

Ecological Impact Assessment **at**

Westerdale, Gardden Road,

Rhosllanerchrugog,

Wrexham LL14 2EN

Grid Ref. SJ 2957 4623

on 22nd November 2018

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1. Summary

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

The proposed scheme entails the demolition of the remains of a building and construction of eight dwellings and associated garages, parking and gardens.

The building and 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 of the site by bats and birds.

Impacts during the development should be low with respect to birds provided that no bird nests are constructed or occupied while work is taking place. If birds are building nests or any are occupied at any stage of the development work in that area must stop until the young have left the nest. Trees should not be felled between March and August to prevent harm to nesting birds.

No rare or threatened species of plants or animals were found on site or near the site.

Checking of the trees and building by a licensed bat worker before felling/demolition with respect to bats is required to ensure no offence is committed.

Compensatory tree re-planting is recommended.

A method statement with regard to great crested newts is provided to avoid any offence being committed and to ensure the nearby Special Area of Conservation is protected.

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 72725:OTH:CSAB:2016 (Natural Resources Wales);

Licensed great crested newt worker, registration number 2016-19947-CLS-CLS (NE) and 72936-OTH-SA:2016 (NRW)

This report was commissioned by Blueprint Architectural Services, Office 3K4, Redwither Business Tower, Wrexham. LL13 9XT.

The site, at Westerdale, Gardden Road, Rhosllanerchrugog, comprises a 0.3 ha area of unmanaged land with the remains of a stone building and lean to extensions. See Appendix 13.6.

The proposed scheme entails the demolition of the building and construction of a residential development. 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 an preliminary 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, owls and other breeding birds. The area around the site might be used by badgers, dormice, amphibians and reptiles, and might contain protected plant species. Zones of influence for great crested newts (GCN) were considered using the rapid risk assessment tool, which forms part of the method statement template for GCN mitigation licence (NE), as guidance to evaluate the impacts of the development in the absence of any licensed mitigation.

3.2. Desk Study

A data search was carried out by Cofnod on 28th January 2019 for priority species of plants and animals within 1 km of the site perimeter.

The nearest record of a European Protected Species (EPS) is of great crested newt (*Triturus cristatus*), 299 m north east of the site. The nearest bat record is 482 m and the nearest badger record is 556 m from the site.

3.3. Field Survey

The site was examined to establish the presence of any protected species or habitats, and for evidence of use by protected species of animals. Trees were assessed for suitability for use by dormice. A risk assessment was made before entering the building. The site and surrounding habitat was examined for signs of use by badgers. Maps of the site and surrounding environment were examined to identify any nearby waterbodies within an influencing distance of the site. The variety of plant species was mapped according to the convention of Phase 1 habitat surveys as described by the JNCC (2010). Photographs were taken of all areas and those of relevance are shown in Appendix 13.6.

The visual assessment of the site was carried out in accordance with CIEEM guidelines (CIEEM 2017) on 22nd November 2018 by Susan Worsfold BSc ACIEEM.

4. Baseline Ecological Conditions/Results

4.1 Designated Sites

The nearest designated site is Johnstown Newt Sites (Special Area of Conservation) and Stryt a'r las Hafod (Site of Special Scientific Interest) 170 m east.

4.2 Habitats

Site: The site is in the centre of Rhosllanerchrugog. It is surrounded mostly by houses, with an area of amenity rough grassland to the west. The total area of the site is approximately 0.3 ha.

The stone building: There is no roof but there are gaps between stones in the walls. Low bat roost potential.

Land: The nearest pond is 320 m south east. The nearest woodland is 70 m east. There are no rivers or streams within 1 km. There are domestic hedgerows surrounding the site which are closely managed.

4.3 Species and Species Groups

Plants

Species found on site:

Rosebay willowherb (<i>Chamerion angustifolium</i>)	Hazel (<i>Coryllus avellana</i>)	Hawthorn (<i>Cratageous monogyna</i>)
Grasses	Bramble (<i>Rubus fruticosus</i>)	Sycamore (<i>Acer pseudoplatanus</i>)
Common nettle (<i>Urtica dioica</i>)	Ash (<i>Fraxinus exelsior</i>)	Rhododendron
Holly (<i>Ilex sp.</i>)	Bindweed (<i>Convolvulus arvensis</i>)	Common ivy (<i>Hedera helix</i>)
Oak (<i>Quercus</i>)	Conifer	Ground elder (<i>Aegopodium podagraria</i>)

No rare or threatened species of plants were found on site or near the site.

