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**Preliminary Ecological Assessment
Proserve Site
Wrexham Industrial Estate
8th February 2022**



Report by: Chris Hall: ACIEEM

Client: Lovelock Mitchell (Chester) Ltd

**Planning
Authority:** Wrexham Borough Council

**Grid
Reference:** SJ 37579 50176 (Approximate site centre)

Cambrian Ecology Ltd/Preliminary Ecological Assessment/Proserve Site: Wrexham Industrial Estate/2023

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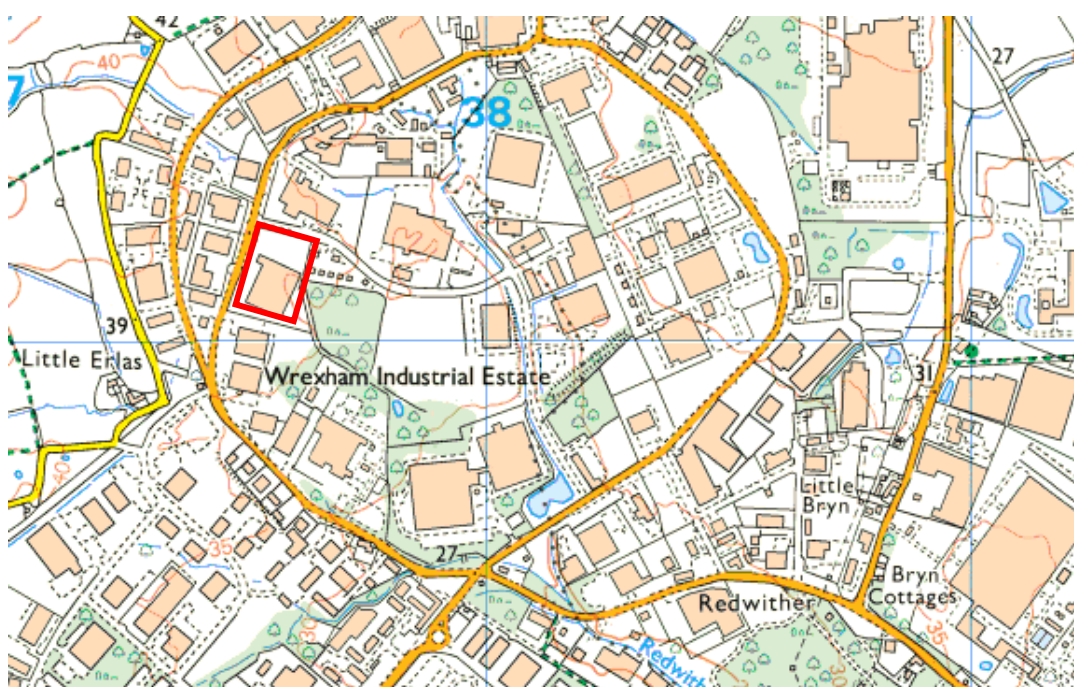


Figure 1: Site location

Preliminary Ecological Assessment

Proserve, Ash Road North Wrexham Industrial Estate

8th February 2023

1. Summary

A Preliminary Ecological Assessment (PEA) was carried out by Cambrian Ecology Ltd on the Proserve site on Ash Road North on the Wrexham Industrial Estate. The original industrial unit on the site has now been demolished and the vacant plot is proposed for redevelopment. The site was previously surveyed by Cambrian Ecology in 2017 prior to the demolition taking place.

The Phase 1 Habitat survey revealed that most of the site is dominated by hard standing on the footprint of the former building and extensive car parking. There are also significant piles of spoil resulting from the demolition process.

With regard to more natural habitats, what had previously been recorded as heavily managed amenity grassland of minimal Biodiversity value, has now been reclassified as semi-improved grassland. This is as a result of the removal of the previous intensive management regime which has allowed the habitat to regenerate.

Also present is a broadleaved woodland which lies outside of the development boundary and will be unaffected by the proposals. Recommendations have however been made with regards to the illumination of this woodland due to the recommendations in relation to bats and artificial lighting which have been introduced since the previous survey, (BCT 2018).

There are a number of immature broadleaved trees on the boundary with Ash Road North and some small areas of scrub on the northern and eastern boundaries. In addition to the above, there are small areas of ornamental planting, a small concrete attenuation pond, which appears to dry up on a fairly regular basis, and an invasive species in the form of bamboo; (*Phyllostachys aurea*).

