

Ecological Appraisal and Impact Assessment **at**
a Former Nursery Building at Scallywags,
Bridge Road South, Pentre Maelor,
Wrexham LL13 9FZ
Grid Ref. SJ 3753 4907

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1. Summary

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

The proposed scheme entails the demolition of the building and construction of seven semi detached and mews style dwellings and associated garages, parking and gardens.

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, of the interior and exterior of the building. One pre-dawn survey and one emergence survey were carried out.

Impacts during the development should be low 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. There is not considered to be any significant threat to the conservation status of bats or danger of harm to individuals as the building was not being used by roosting bats. However precautions must be taken to avoid harm to any transient bats which may roost there in future. If bats are found at any stage of the development then work in that area must stop and a licensed bat worker contacted for advice.

There is not considered to be any significant impact on any protected species or habitat as long as the recommended mitigation and compensation measures are followed, as well as the method statement given in Appendix 16.

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 2015-8194-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 Scallywags Day Nursery, Pentre Maelor, is a single storey building with two small loft spaces formerly used as a children's day nursery. See Appendix 13.6.

The proposed scheme entails the demolition of the building and construction of seven semi detached and mews style dwellings and associated garages, parking and gardens.

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, as guidance to evaluate the impacts of the development in the absence of any licensed mitigation.

3.2. Desk Study

Wrexham Planning Portal was consulted for a review of previous ecological surveys carried out in the area. No rare or threatened species were identified nearby. Magic Maps was consulted for the presence of designated sites and protected habitats.

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 interior and exterior 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 P14, Cluson Clulite CB2) were used for examination of interiors and 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 Appendix 13.7.

A visual assessment of the building and immediate surroundings was carried out on 12th September 2018 by Susan Worsfold BSc ACIEEM. A pre-dawn survey of the building was carried out on 25th August 2018 by Susan Worsfold and Craig Thomas, an experienced assistant. A dusk emergence survey was carried out on 12th September 2018 by Susan Worsfold and Hannah Miles, an experienced assistant. These were done in accordance with *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)* (Collins 2016) (Appendix 12).

Survey times and conditions are given in Appendix 13.2. Visibility was partially hindered by trees on the north east side but not enough to affect the results.

Frequency division detectors were used to record any bat sounds in and around the building for later analysis on the computer. These were Anabat SD1, Echo Meter EM3, Song Meter SMZC and Anabat Express.

4. Baseline Ecological Conditions/Results

4.1 Designated Sites

The nearest designated site is Afon Dyfrdwy (River Dee), (Sites of Special Scientific Interest (Wales) and River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales) 2.8 km south east.

4.2 Habitats

Site: The site is situated on the outskirts of Wrexham Industrial Estate which is 2 km from Wrexham. The building was surrounded by hard standing on the north west and south east sides and grass and some mature trees on the south west and north east sides respectively. The building was in a good state of repair. The walls appeared to be of brick or concrete with no cavity. The windows were glazed, some were boarded. They were intact although one was cracked. The doors were of wood. The pitched roof was of tile, lined with bitumastic felt. There were wooden verge boards at the gable ends and wooden fascias and soffits all round the building. Adjacent land: There were mature trees in the neighbouring land at the north, south and east sides. There is no significant woodland within 500 m but there are scattered trees. There are no ponds or rivers within 500 m. There are few hedgerows surrounding the site.

4.3 Species and Species Groups

Plants

Very little vegetation is to be affected, there were a few successional species including grasses, dandelion (*Taraxicum officianale*), creeping buttercup (*Ranunculus repens*), dock (*Rumex sp.*) and ox-eye daisy (*Leucanthemum vulgare*).

Invertebrates

None seen during the survey. The site is suitable but not favourable for use by many invertebrate species.