Invertebrates

The site is suitable for use by many invertebrate species.

Amphibians and Reptiles

None seen during the survey. There were no ponds within influencing distance of the site which might be used by great crested newts.

Birds

The site and adjacent trees could provide food and shelter for birds and also nesting potential.

Bats

The site is suitable for use by foraging and commuting bats. The stone building has potential for individual roosting bats.

Badgers

There were no badger setts, tracks or latrines found on the site or within 30 m of the site.

Dormice

No evidence of dormice was found.

No species of conservation value or Schedule 9 species were seen on site.

5. Description of the Development

The proposed scheme entails demolition of an already partially collapsed stone building, and the construction of eight dwellings with associated parking on the land (approximately 0.3 ha). A number of trees will be felled and scrub and bushes removed. Existing access will be retained.

6. Assessment of Effects and Mitigation Measures

Designated Sites:

The site is 170 m from the designated Special Area of Conservation Johnstown Newt Sites and Stryt a'r las Hafod (Site of Special Scientific Interest). Mitigation measures are specified under 'Reptiles and Amphibians' below.

Habitats:

No priority habitat is affected by the proposal. The loss of vegetation will have a low impact on some invertebrate and small mammal species and potentially amphibians and reptiles. The remains of the building and any trees to be felled must be checked by a bat worker/arborist immediately beforehand as described below. Bats may also be present behind the ivy on some of the trees. Tree removal should be kept to a minimum.

Species:

Amphibians and Reptiles

There were no ponds apparent within 250 m of the site. Therefore it is highly unlikely that the development would harm any individual GCN, or affect their conservation status, using the rapid risk assessment tool as guidance. However, the site is 170 m from the designated Special Area of Conservation Johnstown Newt Sites, although it is 320 m from the actual breeding pond itself. Therefore a method statement should be followed when clearing the site as given in Annex 13.10. This includes details of fencing which will be erected prior to any work on site and remain in place until work has finished.

Hedgerows and recreational areas will reduce the overall impact of the removal of vegetation from the site as described on page 8 and 9 and in Annexes 13.4, 13.5, 13.10 and 13.12. These should be protected by a section 106 agreement.

Birds

The impacts which the proposed work might have on birds should be small, providing that no nests are occupied or being built at the time the work is done.

Trees should not be felled between March and August to prevent harm to nesting birds. Netting may be placed over trees during September to February to prevent access by birds if necessary.

If birds should gain access to the building to be demolished or the new houses, and begin building nests during the work, then the work in that area must stop until the young have left the nests.

Bats

No evidence of use by bats was found, however the site is suitable for use by foraging and commuting bats. The stone building in section A is suitable for use by bats. It should be checked by a bat worker before demolition to ensure no bats are roosting in any crevices. Some of the trees on site are suitable for use by bats as there were potential roost features in them. Trees should be checked with an endoscope or activity survey by a suitably licensed bat worker/arborist before trimming or felling.

Residual Effects

The proposed development could have a negative effect on wildlife due to habitat modification and direct and indirect effects such as recreational pressures and potential for disturbance, risk of mortality and predation of wildlife. However with appropriate mitigation as described this can be reduced to an acceptable level. There are not considered to be any major isolation or fragmentation impacts due to the distance of the site from the breeding pond. The development will form a 'soft' barrier to dispersal of GCN but there will still be suitable habitat for commuting and foraging, e.g. hedgerows to be established.

Connectivity between GCN suitable habitats will not be significantly affected by the development, except for the barrier of the temporary fencing which will surround the site for the duration of the work.

Work will be restricted to the area within the fencing.

There is limited scope for improved connectivity between ponds since the land outside the boundary is not under the client's ownership.

7. Compensation

At least eight native trees to be planted as part of the development, e.g ash (*Fraxinus excelsior*), hazel (*Coryllus avellana*), oak (*Quercus robur*), alder (*Alnus glutinosa*), bird cherry (*Prunus padus*). A hibernaculum for GCN should be constructed near the site perimeter, see Annexes 13.5 and 13.12. This is to compensate for the loss of habitat.

