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Ipsen Biopharm Ecological and Protected Species Surveys

4th May 2017



Report by:	Kate Williamson, Cambrian Ecology Ltd
Client:	Ipsen Biopharm, Ash Road North, Wrexham Industrial Estate, c/o Ed Mortell, Lovelock Mitchell architects
Planning Authority:	Wrexham Borough Council
Grid Reference:	SJ 37457 50293

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ECOLOGICAL AND PROTECTED SPECIES SURVEYS:-

**Ipsen Biopharm
Wrexham Industrial Estate
9 Ash Road North
Wrexham
LL13 9UF**

4th May 2017

1 Summary

Cambrian Ecology Ltd was commissioned by Ed Mortell of Lovelock Mitchell Architects, on behalf of the client, Ipsen Biopharm, to conduct any ecological and protected species surveys necessary to accompany a planning application to Wrexham Borough Council to demolish a corrugated metal building and replace with a new building. The development is a 3 storey extension at the front of the site that will provide a new process area for the company at ground floor level with office space on the upper floors. Ipsen Biopharm is rapidly expanding worldwide and it is an excellent opportunity for the Wrexham site to be part of that development. To enable the construction of this building it will also be necessary to apply for a temporary single storey office building that will remain in place until the larger building is completed.

A desktop study was undertaken, which involved an initial data search with the local records centre; Cofnod and communication with Emma Broad (Ecologist, Wrexham Borough Council) and Matthew Ellis (Senior Species Officer North Wales, Natural Resources Wales). The most important records highlighted by this study were the presence of a whiskered bat roost in a similar building on the industrial estate, along with the extent of the known nationally important great crested newt population in the area.

An internal inspection of the building proposed for demolition was carried out on 28th March 2017, along with an ecological walkover of a pond within the site boundary, but outside of the construction zone. This was followed by an emergence survey of the building on 2nd May 2017 and three torching surveys of the pond on 29th March, 12th April and 2nd May 2017.

No evidence of the past or current use of the building by bats was recorded during the internal survey, or during the emergence survey. The building was judged to have extremely low roosting potential, primarily due to the amount of street and security lighting present around its perimeter. A single common pipistrelle bat (*Pipistrellus pipistrellus*) bat pass was recorded during the whole survey period. For these reasons,

it is considered that a single emergence survey is a proportional level of survey work for this building in relation to the potential impact on protected species of the proposed works. No further survey work or mitigation is recommended with regard to bat species.

No great crested newts were recorded during any of the torching surveys of the pond on the site. Indeed, no amphibians of any species were recorded and the pond was largely devoid of life. The ecological survey of the pond and the immediate surrounding area revealed that management is largely in line with that recommended. Some further recommendations are made with regard to the presence of a potentially invasive, non-native species of pondweed and the possible reasons for such poor aquatic biodiversity.

There are no potential ecological impacts, as regards protected species, identified as a result of the proposed demolition and construction works and as such, there should be no ecological mitigation measures required.

In terms of wider Biodiversity, there is an interesting night roost of 100+ pied wagtails (*Motacilla alba*) under a fire escape on the building next to that proposed for demolition. Disturbance to these birds should be avoided using some 'reasonable avoidance measures'. By undertaking the recommendations made with regard to the pond water quality, the site could be improved for Biodiversity and potentially support the nationally important metapopulation of great crested newts on the Industrial Estate.

2 Introduction

Cambrian Ecology Ltd was commissioned by Ed Mortell of Lovelock Mitchell Architects, on behalf of the client, Ipsen Biopharm, to conduct any ecological and protected species surveys necessary to accompany a planning application to Wrexham Borough Council to demolish a corrugated metal building and replace with a new building. The development is a 3 storey extension at the front of the site that will provide a new process area for the company at ground floor level with office space on the upper floors. Ipsen Biopharm is rapidly expanding worldwide and it is an excellent opportunity for the Wrexham site to be part of that development. To enable the construction of this building it will also be necessary to apply for a temporary single storey office building that will remain in place until the larger building is completed. These buildings will all be constructed on current areas of hard standing or existing building footprint.

The building proposed for demolition at Ipsen Biopharm is located at Grid Reference SJ 37457 50293.