Amphibians and Reptiles

None seen during the survey. There was limited shelter or foraging potential on site. Due to the small scale of the project and the fact there were no ponds within 150 m of the site there is not considered to be any threat to the conservation status of GCN. However, GCN can travel up to a kilometre from a breeding pond and may be at risk of harm during the development and there are three ponds within 500 m where GCN have been recorded. Therefore a Method Statement must be followed to avoid an offence being committed as given in Appendix 16.

Birds

None nesting in the building. The adjacent trees could provide food and shelter for birds and also nesting potential.

Bats

The site is being used by foraging and commuting bats. Four species were identified during the two surveys (see Appendix 13.1) The frequency of visits and number of bats seen does not indicate that the site is particularly important habitat for 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 and the site was not favourable for use by them.

5. Description of the Development

The proposed scheme entails demolition of the building and the construction of seven semi detached and mews style dwellings and associated garages, parking and gardens. Little vegetation is to be affected and the mature trees at the boundaries are on neighbouring land. The existing access will be retained.

6. Assessment of Effects and Mitigation Measures

Designated Sites:

It is not considered that the development will have any significant impact on any nearby designated sites due to the small scale of the development and distance from the sites.

Habitats:

No priority habitat is affected by the proposal. The loss of vegetation will have a low impact on some invertebrate species.

Species:

iii. Amphibians and Reptiles

There were no ponds apparent within 450 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.

Birds

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

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

There is not considered to be any threat to the conservation status of bats or danger of harm to individuals as the building was not being used by roosting bats. However, it is possible that transient bats may temporarily roost or perch in the building in the future.

If bats are found at any stage of the development then work in that area must stop and a licensed bat worker contacted for advice.

It is recommended that the new buildings use bitumastic hessian roofing felt type 1F, as modern roofing membranes are extremely hazardous to bats as they become entangled in the fibres and cannot escape.

Residual Effects

No significant residual effects anticipated.

7. Compensation

None needed.

8. Enhancement Recommendations

A bat box e.g. Schwegler 1FF to be fitted externally to each new building. 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

One woodcrete nests suitable for small birds such as robin, blackbird, tit species and sparrow to be incorporated into each new building, 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.

9. Ecological Constraints

None identified

10. Monitoring

None recommended

11. Conclusions

If the recommended method statement, 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>

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

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>

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

Wrexham Planning Portal available at: <http://planning.wrexham.gov.uk/Planning>

Appendix 13.1: Activity Surveys

25/8/18

Number of observers: 2

Observer 1: Susan Worsfold (SW); equipment: EM3; Station: south corner of building

Observer 2: Craig Thomas (CT); equipment : Anabat SD1; Station: north corner of building

Bat species seen and/or recorded:

First bat:

Long eared bat, presumed brown long eared (*Plecotus auritus*)

Time: 04.51; *Location:* CT station

Subsequently: Twice, CT station

Other species:

None

No bats were seen during the survey.

12/9/18

Number of observers: 2

Observer 1: Susan Worsfold (SW); equipment: EM3; Station: south corner of building

Observer 2: Hannah Miles (HM); equipment : Anabat SD1; Station: north corner of building

Stationary equipment: Anabat Express in Loft 1, Song Meter SMZC in Loft 2

Bat species seen and/or recorded:

First bat:

Soprano pipistrelle (*Pipistrellus pygmaeus*)

Time: 19.51; *Location:* HM station

Subsequently: Occasionally, HM station until 20.46

Other species:

Common pipistrelle (*Pipistrellus pipistrellus*)

