

Ecological Impact Assessment **at**

Westerdale, Gardden Road,

Rhosllanerchrugog,

Wrexham LL14 2EN

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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)

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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 sites are Stryt las a'r Hafod, (Site of Special Scientific Interest) and Johnstown Newt Sites (Special Area of Conservation) 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.

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.

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.

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, details to be agreed. This is to compensate for the loss of potential 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

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

<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>

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

The National Vegetation Classification available at: jncc.defra.gov.uk

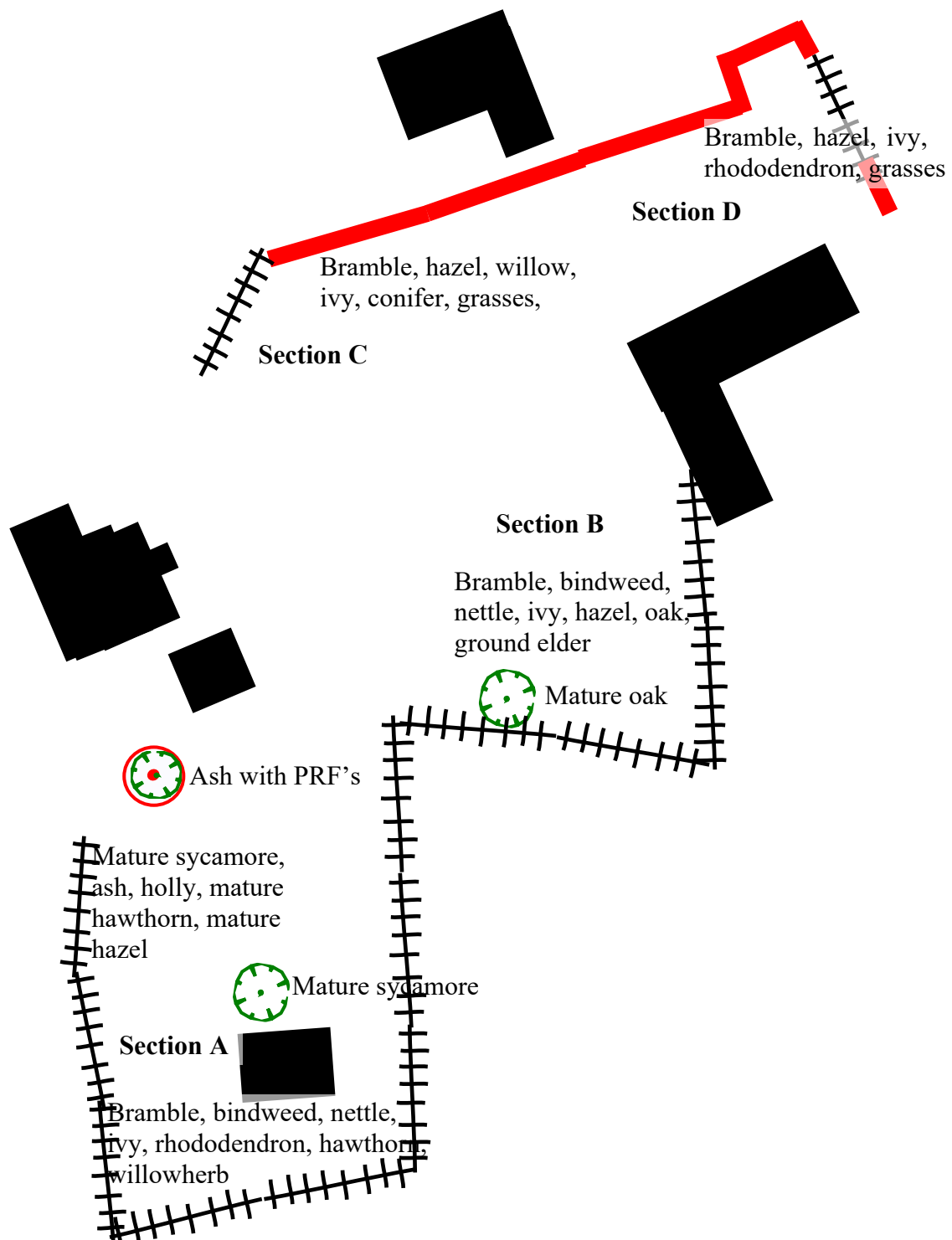
Natural Resources Wales available at: <https://naturalresources.wales/?lang=en>