8. Enhancement Recommendations

Bats: A bat box e.g. Schwegler 1FF to be fitted externally to each new dwelling. Further information is given in the bat box information pack available at <http://www.bats.org.uk/index.php>. Bat boxes should be placed in a south east to south west facing position if possible.

A lighting plan should be designed in accordance with the Bat Conservation Trust guidelines: http://www.bats.org.uk/pages/bats_and_lighting.html

Birds: One woodcrete nests suitable for small birds such as robin, blackbird, tit species and sparrow to be incorporated into each new dwelling, and one swallow nest.

House Sparrow Terrace - Wooden (or woodcrete) nest box with 3 sub-divisions to support 3 nesting pairs. To be placed under the eaves of buildings or incorporated into walls. 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.

Swallow nests - H110mm x W250mm x D140mm. The nests should be placed inside an enclosed outbuilding or shed, porch or garage leaving a distance of at least 6cm between the top of the nest and the ceiling. There must be access for the birds through an open window or sky-light. A car port or refuse bin shelter, or an outbuilding with a permanently open window or half door, or simply a space over the door, would suffice. Under the eaves of the buildings would be acceptable but less suitable.

Other designs of nest boxes may also be suitable.

Hedgerows: New hedgerows to be agreed before final layout submitted. Hedges will comprise at least four native species such as ash (*Fraxinus excelsior*), holly, hazel, blackthorn (*Prunus spinosa*), hawthorn, elder (*Sambucus nigra*). There is potential for hedging around the perimeter of the site and between houses.

9. Ecological Constraints

None identified.

10. Monitoring

None considered necessary.

11. Conclusions

If the recommended mitigation, compensation and enhancement measures are taken the overall ecological impacts of the proposed development will be low due to its small scale and lack of evidence of any rare or threatened species or priority habitat.

12. Bibliography

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<http://www.buildingwildlife.org.uk/guidelines-for-developers/>

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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

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

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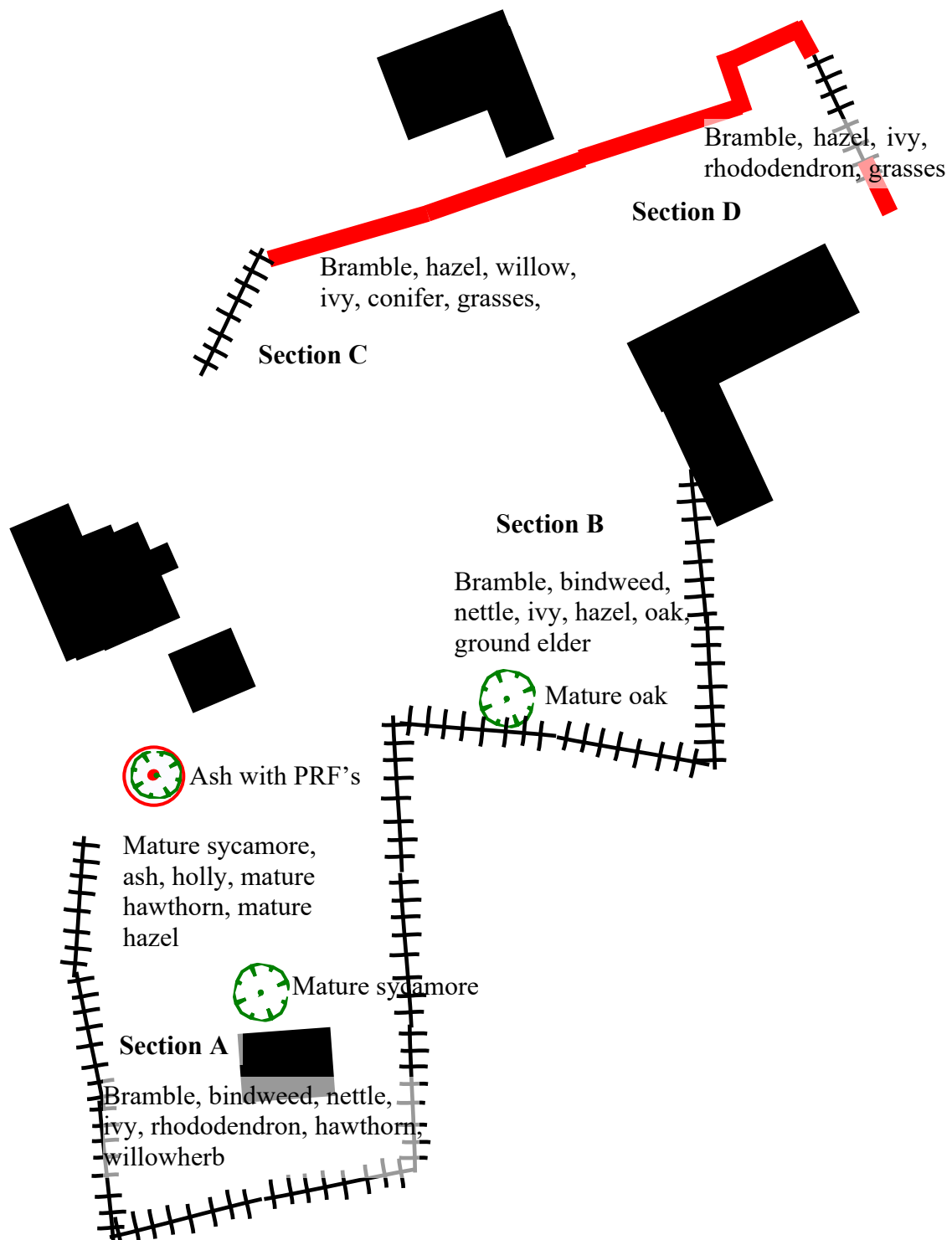
Natural Resources Wales available at: <https://naturalresources.wales/?lang=en>