Time: 20.18; *Location:* HM station

Subsequently: Occasionally, both external stations until 20.58

Myotis sp., Probably *Myotis daubentonii*

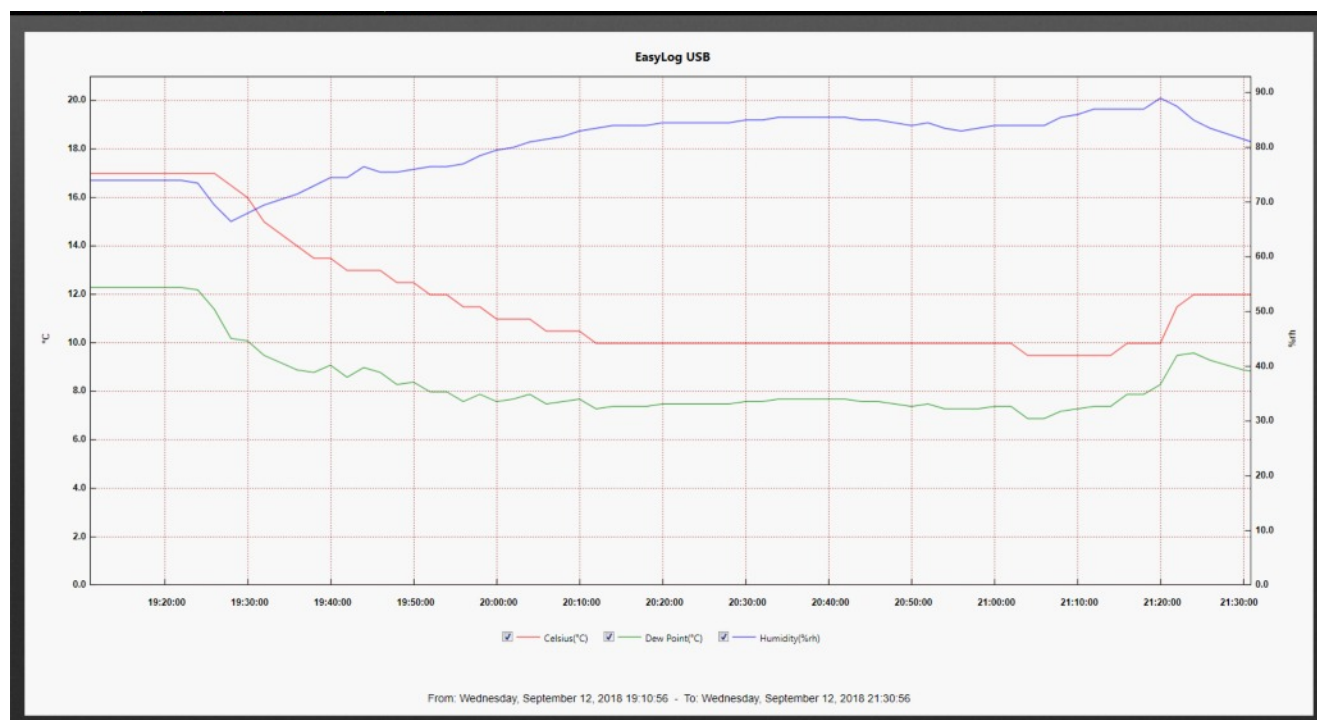
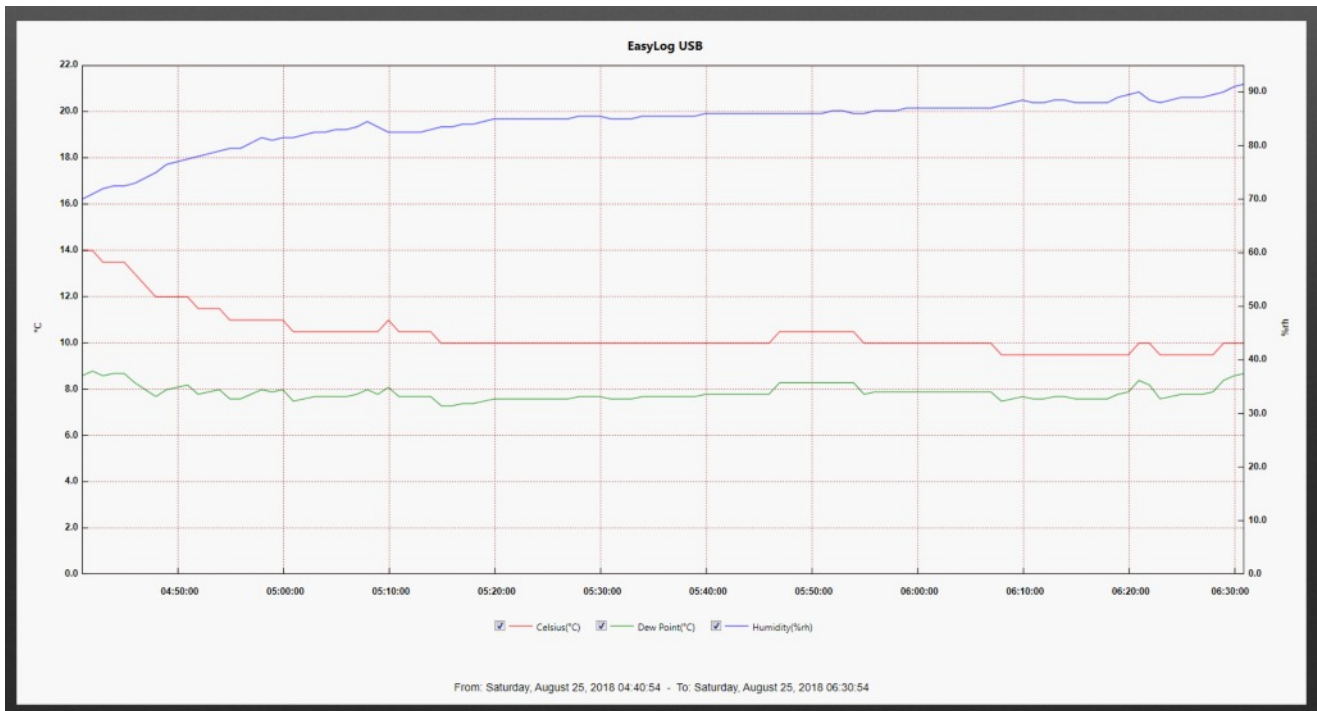
Time: 20.35; *Location:* SW station