Protected species issues include the potential presence of badgers; (*Meles meles*), hedgehogs; (*Erinaceus europaeus*), nesting birds and herpetofauna, (amphibians and reptiles) in some of the terrestrial habitats.

Under Chapter 6 of Planning Policy Wales 11, planning authorities must seek to maintain and enhance Biodiversity in the exercise of their functions. In this case Biodiversity enhancements will be achieved through the eradication of the invasive bamboo, the excavation of new ponds and the planting of native tree species as an integral part of the landscaping scheme.

Key Messages:

1. The site is dominated by hard standing which is of no ecological value.
2. It is recommended that the scattered trees are retained where possible and any losses replaced, see Section 8.1.3.
3. It is also recommended that the grassland habitats are retained, and favourable management regimes introduced, see Sections 8.1.5
4. Some precautionary measures have been recommended to avoid any negative impact on badgers and hedgehogs, see Section 8.2.1.
5. Recommendations are provided with regards to lighting to prevent any impact on bat commuting and foraging along the eastern site boundary, see Section 8.2.2.
6. Impact on nesting birds can be avoided by following the recommendations made for the timing of vegetation clearance in Section 8.2.3.
7. Due to the potential presence of great crested newts and other herpetofauna, some precautionary measures will be required along with some new habitat creation, see Section 8.2.4.
8. Biodiversity enhancement will be achieved via the eradication of the invasive bamboo, new native tree planting, pond creation and favourable management of grassland habitats, see Section 9.

2. Introduction

A Preliminary Ecological Assessment (PEA) was carried out by Cambrian Ecology Ltd on the Proserve site on Ash Road North on the Wrexham Industrial Estate. The original industrial unit on the site has now been demolished and the vacant plot is now proposed for redevelopment. The site was previously surveyed by Cambrian Ecology in 2017 prior to the demolition taking place.

The relevant planning authority is Wrexham Borough Council.

The approximate centre of the site is located at Grid Reference SJ 37579 50176.

3. Methodologies

3.1 Habitats

The latest Phase 1 Habitat survey was carried out on 7th February by ecologist Chris Hall. The survey took the form of an extended Phase I survey and identified baseline ecological conditions, as well as any important or notable habitats. All habitats within the proposed development site were classified and mapped as accurately as possible, using target notes to identify features of particular ecological interest. Species lists were drawn up for each habitat type identified and the habitat condition was assessed. In the context of this report, *important or notable habitats* are considered to be those which are of a sustainable size and which meet any of the following criteria:

- Habitats which have a high intrinsic ecological value, i.e. they support a diverse range of vascular plant and/or faunal species;

- Mature or semi-natural habitats in built-up areas;
- Environment Wales Section 7 ‘Priority’ habitats;
- Local habitats considered having a significant extent and/or ecological interest.
- Potentially Invasive Non-Native Species, (INNS)

3.2 Protected Species

The site was also surveyed for protected species and assessed by ecologist Chris Hall, on its potential to support any protected or important species. During this survey, a search was made for field signs of protected or notable species and assessments made of the potential of habitats to support these species. In the context of this report important or notable species are considered to be those that meet any of the following criteria:

- Species protected by British or international law
- Environment Wales Act Section 7 ‘Priority’ species
- Nationally rare or scarce species
- Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber lists)

Torching surveys were also carried out on the small water body on the site for great crested newts. These were carried out on the evenings of 29th March, 12th April and 2nd May.

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 2km from the survey site area for protected species and all protected sites and a 10km radius for protected sites of relevance to bat species.

4 **Survey Limitations**

Field signs for protected and important species are often difficult to find or absent from a site. For this reason, the site and its habitats are assessed on their potential to support these species.

Although this survey was conducted outside of the normally recognised botanical survey season, due to the industrial nature of the site, combined with the results of the previous survey of 2017 which was also carried out by Cambrian Ecology, it is considered that the timing of this survey will not have unduly influenced the results.

5 **Results**

5.1 Habitats

The Phase 1 Habitat survey revealed that most of the site is dominated by hard standing on the footprint of the former building and extensive car parking. There are also significant piles of spoil resulting from the demolition process.

With regard to more natural habitats, semi-improved grassland, scrub and an attenuation pond are also present along with a number of scattered, immature broadleaved trees.

There is a small area of broadleaved woodland which lies outside of the development boundary and will be unaffected by the proposals.