3 Methodology

3.1 Bats

The internal survey, was carried out on 28th March 2017 by licensed bat workers Kate Williamson, (74340:OTH:CSAB:2016) and Chris Hall, (74726:OTH:CSAB:2016). Kate has been working as an independent ecologist for 7 years and has held a bat license from the Countryside Council for Wales (now NRW) since October 2004. Kate is also a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM). Chris has been working as an independent ecologist for 12 years and has held a bat license from CCW/NRW for 20 years. He is an associate member of CIEEM. An emergence survey was then carried out on 2nd May 2017 by Kate, Chris and an assistant. The assistant has been working with Cambrian Ecology and assisting with bat surveys since 2012.

Objectives of the bat survey at Ipsen Biopharm:

- Identify any signs of the presence of bat species within the building
- Assess the potential of the building to support bat species
- Identify any crevice-dwelling species roosting within internal or external features of the building and identify the features they are using
- Assess the levels of potential disturbance and loss of roosting opportunities due to the proposed works
- Gather detailed evidence to support any ensuing development license application to NRW
- Recommend mitigation and compensation measures to ensure the continued ecological functionality of the site for bats

During the internal survey, all crevices and other likely roosting areas were methodically searched for signs of bat occupation, such as droppings, feeding remains and marks on timbers from oils in the animal's fur. Any accessible roosting areas on the exterior of the building were also examined. High powered lights, including Cluson Clulite Clubman CB2 and LED lenser torches were used to examine roof features and search for signs of bat occupation.

The emergence survey was then conducted on 2nd May 2017 and commenced half an hour prior to sunset, continuing for at least 90 minutes after sunset to allow for the possible presence of late emerging species. Weather conditions were appropriate for the survey with a dusk temperature of 12.3°C, 20% cloud cover and a light breeze. Sunset was at 20.41.

The surveyors each utilised an Anabat SD1 or SD2 unit in conjunction with a Bat Box Duet frequency division bat detector. Any calls recorded were later analysed using

Analook to confirm field identification. A FLIR E40bx thermal imaging camera was used on the exterior once it became too dark to see emerging bats and on the interior to highlight any roosting crevice-dwelling bats.

3.2 Great Crested Newts

Due to the fact that the Wrexham Industrial Estate area is known to support a nationally important meta-population of GCN, the pond on the Ipsen Biopharm site was assumed to support the species. A series of three torching surveys were undertaken to confirm this presence and give some idea of the number of animals involved. These surveys were conducted on March 29th, April 12th and May 2nd 2017. In particular, high powered torches were utilised to scan the pond for signs of GCNs. Identification of these animals would have been undertaken by netting where they are positioned close enough to the pond edge for it to be safe to do so. The area around the pond was surveyed with a view to providing some management recommendations to enhance the habitats for the species. None of this area is to be directly impacted by the proposed development.

A 'Pond Suitability Index' (PSI) calculation was carried out on the pond to give an idea of the likelihood of it supporting a good, breeding population of GCN.

3.3 Other Ecological Issues

In accordance with the guidelines from CIEEM the presence of any other protected or invasive species was also recorded. In particular, this building was searched for signs of breeding birds, including droppings and old nests and the pond area for invasive, non-native plant species.

3.3 Desk Study

The desktop study aims to collate existing information about priority species, habitats and designated sites within 1km of the survey area. This information has relevance to the likelihood of priority species being present within the survey area, as well as giving context to any species and habitat records from the actual site.

A data search for all priority species, habitats and designated sites was conducted with the Local Environmental Records Centre; Cofnod. The search parameters were priority species within 1km from the survey site area. All searches include Invasive Non-Native Species, Phase I Habitat survey data and protected and non-statutory sites where they intersect with the search area.

Advice and information was also sought from Wrexham Borough Council Ecologist and NRW Senior Species Officer North Wales.

4. Site Description

4.1 Building

The building proposed for demolition on the site is a large, corrugated metal, industrial unit (U55). The corrugated metal panels are fixed to a steel frame. There are gaps where the corrugated metal meets the capping at ridges.

Within the building, there are false ceilings in some places, but in others it is open to the roof and unlined.