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

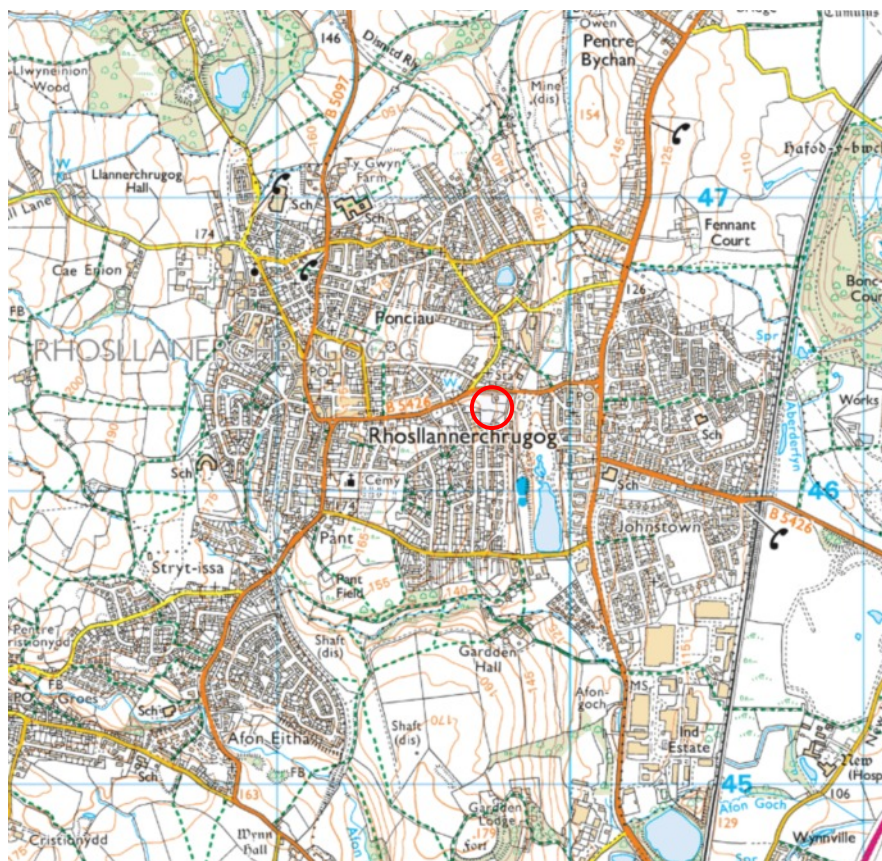
UK BAP Priority Habitats available at: jncc.defra.gov.uk