The location of the habitats is shown in Appendix 3.

Broadleaved woodland

There is an area of broadleaved woodland which lies outside of the south-eastern boundary of the site. Species present include ash; (*Fraxinus excelsior*), elder; (*Sambucus nigra*), wych elm; (*Ulmus glabra*) willow; (*Salix spp*) and blackthorn; (*Prunus spinosa*).

Ground-flora was sparse at the time of the survey but included nettle; (*Urtica dioica*), bramble; (*Rubus fruticosus*), dog rose; (*Rosa canina*), dog's mercury; (*Mercurialis perennis*), cuckoo pint; (*Arum maculatum*), bluebell; (*Hyacinthoides non-scriptus*) and ivy; (*Hedera helix*).

Introduced Species

Two introduced species were recorded in the form of elephant's ears; (*Bergenia cordifolia*), in the north-west corner of the site, and bamboo, which has colonised three distinct areas on the western and southern boundaries. This particular species, believed to be *Phyllostachys aurea*, is particularly invasive and has spread significantly since the 2017 survey.

Semi-Improved Grassland

This habitat was originally classified as amenity grassland in the 2017 survey. The removal of management however has resulted in this habitat regenerating and it has now been classified as semi-improved grassland. The broadleaved species present include dandelion; (*Taraxacum officinale*), clover; (*Trifolium repens*), creeping buttercup; (*Ranunculus repens*) yarrow; (*Achillea millefolium*), oxeye daisy; (*Chrysanthemum leucanthemum*), cowslip; (*Primula veris*), colt's foot; (*Tussilago farfara*) and black knapweed; (*Centaurea nigra*).

Grasses now present in the sward include cock's foot; (*Dactylis glomerata*), Yorkshire fog; (*Holcus lanatus*), common bent; (*Agrostis capillaris*) and false oat grass; (*Arrhenatherum elatius*)

Scattered Trees

There are scattered trees planted along the western site boundary, presumably as part of a landscaping scheme. The species present include ash, lime; (*Tilia spp*) and plane; (*Platanus spp*).

Spoil Heaps

Spoil heaps now cover a significant part of the southern part of the site, and these vary from broken concrete and tarmac near the eastern boundary and what appears to be top-soil near the southern boundary.

The majority of the spoil heaps are devoid of vegetation, but some plants have begun to colonise the habitat in places.

Species present include teasel; (*Dipsacus fullonum*) and mullein, (*Verbascum thapsus*), both of which are biennial. Other species include broadleaved dock; (*Rumex obtusifolius*), willow herb; (*Epilobium montanum*) and butterfly bush; (*Buddleia davidii*).

Scrub

There are areas of scrub encroachment on the site perimeters where bramble; (*Rubus fruticosus*) is the dominant species along with dog rose; (*Rosa canina*), willow; (*Salix spp*), hawthorn; (*Crataegus monogyna*) and ash saplings.

Standing Water

There is a small area of standing water in the north-west corner of the site. This appears to be a small attenuation pond fed by an underground culvert. There was no aquatic, emergent or marginal vegetation during the survey of 2017 and the substrate was covered with a dense layer of decomposing leaves.

During the 2023 survey, this attenuation pond was almost dry and is now dominated by dense growth of greater reed mace; (*Typha latifolia*) which has now taken over the habitat leaving virtually no open water. Greater willow herb; (*Epilobium hirsutum*) is now encroaching on the margins, further reducing the extent of the habitat.



Figure 2: Aerial photograph of the proposed development site

5.2 Protected Species

There was no evidence of the presence of any protected species recorded during the survey.

Bats

The scattered trees on the western perimeter of the site were assessed on their potential to support roosting bats. These trees are however relatively young and in good condition. No features were noted that offered roosting potential.

There are however potential roosting cavities in trees in the woodland to the east of the site and also the potential for this woodland habitat to be utilised for commuting and foraging.

Great Crested Newts

A 'Habitat Suitability Index' (HSI) for great crested newts was undertaken on the standing water during the 2017 survey. The results are shown below. The three torching surveys subsequently carried out for great crested newts were all negative.

Table 1: HSI Results

Location	1.0
Pond area	0.1
Pond drying	0.1
Water quality	0.01
Shade	1.0
Fowl	1.0
Fish	1.0
Ponds	0.3
Terrestrial habitat	0.33
Macrophytes	0.3

HSI = 0.28

Any HSI <0.5 indicates a poor-quality habitat for GCN.