Building/Construction Detail:

Walls	Corrugated metal panels on brick footings. Some gaps within the corrugations where the panels are fixed to the frame, particularly at the ridges.
Roof	Corrugated metal panels, with some transparent, Perspex panels included.
Exterior Timber-work	There is no exterior timberwork.
Doors / Windows	The building is sealed. There are a number of windows and doors, all present and well fitted.
Light Levels	Very high throughout most of the building. Windows in office areas and Perspex roof panels in the open sections.
Airflow	Moderate levels of air flow freely through the building.
Rain Water Goods	None

4.2 Habitat

The building sits within a highly developed landscape of the Wrexham Industrial Estate. In the immediate vicinity are numbers of other industrial units and office blocks on the Ipsen Biopharm site itself. The site is extremely well lit, with street lighting along the periphery and bright, security lighting around all the buildings.

There is a pond and ‘wildlife’ area within the site, which comprises the following habitats:

Amenity Grassland

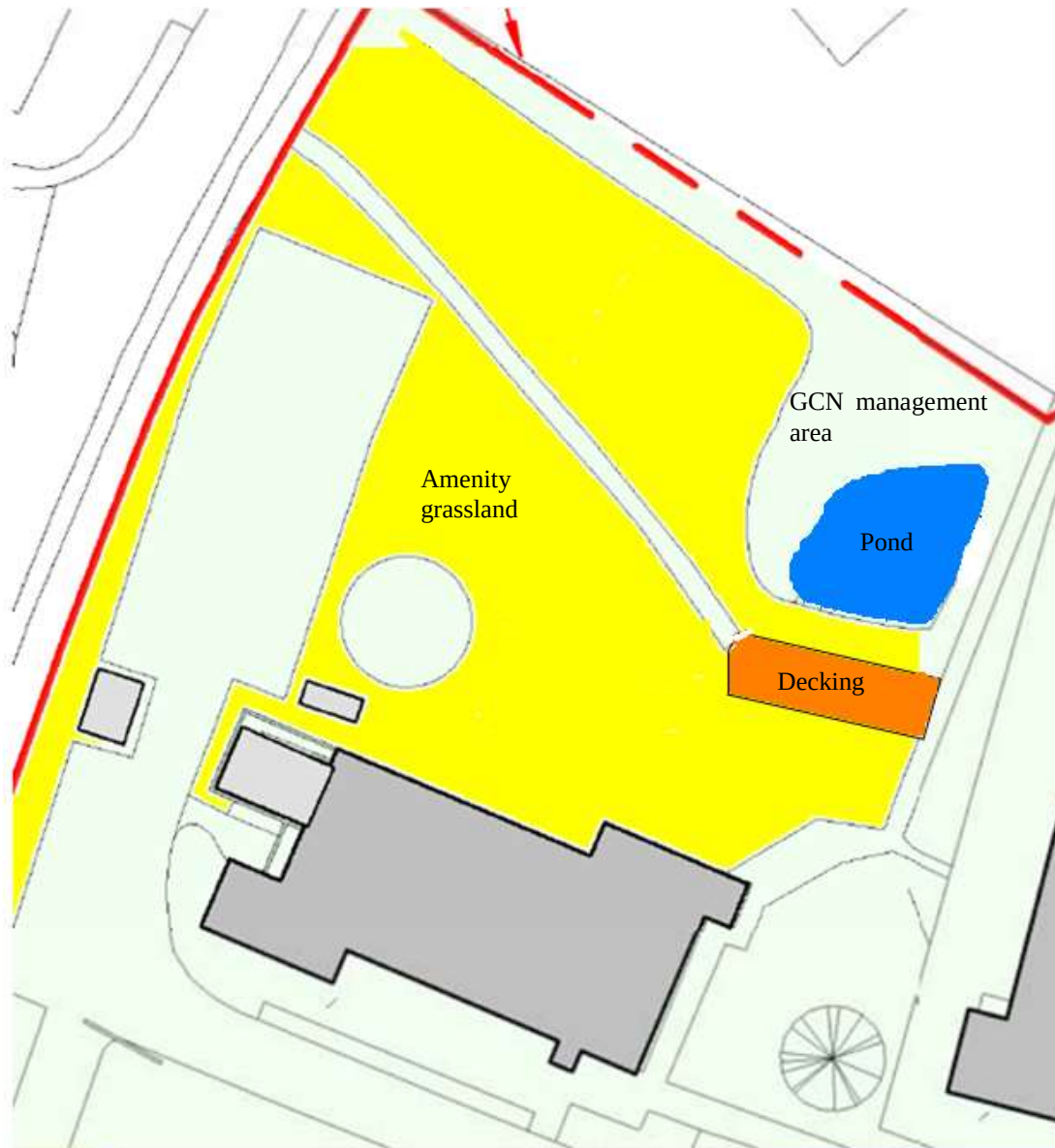
The dominant habitat on this part of the site is the amenity grassland and ornamental planting which is managed to provide an area for relaxation for staff on the site.