Rapid Risk Assessment Tool available at: <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence>

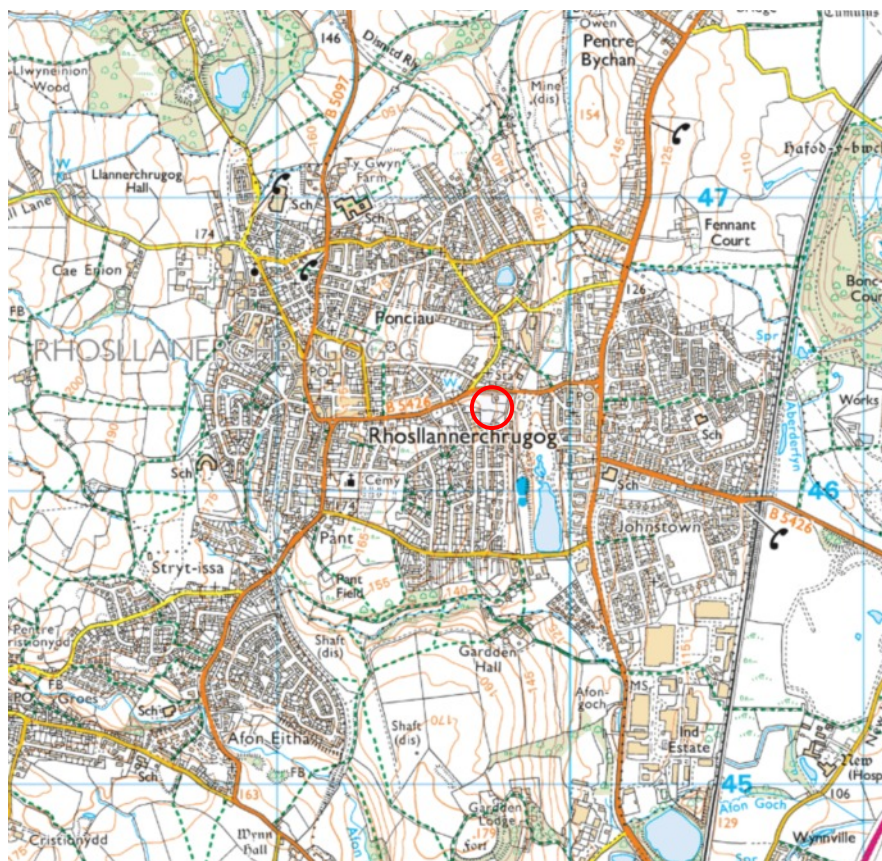
UK BAP Priority Habitats available at: jncc.defra.gov.uk