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

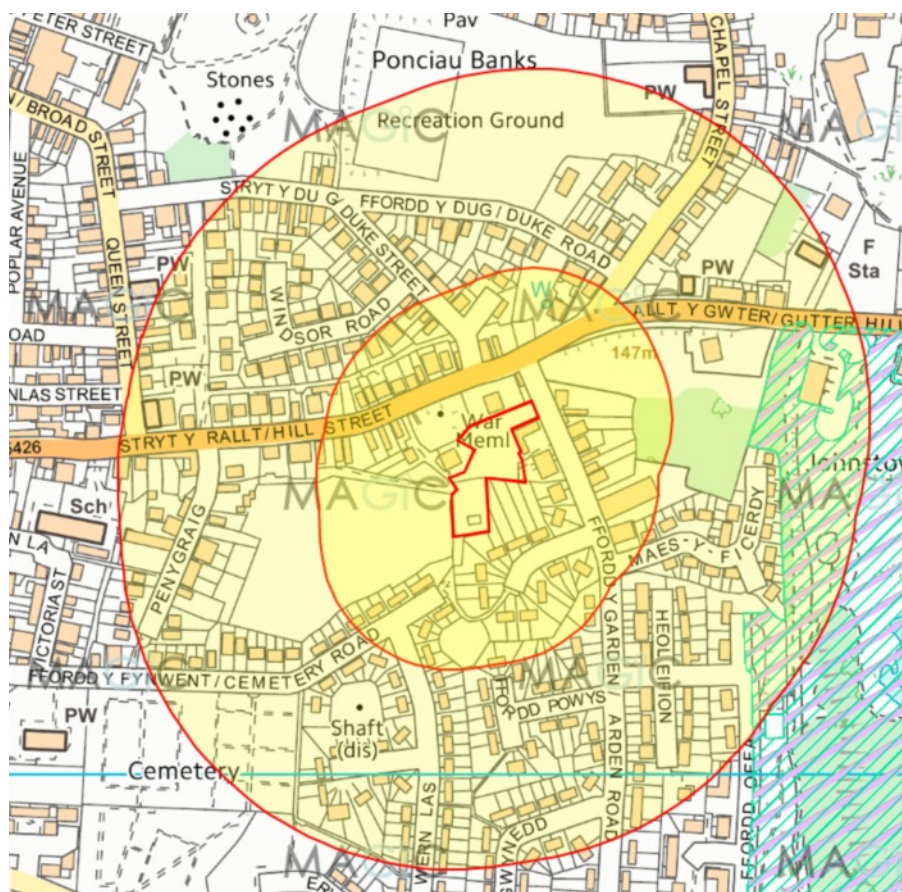
Appendix 13.1: Survey Diagram



Appendix 13.2: OS Location Map



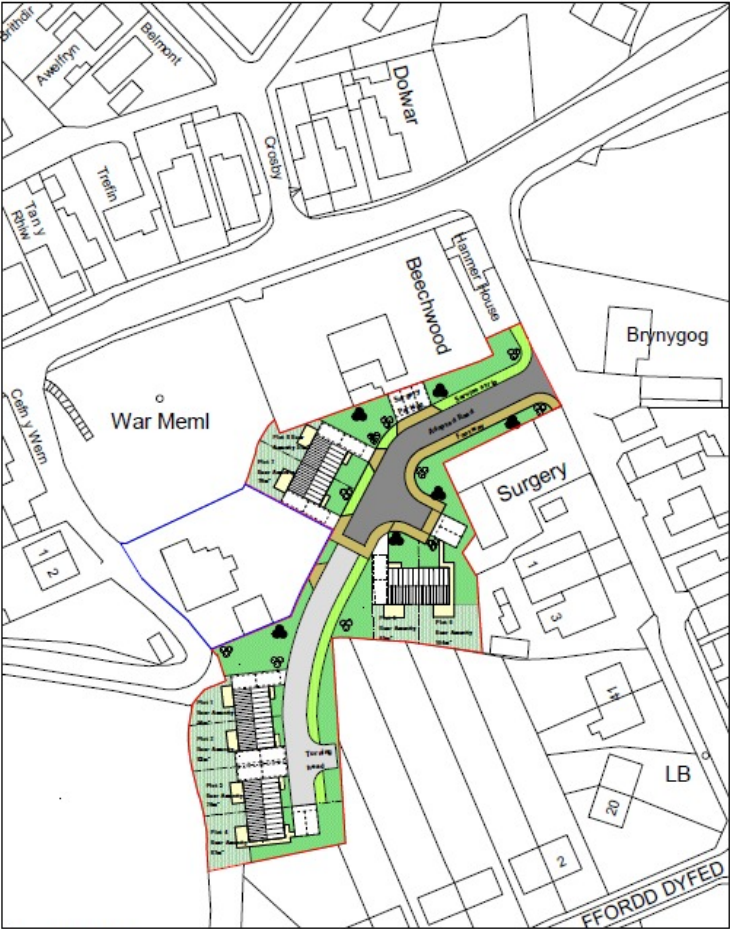
Appendix 13.3: Map Showing Zones of Influence for Great Crested Newts