Pond

The pond is fed by an off-site water source via a small stream. This stream is heavily choked with vegetation, with fool's watercress; (*Apium nodiflorum*) and hemlock water dropwort; (*Oenanthe crocata*). The pond itself is a virtual mono-culture of Canadian water weed; (*Elodea canadensis*). This introduced species is classified as an 'Invasive Non-Native Species (INNS) under the Wildlife & Countryside Act. Emergence vegetation is limited to occasional greater reed mace; (*Typha latifolia*). The vegetation in the margins is more diverse with yellow iris; (*Iris pseudacorus*), water forget-me-not; (*Myosotis scorpioides*), marsh marigold; (*Caltha palustris*) brook lime; (*Veronica beccabunga*) and water mint; (*Mentha aquatic*) all present.

Great Crested Newt Management Area

The great crested newt management area is currently sympathetically managed and allowed to grow into suitable terrestrial habitat and only occasionally cut. Species present include bird's foot trefoil; (*Lotus corniculatus*), cuckoo pint; (*Arum maculatum*), broadleaved dock; (*Rumex obtusifolius*) red campion; (*Silene dioica*), meadow sweet; (*Filipendula ulmaria*) creeping buttercup; (*Ranunculus repens*) and marsh marigold.



Phase I map of the pond and 'wildlife' area

5 Results

5.1 Bats

5.1.1 Building survey

No evidence of roosting bats was recorded during the internal building survey on 28th March. There were no obviously suitable roosting crevices identified on the exterior of the building, although the desktop survey revealed a roost for a single whiskered bat within a very similar building on the industrial estate. That animal was roosting within a corrugation where the metal panels meet the steel frame. This would be

considered a sub-optimal location due to the poor thermal properties of the materials, but obviously can be used on occasion.

There were no observed access points for animals to be gaining access into the interior of the building, few crevices inside, high light levels and no droppings found.

5.1.2 Emergence survey

No bats were recorded emerging from any external features on the building during the emergence survey on 2nd May 2017. A single common pipistrelle pass was recorded along Ash Road North at 21.09 during the survey, but this animal was not associated with the building being surveyed.

Light levels around the whole of the building were very high, with bright security lighting. This was augmented by street lighting along the eastern side of the building from Ash Road North.

5.2 GCN

No sign of GCN was recorded during any of the three torching surveys conducted. Indeed, no sign of any amphibian species were recorded at all, which was very unusual given the time of year immediately after the spawning period.

During the survey on 29th March, a single eel specimen was recorded within the pond. Apart from this, the only life recorded was a species of water shrimp and a few other surface-dwelling invertebrates, such as pond skaters.

Table 1: PSI Results

Location	1.0
Pond area	0.1
Pond drying	1.0
Water quality	0.33
Shade	1.0
Fowl	1.0
Fish	0.33
Ponds	0.22
Terrestrial habitat	0.67
Macrophytes	0.9

PSI = 0.52

Any PSI <50 indicates a poor quality habitat for GCN. Those between 0.50 – 0.59 indicate a below average habitat.

5.3 Other Ecological Issues

During the emergence survey on 2nd May 2017, large numbers of pied wagtails were observed coming in to roost on a fire escape immediately adjacent to the building proposed for demolition. This fire escape was positioned directly above hot air vents from the building. The number of birds present was estimated at being in excess of 100. While the species has no protection except while nesting, it is obviously an interesting feature of 'Biodiversity'.

5.4 Desktop Survey

The data search carried out with Cofnod revealed 66 records of European Protected Species (EPS), none of which were within a 50m radius of the site. There were no records for any protected species on the site itself. Those considered significant within the context of the proposals were:

Whiskered bat (*Myotis mystacinus*). The record was from SJ 373503 (Pan Crisp) on 30.09.1999. This was apparently a roost of a single animal within a building very similar to that proposed for demolition on the Ipsen Biopharm site.