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

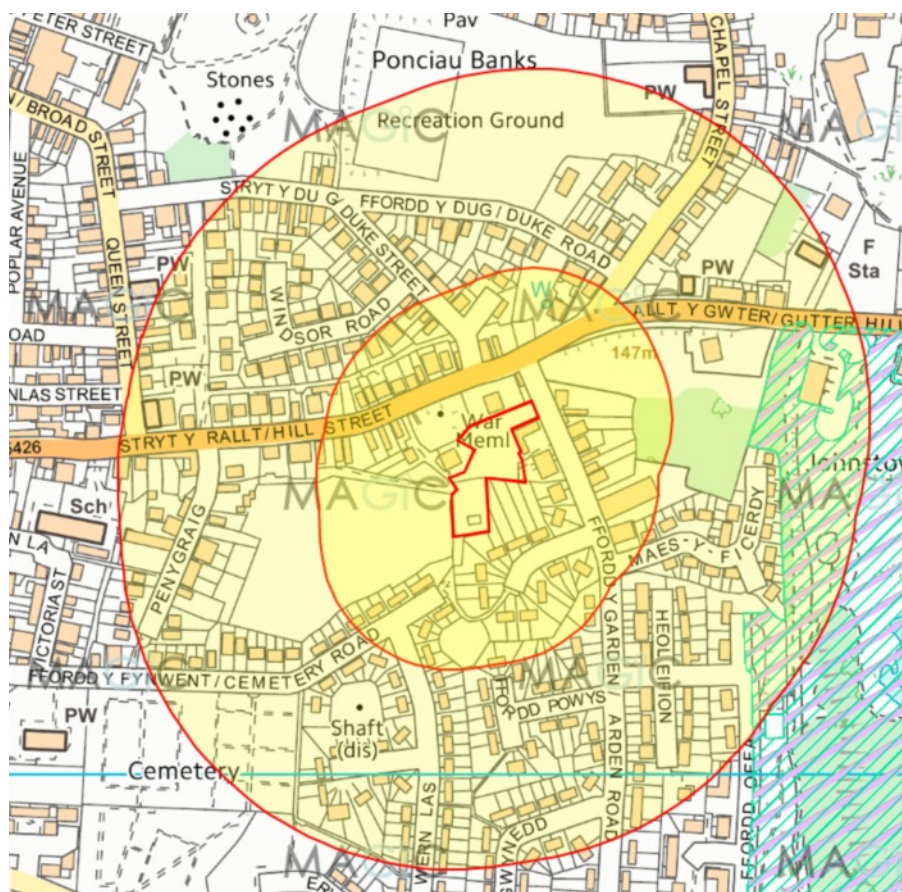
Appendix 13.1: Survey Diagram



Appendix 13.2: OS Location Map



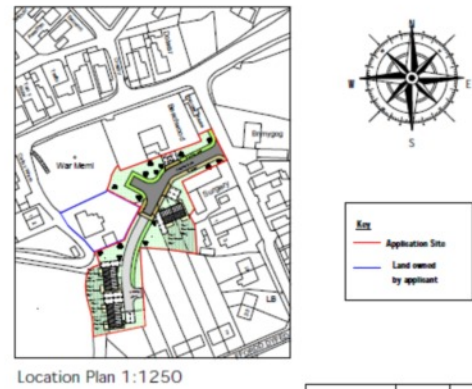
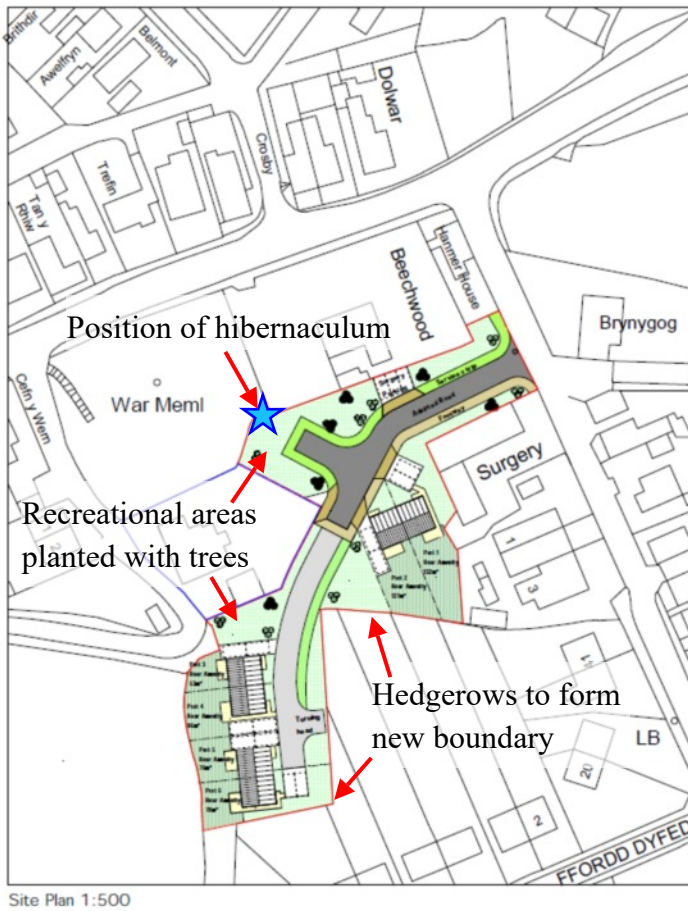
Appendix 13.3: Map Showing Zones of Influence for Great Crested Newts