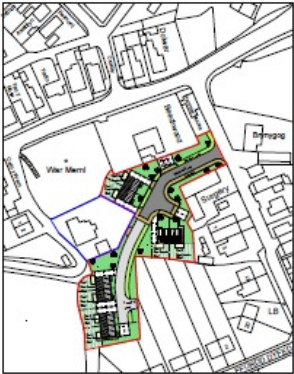
Appendix 13.4: Aerial Photograph



Appendix 13.5: Block Plan: Proposed



Site Plan 1:500



Location Plan 1:1250

Rev	Date	Detail	Initial
Project: Proposed residential development on land adj to Westerdale, Gardden Road, Rhos, Wrexham.			
Title: Proposed: Site & Location Plan		Scale: (A2) 1:500 & 1:1250	
Drawn By: D.J.Edwards		Date: May 2015	
Drawing No: T045/002		Sheet: 1 of 1	
			
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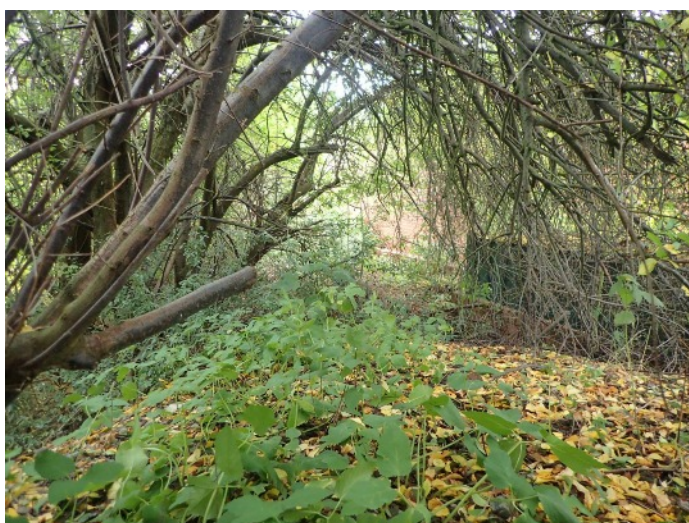
Appendix 13.6: Photographs of Section A



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 bat species, their breeding sites and resting places are fully protected by law - they're European protected species.

You may be able to get a licence from Natural England if you can't avoid disturbing them or damaging their habitats, or if you want to survey or conserve them.

What you must not do

You're breaking the law if you do certain things including:

- deliberately capture, injure or kill bats
- damage or destroy a breeding or resting place
- obstruct access to their resting or sheltering places
- possess, sell, control or transport live or dead bats, or parts of them
- intentionally or recklessly disturb a bat while it's in a structure or place of shelter or protection

Either or both of the following could happen if you're found guilty of any offences:

- you could be sent to prison for up to 6 months
- you could get an unlimited fine

Activities that can harm bats

Activities that can affect bats include:

- renovating, converting or demolishing a building
- cutting down or removing branches from a mature tree
- repairing or replacing a roof
- repointing brickwork
- insulating or converting a loft
- installing lighting in a roost, or outside if it lights up the entrance to the roost
- removing 'commuting habitats' like hedgerows, watercourses or woodland
- changing or removing bats' foraging areas
- using insecticides or treating timber

In many cases you should be able to avoid harming the bats or damaging or blocking access to their habitats.

A bat survey will show what type, how many and how the bats are using the building or area so you can plan to avoid harming them.

If you can't avoid harming bats or their habitats, you can apply for a mitigation licence from Natural England or Natural Resources Wales.

Appendix 13.8: Legislation Relating to Birds

All wild bird species, their eggs and nests are protected by law. You must always try to avoid harming birds or to use measures which do not kill or injure them before considering taking harmful action.