Subsequently: None

Bats were seen intermittently near both stations. No bats were seen to emerge from the building. No bat calls were recorded inside either loft.

Appendix 13.2: Survey Conditions

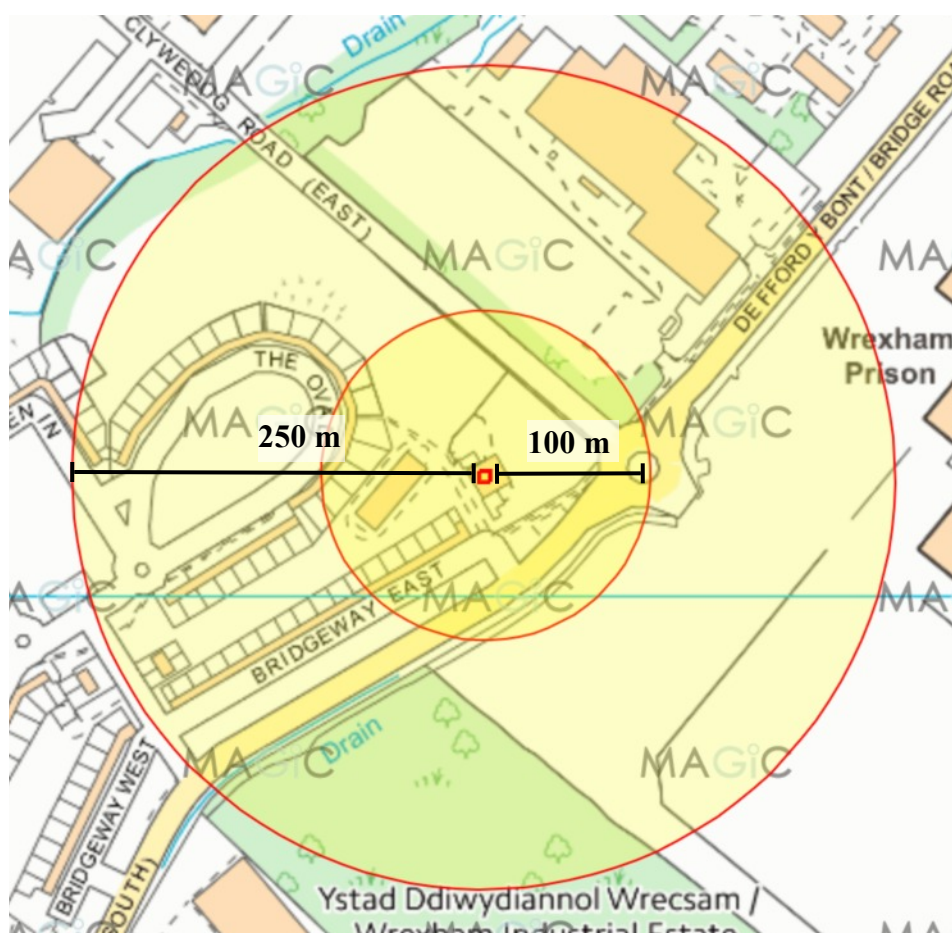
Date	Sunset/ Sunrise	Start Time	End Time	Temp. Start °C	Relative Humidity Start %	Temp. End °C	Relative Humidity End %	Cloud %	Wind 0-6
25/8/18	06:00	04:40	06:25	12	75	9	88	50-50	1-0
12/9/18	19:38	19:15	21:10	13	84	9	84	0-0	0-0



