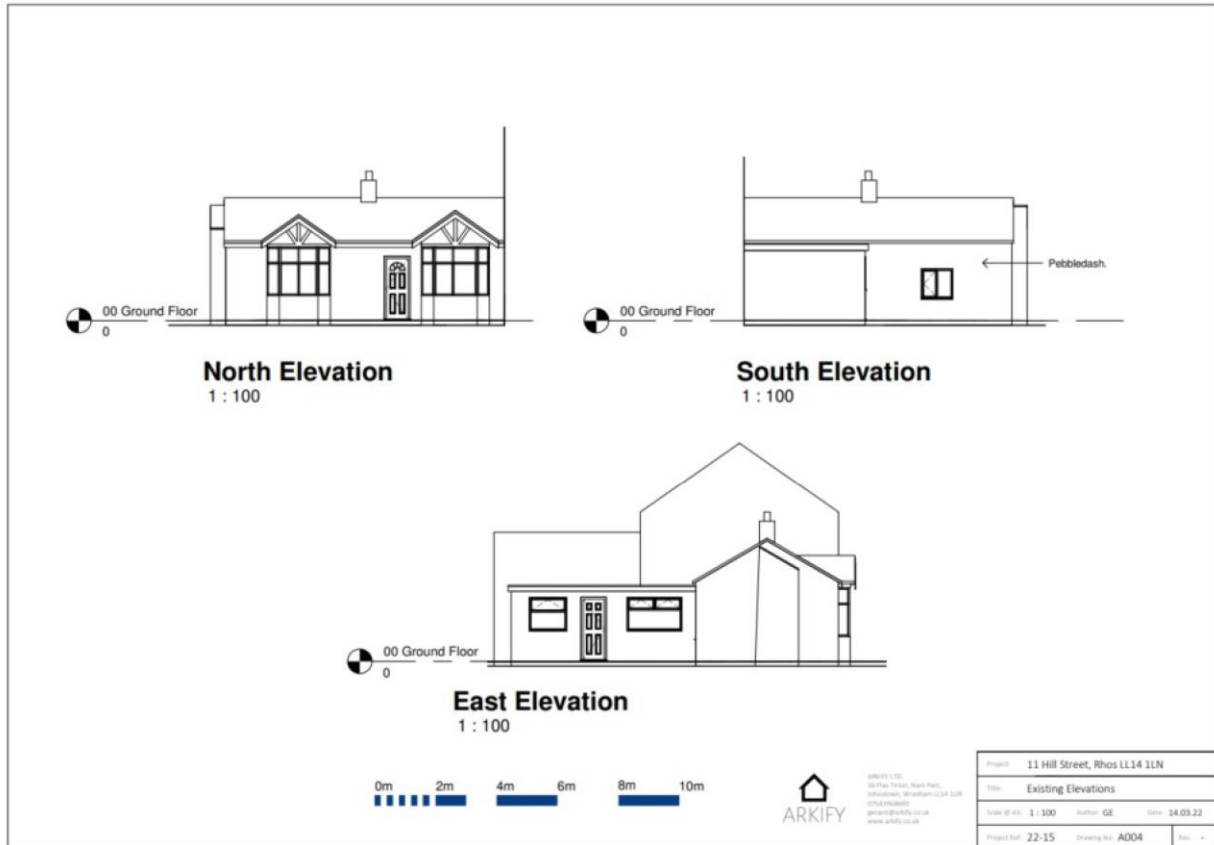
Appendix 13.5: Proposed Site Plan



Appendix 13.5: Existing and Proposed Floor Plans



Appendix 13.5: Existing and Proposed Elevations



Appendix 13.6: Photographs



North section



East section
(View from the north)



View from the south east



View from the north east



Main building



Main building

Appendix 13.6: Photographs



Appendix 13.7: 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 13.8: 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.

Appendix 13.9: Legislation Relating to Great Crested Newts

Wales is home to six amphibian species. They need fresh water in which to lay their eggs or spawn and enough suitable habitat nearby to spend the rest of their year. They have declined in recent decades as ponds have disappeared or become polluted or acidified. Pond restoration and creation (even in gardens) is a great help to amphibian conservation.

All amphibian species spend a large part of their year foraging on dry land, and they need sheltered places to hibernate. Hedgerows and other areas of semi-natural habitat are vital for their survival.

UK legislation:

The most common species are protected from sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are:

Common frog, *Rana temporaria*

Common toad, *Bufo bufo*

Palmate newt, *Triturus helveticus*

Smooth / common newt, *Triturus vulgaris*

The legislation protects them from being sold or offered for sale to protect them from exploitation in the pet trade or laboratory use.

European legislation:

Our rarest amphibians are protected under the Conservation of Habitats and Species Regulations 2017 (known as 'the Habitats Regulations'). The Habitats Regulations lists the following amphibian European Protected Species (EPS):

Great crested (or warty) newt, *Triturus cristatus* Natterjack toad, *Bufo calamita*

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,
deliberately take or destroy the eggs of such an animal, or
damage or destroy a breeding site or resting place of such an animal

Disturbance is defined as that which is likely to impair the ability to survive, breed, reproduce, or nurture young, or to hibernate or migrate.

There are other offences relating to possession, transport and sale. See 'Possession and Sale of Protected Species' for more information.

The great crested newt and natterjack toad also receive protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) from the following:

disturbing whilst occupying a place of shelter or protection,
obstructing access to a place of shelter or protection, sale
/ offering for sale

Licensing for activities involving European Protected Species:

In certain circumstances Natural Resources Wales may issue licences for activities involving European protected species, that would otherwise be offences.