In most cases you should be able to avoid harming wild birds by:

- timing your work to avoid the breeding season
- using a range of methods that deter but don't harm them

In exceptional cases the law allows certain exemptions to permit legal activities (such as a development with planning permission) and where avoiding harm isn't possible.

What you must not do:

You're breaking the law if you:

- intentionally kill, injure or take wild birds
- intentionally take, damage or destroy a wild bird's nest while it's being used or built
- intentionally take or destroy a wild bird's egg
- possess, control or transport live or dead wild birds, or parts of them, or their eggs
- sell wild birds or put them on display for sale
- use prohibited methods to kill or take wild birds

Some birds, known as 'schedule 1 birds', eg barn owls, have extra legal protection. For these bird species it's also an offence to do the following, either intentionally or by not taking enough care:

- disturb them while they're nesting, building a nest, in or near a nest that contains their young
- disturb their dependent young

You could get an unlimited fine and up to 6 months in prison for each offence if you're found guilty.

Activities that can harm birds

These activities can affect wild birds, particularly during breeding season:

- trimming or cutting trees, bushes, hedges and rough vegetation
- renovating, converting or demolishing a building
- creating disturbance, eg noise, lighting and vibration
- taking actions to prevent problems, eg shooting birds or removing nests

When you can get a licence

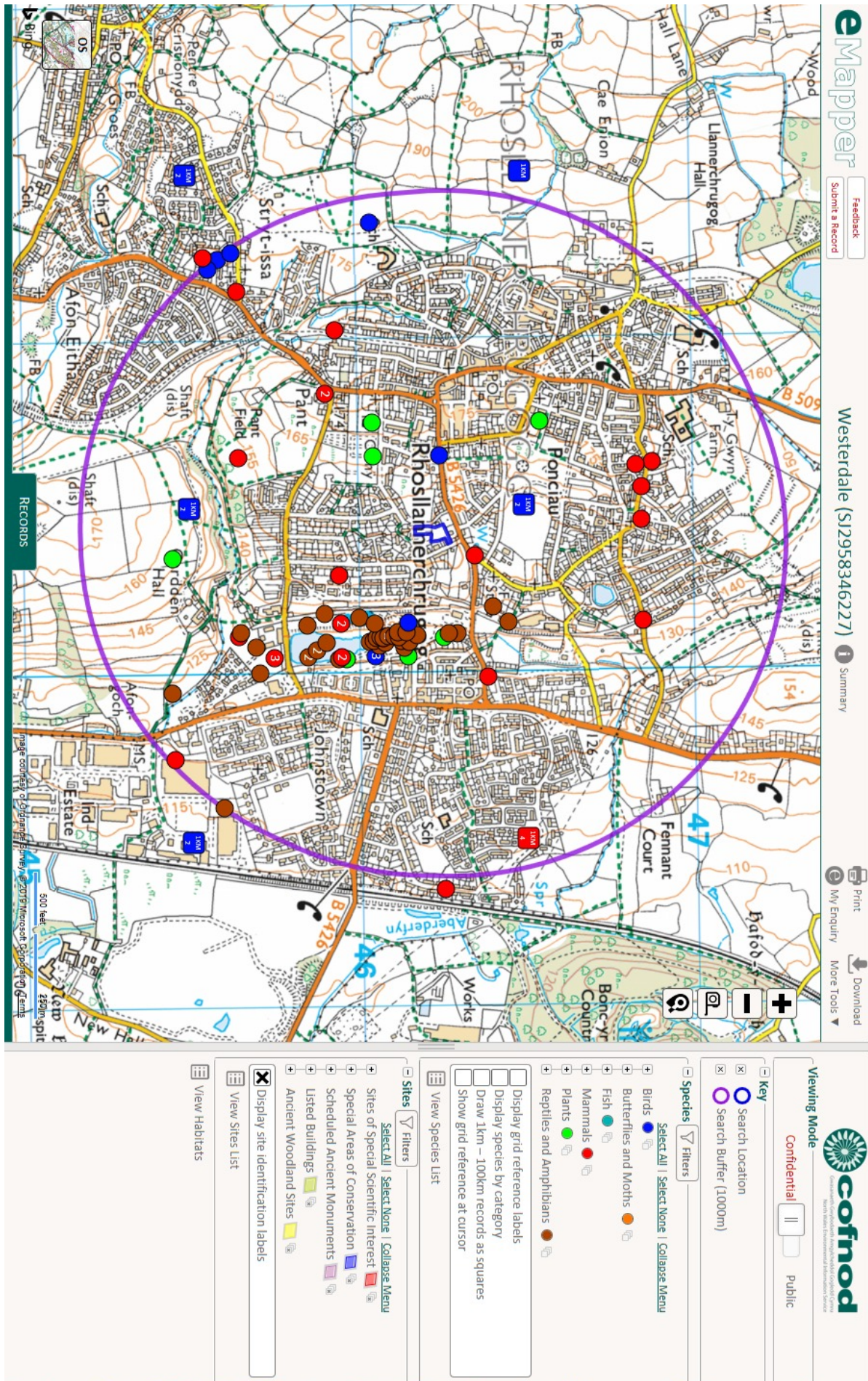
There are no licensing purposes to permit development or construction but there are ways you can continue development or construction when birds are present. These activities should rely upon the legal exemptions. You must make sure that you can comply fully with the terms of the exemption so that you don't break the law.