The closest record of GCN was from 293m away on the Wrexham Industrial Estate. This was a record of a single adult female and a single adult male during torching surveys in 2000. Further records of adult GCN from the Industrial Estate (557m away) were also recorded during torching surveys in 2000. This record was of up to 21 females and 4 males. Juveniles, in the form of tadpoles, were also recorded here.

6 Survey Limitations.

Individual crevice-dwelling species of bats, e.g. pipistrelles, can move roosts on a regular basis and even a suite of surveys can fail to record all their roosts, or even their presence. In this case it is reasonable to conclude that the building offers only extremely low potential for occasional, individual crevice-dwelling species of bat to roost. It is therefore considered reasonable for a single emergence survey being a proportional level of survey effort to record bat usage.

7 Conclusions

7.1 Bats

It is concluded from the results of this survey work that the building proposed for demolition on the Ipsen Biopharm site does not currently constitute a bat roost and does not therefore require a development license from NRW to proceed.

Both the internal and emergence surveys on the building were negative, and the assessment of roosting potential on the building was very low. It is concluded that it is highly unlikely that bats will utilise features on this building for roosting on any occasion. The lighting around the building is very strong and covers all elevations. The thermal properties of the materials within the building structure are such that temperatures will fluctuate widely, with very high and very low temperatures being experienced within the available crevices in the corrugations.

If bats, or evidence of bats, is found during the course of the work, compensatory measures will be required for the loss of roosts. It is considered highly unlikely that this will occur.

7.2 GCN

It is concluded from the results of the torching surveys for GCN, that the species is currently absent from the site. There are no obvious reasons for this, as the habitat is currently being managed sensitively and appears suitable. The PSI, although below average, does not preclude their presence and the species is certainly present and breeding within a 1km radius of this pond.

Two potential problems for GCN on the site are the presence of fish in the form of eels and possibly water quality. Further recommendations are made in 9.2 to try and elucidate the reason for their absence and continue to manage the habitat in an appropriate manner for if they return. However, given that there is an inflow to the site, it will not be possible to exclude potential predators such as eels.

7.3 Other Ecological Issues

Although not under any legal protection, the presence of the large pied wagtail roost is an interesting Biodiversity feature on the site. Care should be taken to avoid disturbance to these birds during the demolition and construction phases of the project.

8 Ecological Impacts

8.1 Bats

Although the survey carried out on the building proposed for demolition on the Ipsen Biopharm site was negative there is still some very minimal potential for bats to be present on occasions within the corrugations in the metal panels on the building due to this behaviour having been recorded in a similar building in 1999 by a whiskered bat. However, the levels of lighting around this building are further impedance to roosting, over and above the low suitability of the available crevices.

- Potential disturbance of bats – during the demolition
- Potential killing or injury of bats – individual bats during demolition works
- Possible loss of roosts – it is possible that individual males or non-breeding females roost within crevices associated with the building on occasion.

All of these potential impacts are considered negligible.

8.2 GCN

There is no potential terrestrial GCN habitat within the construction zone on the site and the surveys on the nearby ponds (both on the site and over the road on the site associated with a proposed car park) were negative for the species. This is an actively used site, with high levels of machinery movements already being undertaken and the proposed demolition and construction of a new building are not considered to increase the risk of any impacts to GCN on the site.

9 Mitigation & Recommendations

9.1 Bats

No specific mitigation or recommendations are made with regard to bats. However, in the highly unlikely event of any evidence of bats being found during the course of the works, work must stop and NRW must be contacted as they may require a licence to be issued to complete the works. Mitigation measures would then need to be put in place to compensate for any loss of roosts.

9.2 GCN

No mitigation or recommendations are made with regard to the animals themselves due to the absence of the species on the site and the total lack of terrestrial habitat available within the proposed construction zone.

With regards to the management of the habitat, this already appears to be ideal for great crested newts and finds a balance between the requirements of amphibians and the well-being of the staff working on the site.