This habitat has deteriorated since the 2017 survey and by 2023 has virtually no open water with the pond being choked with greater reed mace and great willow herb.

Some of the habitats on the site do offer potential terrestrial habitat for great crested newts and other amphibians.

Nesting Birds

There is the potential for nesting birds to be present within the scrub, trees and dense thickets of bamboo during the recognised breeding bird season of 1st March to 30th September.

5.3 Desk Study

5.3.1 Protected Species

The biological record search revealed a large number of records of reptiles and amphibians as summarised in Table 2 below.

Table 2: Amphibian and reptile records

Common Name	Zoological Name	Number of Records
Palmate newt	<i>Lissotriton helveticus</i>	8
Smooth Newt	<i>L. vulgaris</i>	53
Newt spp	<i>Lissotriton spp</i>	31
Great crested newt	<i>Triturus cristatus</i>	100+
Common frog	<i>Rana temporaria</i>	33
Common toad	<i>Bufo bufo</i>	24

Grass snake	<i>Natrix helvetica</i>	1
Adder	<i>Vipera berus</i>	2
Slow worm	<i>Anguis fragilis</i>	2
Common lizard	<i>Zootoca vivipara</i>	1

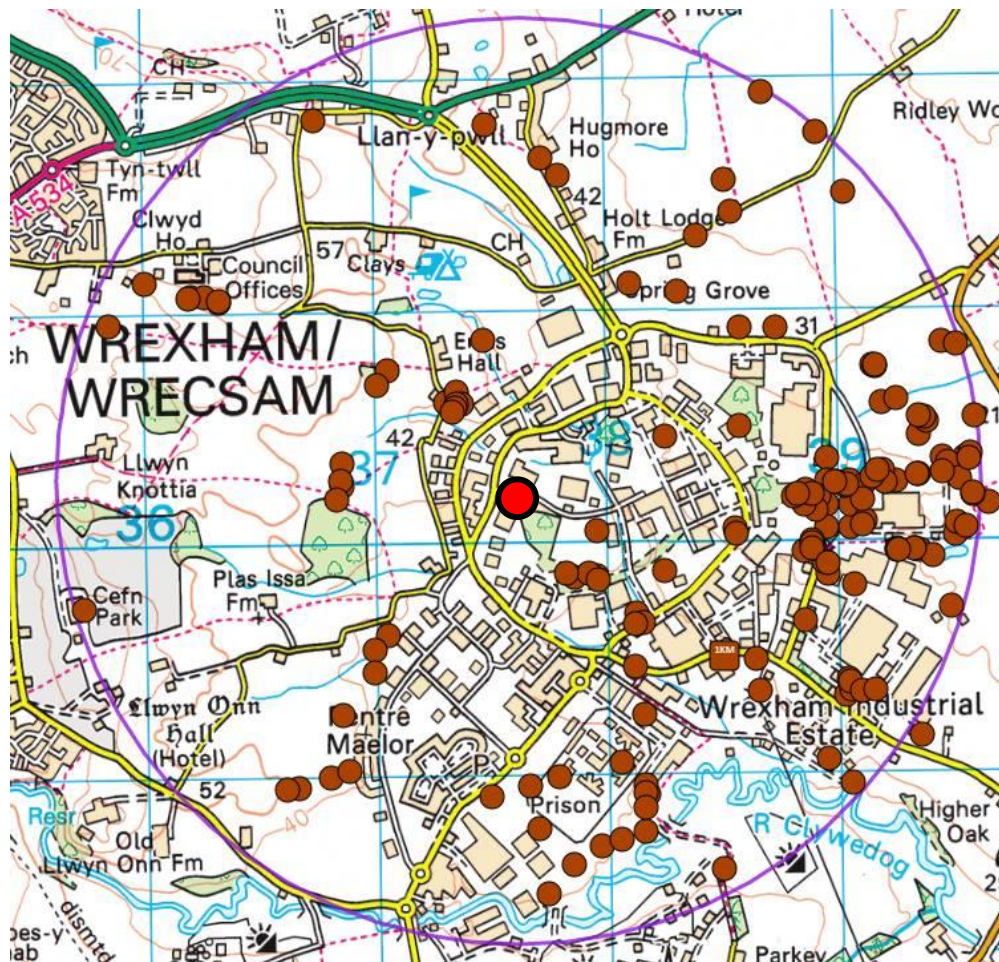


Figure 3: Location of amphibian and reptile records

The data search also revealed a large number of relevant mammal records including 13 bat records, some of which originated from the adjacent woodland habitat to the immediate east.