You can apply for a licence from Natural England or Natural Resources Wales in certain circumstances and for certain problems.

Licences are available for disturbing or harming birds for a limited number of reasons that include:

- preserve public health and safety
- preserve air safety
- do work for science, education or research
- prevent damage to crops or animal feed
- conserve plants and animals (including other wild birds)
- prevent damage to fisheries
- take part in photography, falconry, keeping or breeding birds

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. 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.
2. 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.
3. 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.
4. 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.
5. All trenches will be inspected carefully before infilling, and any animals carefully removed and removed from the area to a place of safety.
6. 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.
7. 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.
8. 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.
9. 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 will be required in order to continue.
10. The ECoW may visit the site without notice at any time during the development.

Appendix 13.11: Legislation Relating to Great Crested Newts

Great crested newts are a European protected species. The animals and their eggs, breeding sites and resting places are protected by law.

You may be able to get a licence from Natural England or Natural Resources Wales if you're planning an activity and can't avoid disturbing them or damaging their habitats (ponds and the land around ponds).

What you must not do

Things that would cause you to break the law include:

- capturing, killing, disturbing or injuring great crested newts deliberately
- damaging or destroying a breeding or resting place
- obstructing access to their resting or sheltering places (deliberately or by not taking enough care)
- possessing, selling, controlling or transporting live or dead newts, or parts of them
- taking great crested newt eggs

You could get an unlimited fine and up to 6 months in prison for each offence if you're found guilty.

Activities that can harm great crested newts

Activities that can affect great crested newts include:

- maintaining or restoring ponds, woodland, scrub or rough grassland
- restoring forest areas to lowland heaths
- ploughing close to breeding ponds or other bodies of water
- removing dense vegetation and disturbing the ground
- removing materials like dead wood piled on the ground
- excavating the ground, for example to renovate a building
- filling in or destroying ponds or other water bodies

Building and development work can harm great crested newts and their habitats, for example if it:

- removes habitat or makes it unsuitable
- disconnects or isolates habitats, such as by splitting it up
- changes habitats of other species, reducing the newts' food sources
- increases shade and silt in ponds or other water bodies used by the newts
- changes the water table
- introduces fish, which will eat newt eggs or young
- increases the numbers of people, traffic and pollutants in the area or the amount of chemicals that run off into ponds

In many cases you should be able to avoid harming the newts, damaging or blocking access to their habitats by adjusting your plans. If you can't avoid this, you can apply for a mitigation licence from Natural England or Natural Resources Wales.

Appendix 13.12: Suggested Hibernaculum Design (English Nature 2001)

Figure 3: Suggested hibernaculum design

This design mimics artificial and natural conditions in which great crested newts have frequently been found overwintering. 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.