There are however two potential issues. Firstly there is the presence of *Elodia Canadensis*, which is listed as an INNS under the Wildlife & Countryside Act. While it is not illegal to grow this plant on private property, it is illegal to cause, or allow it to spread into the wild. With this in mind it is recommended that care is taken when managing the pond and outflow. It is essential that the plant is not allowed to pass through the grille on the outflow as it could then spread to a much wider area and

infect associated watercourses. The most expedient way of disposing of the plant, or any parts of the plant would be to compost it in the great crested newt management area.

The second issue is the total lack, not only of great crested newts, but also a total lack of any amphibians. Aquatic invertebrate life is also very limited and restricted to water shrimps. These aquatic crustaceans have relatively high levels of pollution tolerance (compared with amphibians) and their presence can be an indication of poor water quality. With this in mind, and also taking into consideration that this is an off-site water source for which Ipsen Biopharm cannot be responsible for the pollution of, it is recommended that water quality testing for pollutants is undertaken. The first stage would be to seek advice from NRW as the statutory body responsible for pollution control.

9.3 Other Ecological Issues

Care should be taken not to disturb the night roost of pied wagtails on the adjacent building. In reality, this should not pose any real problems as the birds are used to the bright lighting and high activity levels already on the site. Demolition and construction works are unlikely to be undertaken during the night period when the birds are in situ.

10 Legal Implications

10.1 Invasive Non-native Species

Elodia canadensis is included in the list of alien invasive species covered by the Wildlife & Countryside Act 1981. Under this legislation, the introduction of any of the species listed, or allowing them to spread into the wild could constitute an offence.

There are however no legal implications with regards to growing these plants in a garden situation.