Appendix 13.4: Aerial Photograph Showing Boundaries and Position of Proposed Amphibian Fencing



Appendix 13.5: Block Plan: Proposed



Building Parameter	Minimum Level	Maximum Level
Depth	6640	7140
Width	71450	11060
Height	6660	7100

Rev	Date	Detail	Initial

Project:
Proposed residential
development on land adj to
Westerdale, Gardden Road,
Rhos, Wrexham.

Title: Planning: Site & Location Plan	Scale: (A2) 1:500 & 1:1250
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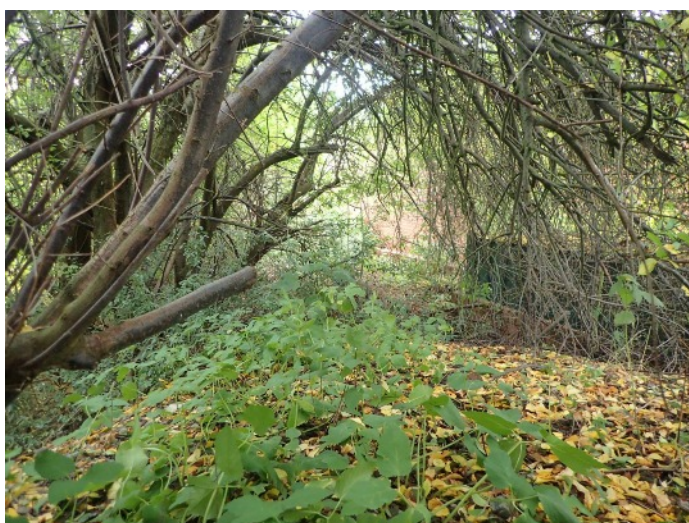
Appendix 13.6: Photographs of Section A



Appendix 13.6: Photographs of Section A



Appendix 13.6: Photographs of Section B



Appendix 13.6: Photographs of Section C



Appendix 13.6: Photographs of Section D



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:

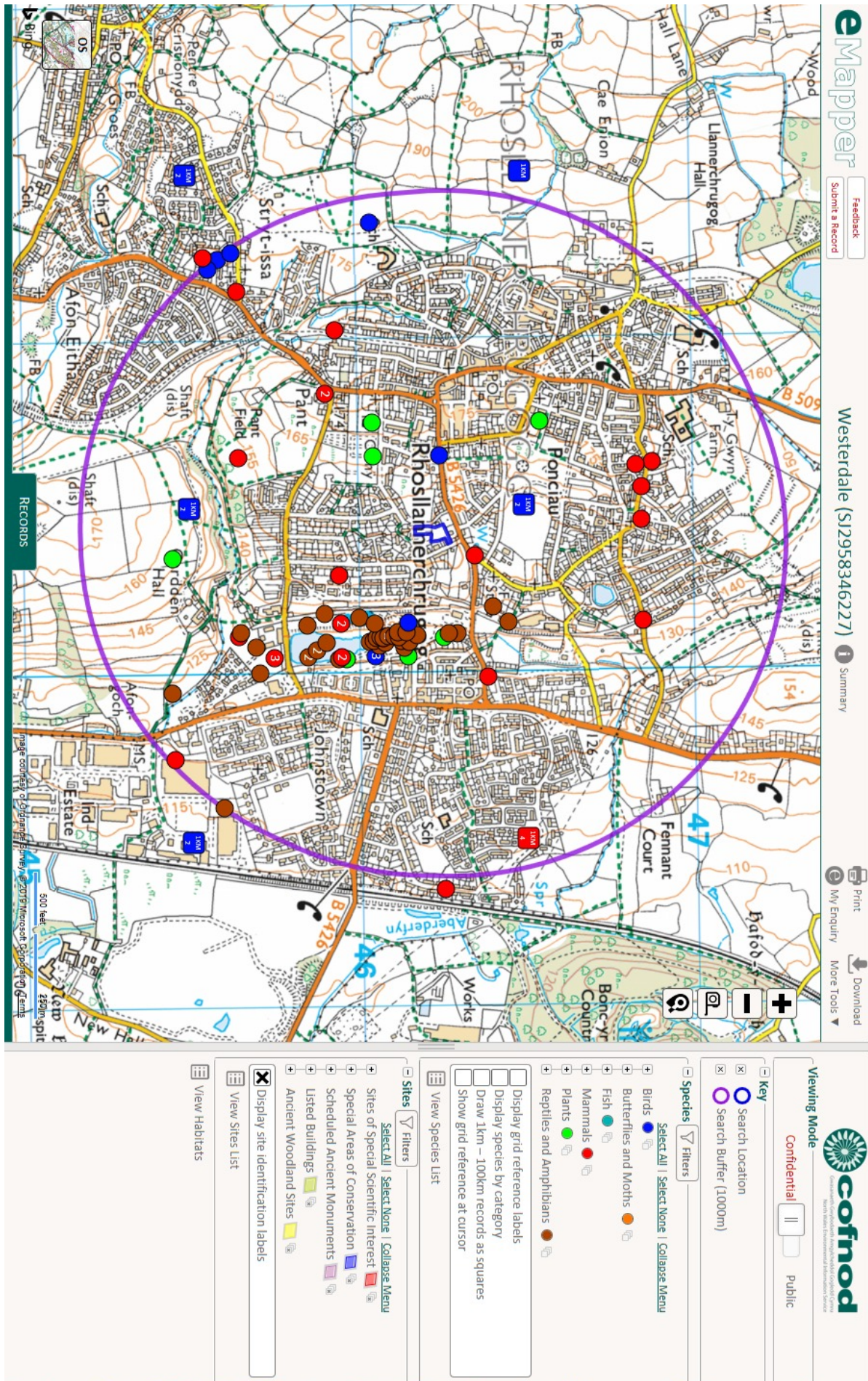
kill, injure or take any wild bird,
take, damage or destroy the nest of a Golden Eagle, White-tailed Eagle or Osprey (even if disused),
take, damage or destroy the nest of any wild bird whilst it is in use or being built,
take, damage or destroy an egg or any wild bird,
possess any live or dead wild 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: Cofnod Data Search (1 km)



Appendix 13.10: Method Statement 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. A temporary amphibian and reptile fence will be erected around the site, to enclose all works, apart from any trenches for pipe work relating to sewerage or other utilities. Initially this will be supervised by a licensed GCN worker, who will act as the ecological clerk of works (ECoW). The fence may be lowered temporarily while such trenches are dug, then replaced the same day and sealed with loose earth. The fence will be one way (see diagram) at the north and west perimeters. A newt gate will be installed at the entrance to the site which will consist of a metal grid with ramps of earth at either end for newts to escape.
2. The supervisor or other designated contractor for the development will be charged with the responsibility of communicating any information relating to GCN on site to the Ecological Clerk of Works (ECoW) dealing with the site. This person will be briefed by the ECoW on how to recognise GCN and the procedures for safeguarding them. All contractors will be made aware of the protected status of GCN and the possibility of finding them on site during the development.
3. Any rubble which is present on site is a potential refuge for GCN, particularly the disused building. This will be removed carefully, by hand, and supervised by the ECoW. This will take place once the fence has been erected.
4. Any vegetation will be kept below 10 cm. Vegetation removal will begin in the centre of the site and continue to the outer edges so that any animals present are able to move away. This will be overseen by the ECoW.
5. The site will be hand searched by the ECoW during removal of rubble and vegetation. Any GCN will be placed carefully into a container and released outside the fence into the surrounding vegetation.
6. All trenches will be inspected carefully before infilling, and any animals carefully removed and removed from the area to a place of safety.