Appendix 13.3: OS Location Map



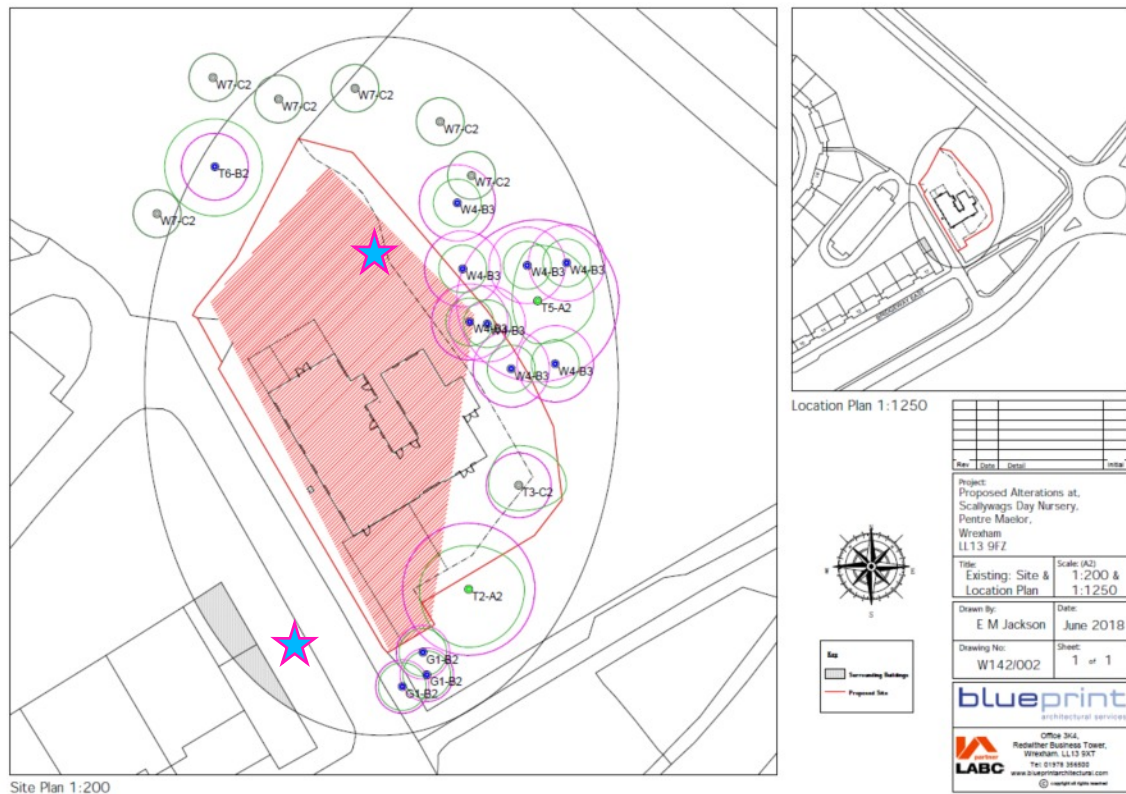
Appendix 13.4: Map Showing Zones of Influence for Great Crested Newts