Table 3: Mammal records

Common Name	Zoological Name	Number of Records
Badger	<i>Meles meles</i>	40
Hedgehog	<i>Erinaceus europaeus</i>	6
Unidentified bat	<i>Chiroptera</i>	4
Brandt's bat	<i>Myotis brandtii</i>	2
Whiskered bat	<i>M. mystacinus</i>	4
Whiskered/Brandt's bat	<i>M. mystacinus/brandtii</i>	1
Natterer's bat	<i>M. nattereri</i>	1
Daubenton's bat	<i>M. daubentonii</i>	3
Myotis bat	<i>Myotis spp</i>	2

Common pipistrelle	<i>Pipistrellus pipistrellus</i>	11
Soprano pipistrelle	<i>P. pygmaeus</i>	5
Pipistrelle	<i>Pipistrellus spp</i>	4
Noctule bat	<i>Nyctalus noctula</i>	6
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	5
Brown long eared bat	<i>Plecotus auritus</i>	9

5.3.2 Protected/Designated Sites

The data search revealed that there are no statutory protected/designated sites within the search area.

There is however one relevant non-statutory designated site which lies adjacent to the proposed development site which is the Erlas Black Wood Local Wildlife Site which is part of the wider Wrexham Industrial Estate Wildlife Site. This woodland is designated on the strength of its broadleaved woodland habitats and associated botanical species.

The site also sits within a Welsh B-line. B-lines are a network of linear areas designated across Wales with the intention of improving habitat connectivity for pollinators between Important Invertebrate Areas, (IIAs). While these areas are non-statutory, it is worth taking them into consideration regarding Biodiversity enhancement schemes as native planting in such sites will often aid in national habitat connectivity for these taxa.



Figure 4: Location of part of the Wrexham Industrial Estate Wildlife Site which lies adjacent to the proposed development site.