11 Appendices

11.1 Site Photographs



Building proposed for demolition



Roof of the building, showing Perspex panels



The interior of the building



High levels of lighting around the building during the hours of darkness



The pond in the 'wildlife management' area

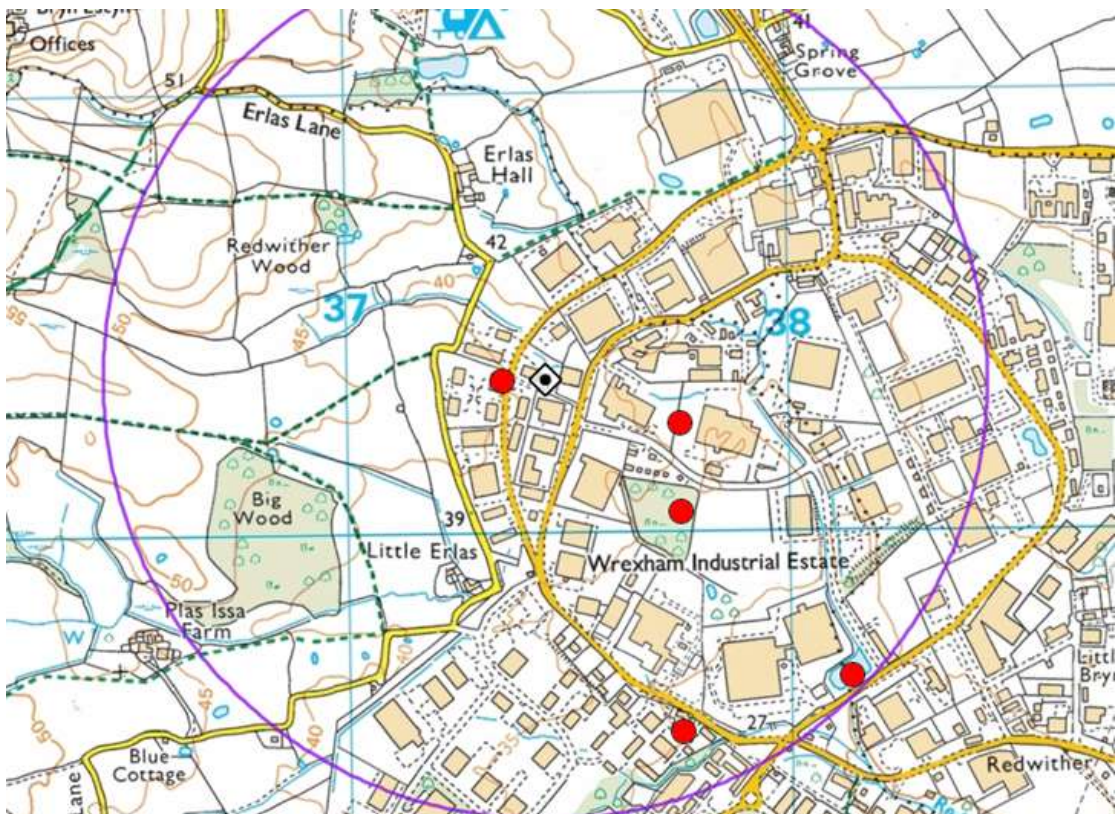


Inflow stream to the pond

11.2 Maps of Cofnod records

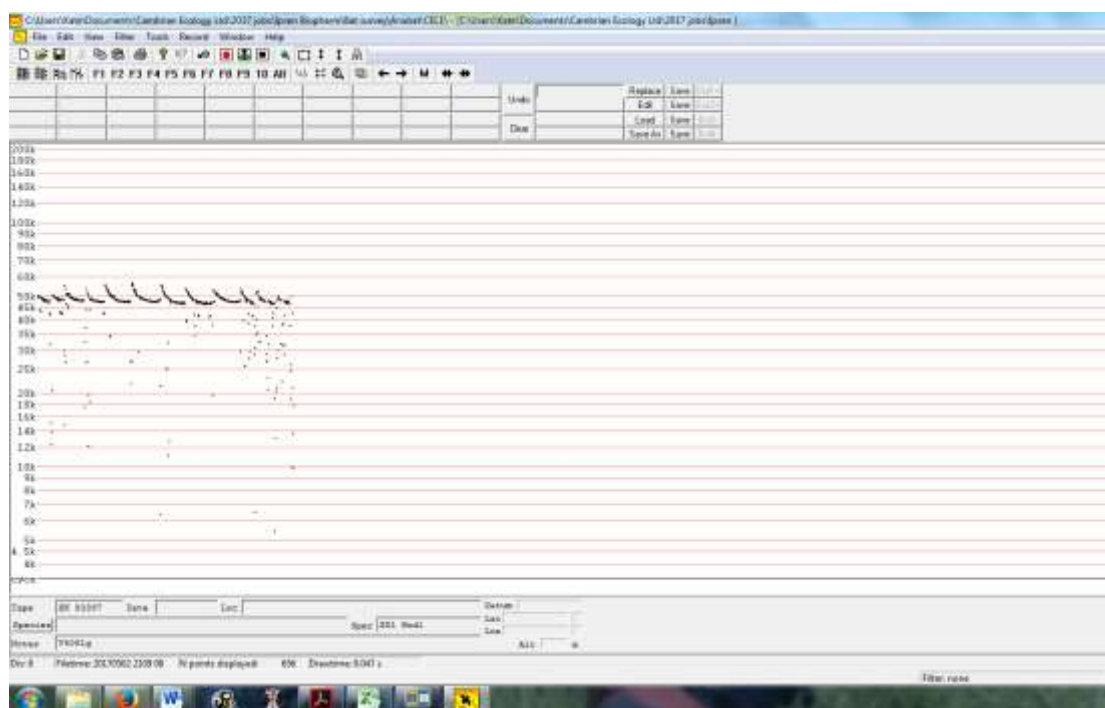


Map of GCN records within 1km of the site



Map of bat records – whiskered roost nearest, common pip, noctule and sop pip next nearest (detector)

11.3 Examples of bat calls recorded



Common pipistrelle pass at 21.09

11.4 Biological Records

Date	Location	Grid Ref	Species	Nature Record	of	Recorder
29.03.17	Ipsen Biopharm, Wrexham Industrial Estate	SJ3745750293	Eel	Sighting during torching survey for GCN		Kate Williamson
29.03.17	Ipsen Biopharm, Wrexham Industrial Estate	SJ3745750293	<i>Elodea candensis</i>	Pond survey		Kate Williamson
02.05.17	Ipsen Biopharm, Wrexham Industrial Estate	SJ3745750293	Common pipistrelle	Anabat record		Kate Williamson
02.05.17	Ipsen Biopharm, Wrexham Industrial Estate	SJ3745750293	Pied wagtail	Night roost of >100 birds		Kate Williamson

11.5 Review Table

Name	Task	Date
Kate Williamson	Author	04.05.2017
Chris Hall	Review	05.05.2017