Appendix 13.5: Aerial Photograph



Appendix 13.6: Block Plan: Existing



★ Bat detector and observer

Block Plan: Proposed



Appendix 13.7: Photographs of the Exterior



View from the north



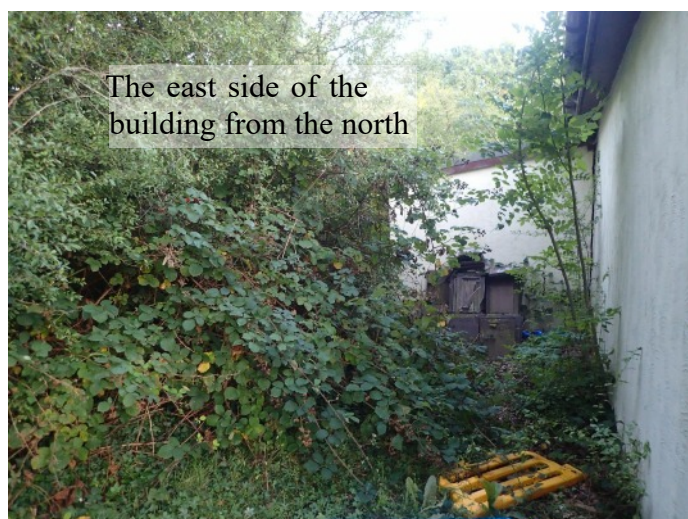
View from the south



Land at the north section



Land at the north section



The east side of the building from the north



Land at the south section

Appendix 13.7: Photographs of the Interior



Appendix 13.7: Photographs of the Lofts



Appendix 13.8: 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 13.9: 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