Appendix 13.10: Method Statement with Regard to Great Crested Newts contd.

7. Building materials will be stored within the fence and 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.
8. Any open pipework will be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal is trapped. The use of gully pots as part of any drainage scheme is to be avoided and installation of kerbs should also be avoided.
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 the ECoW contacted immediately for advice. A license from NRW may be required in order to continue.
11. The ECoW may visit the site without notice at any time during the development.

Appendix 13.11: 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

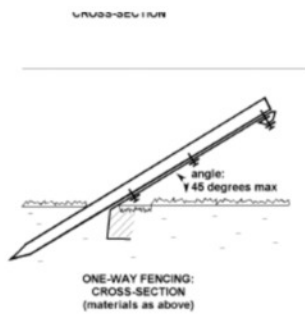
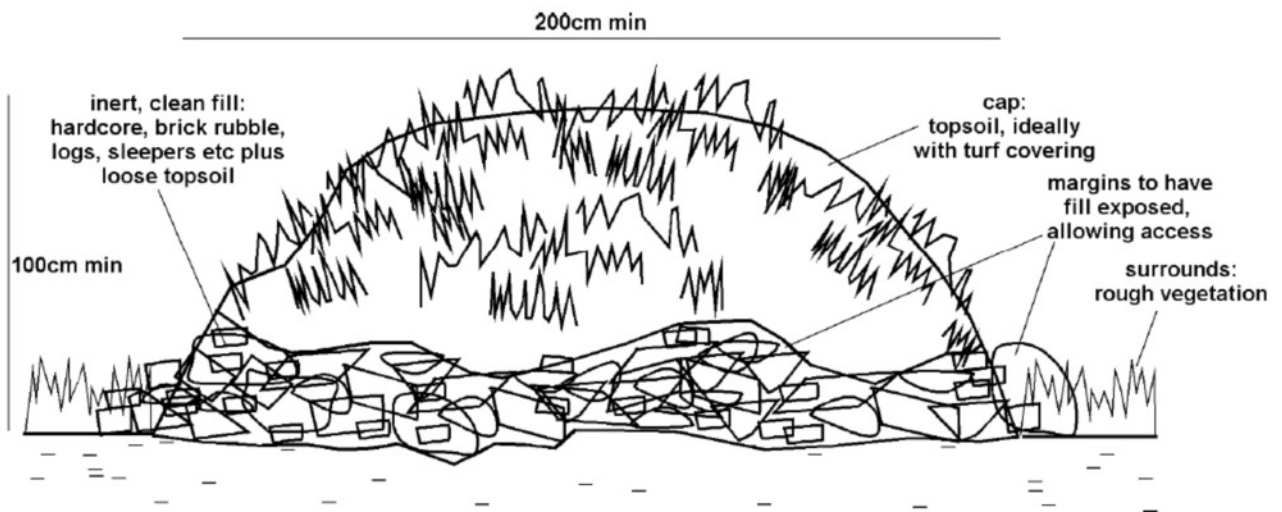
Licensing for activities involving European Protected Species:

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

Appendix 13.12: Suggested Hibernaculum Design (English Nature 2001) and Temporary Amphibian Fence

Figure 3: Suggested hibernaculum design

This design mimics artificial and natural conditions in which great crested newts have frequently been found over-wintering. Dimensions should not be below 2m length x 1m width x 1m height. The illustrated design would be suitable for locating on an impermeable substrate. On free-draining substrates, the design is largely similar but the bulk of the fill is sited in an excavated depression in the ground. Hibernacula should ideally be positioned across a site, both close to and distant from breeding ponds, always in suitable terrestrial habitat and above the flood-line.



- One-way fencing should be sloped at an angle of between 45° and 40°. This may allow amphibians to climb over into the receptor area, but prevent them from escaping back into the clearance area.

Appendix 13.13: Map Showing the Extent of Johnstown Newt SAC and Buffer (Great Crested Newt Mitigation Requirements – Johnstown Newt Site SAC and the Wider Countryside)