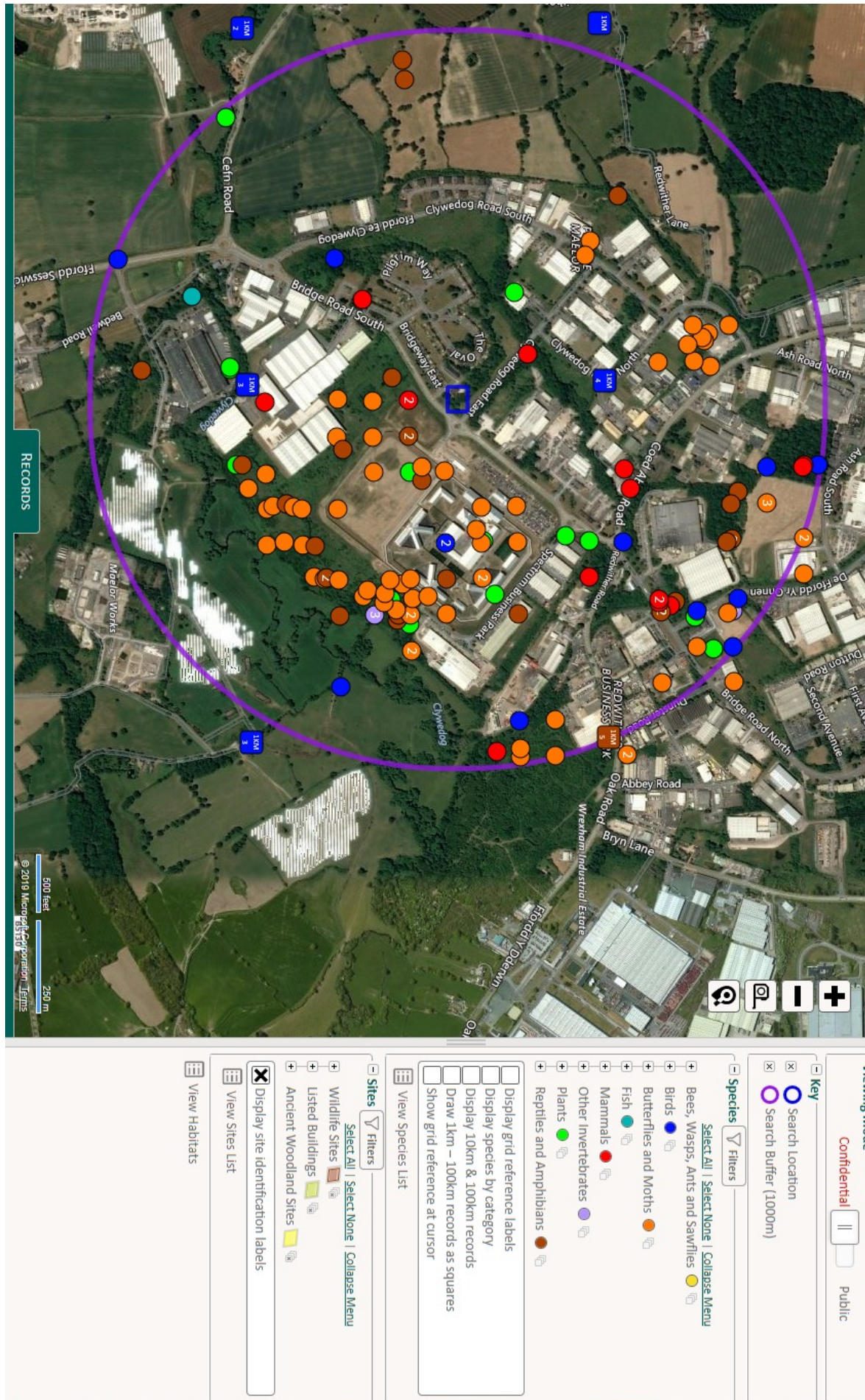
There are no licensing purposes to permit development or construction but there are ways you can continue development or construction when birds are present. These activities should rely upon the legal exemptions. You must make sure that you can comply fully with the terms of the exemption so that you 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.

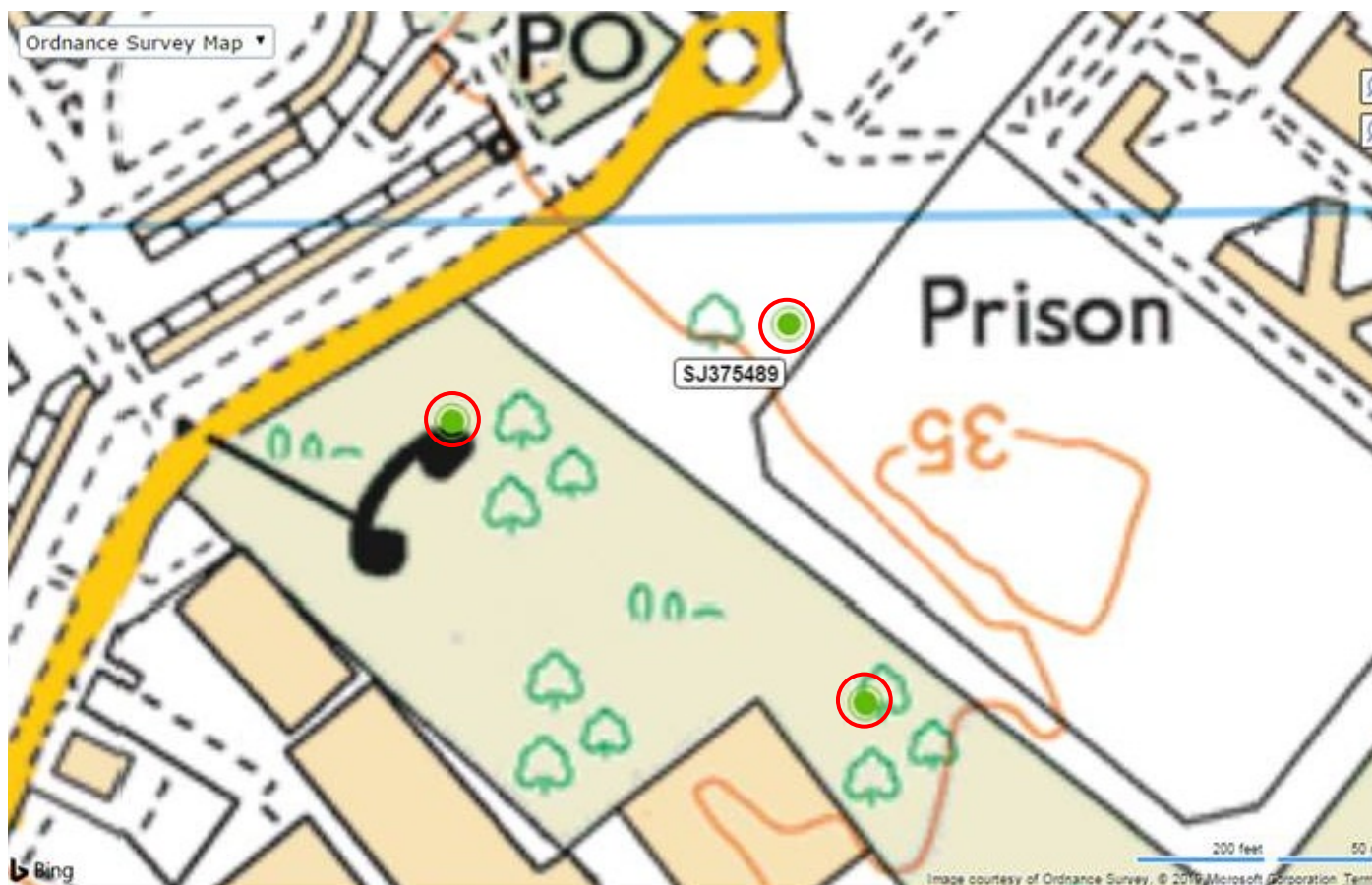
Licences are available for disturbing or harming birds for a limited number of reasons that include:

- 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 14: Data Search (Cofnod)



Appendix 15: GCN Monitored Ponds (Emma Broad)



Appendix 16: 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.

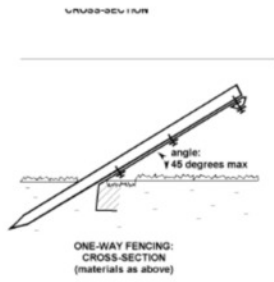
They may travel more than kilometre from their breeding pond.

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. Any rubble which is present within the courtyard is a potential refuge for GCN. This will be removed carefully, by hand, and supervised by the ECoW. This will take place once the fence has been erected.
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.
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 released into the surrounding environment, on the other side of the newt fence.
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. The fence will be checked daily by the owners and maintained so that it is functional throughout the construction period. The owners will receive a briefing by the ECoW before work starts.
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.
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 will be required in order to continue.
11. The ECoW may visit the site without notice at any time during the development.

Appendix 16: Method Statement with Regard to Great Crested Newts



- 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.

Connectivity between GCN suitable habitats will not be 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 courtyard and the exterior of the buildings.