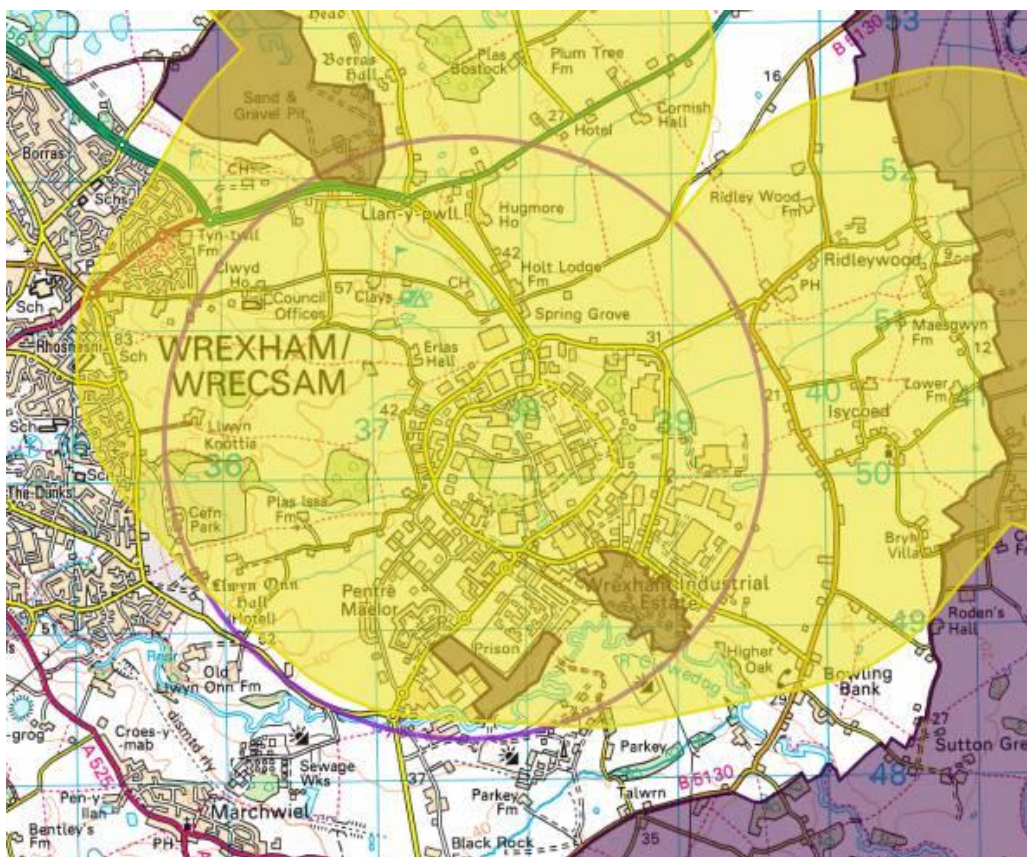


Figure 5: The Welsh B Lines are (yellow) which links the IIAs (purple) to improve habitat connectivity for invertebrates.

6 Habitat Evaluation & Impact Assessment

6.1 Broadleaved Woodland

The broadleaved woodland on the eastern site boundary contains a number of the ground-flora species which are ‘Ancient Woodland Indicator Species’ including dog’s mercury, cuckoo pint and bluebells.

Ancient Woodland is a ‘Priority Habitat’ in both Wales and the UK and is the subject of the Wrexham ‘Biodiversity Action Plan’ (BAP). Due to its European status, Ancient Woodland is also listed in Annexe 1 of the Habitats Directive.

This habitat is outside of the planning boundary and will not be impacted in any way by the proposals.

There is, however, the potential for a negative impact on species associated with this woodland, in particular bats, if this habitat is subjected to any additional illumination, see Section 8.2.2.

6.2 Introduced Species

The introduced species in the form of bamboo is already having a negative impact on Biodiversity as it out-competes native species.

The removal/eradication of this species would therefore be seen as a Biodiversity enhancement, see Section 9.

6.3 Scattered Trees

The scattered trees comprise common and widespread species of no conservation concern. Being on a very busy and brightly illuminated road, these trees will also be of negligible importance to habitat connectivity for taxa such as bats.

Trees are however of significant importance in an industrial landscape such as this and as a result, losses must be kept to a minimum and any losses replaced, see Section 8.1.2.

6.4 Scrub

The scrub habitats comprise common and widespread species of no conservation concern and are of limited interest from a botanical perspective.

This habitat does however have the potential to harbour protected species in the form of herpetofauna, nesting birds and hedgehogs.

6.5 Semi-Improved Grassland

While the semi-improved grassland habitat comprises of common and widespread species of no conservation concern, as this habitat has regenerated from the previously recorded amenity grassland, it has become increasingly beneficial. This will particularly benefit pollinating insects, which will contribute to the Welsh B Lines initiative. The semi-improved grassland also provides potential terrestrial habitat for amphibians,

In the context of the industrial estate, this habitat is of enhanced value to Biodiversity and its loss could have a negative impact at a local level.

6.6 Spoil Heaps

The spoil heaps on the site are currently of minimal botanical value, having not been in-situ for long enough to develop any significant vegetation associations.

The more industrial debris resulting from the demolition of the previous factory unit on the site, in the form of broken concrete and tarmac, does however provide excellent refuges for amphibians and reptiles for which there are numerous records in the vicinity. This habitat is largely restricted to the area along the eastern site boundary.

6.7 Standing Water

The standing water is of negligible botanical or Biodiversity benefit in its current condition and any impact as a result of the loss of this habitat would be restricted to a local level.

There is also the potential for a positive impact on the site as a result of the proposals to excavate two new ponds, see Section 9.

7 Species Evaluation & Impact Assessment

7.1 Badgers

There will be no setts damaged or disturbed and there will be no loss of potential badger foraging habitat. There will therefore be no negative impact on badgers as a result of either of these factors. Construction sites are however hazardous places for badgers which can range widely during their nocturnal foraging and territorial patrolling. As there are 40 records of badgers within a 2km radius, as revealed by the results of the data search, there is the potential for this species to be present on the site at times during the construction phase of the proposed development. The entrapment of animals in open excavations is the primary risk to this species. This could have a negative impact on badgers at a local level.

7.2 Bats

While there is no potential bat habitat within the site boundaries, the woodland of the Wildlife Site to the east has the potential be used for foraging and commuting, and there are cavities in some of the trees which could be exploited as roosts. A number of the bat records on the Cofnod data base originated from this woodland.

Although this woodland will be physically unaffected by the proposals, inappropriate illumination can have a similar negative impact on bat movements to physical habitat fragmentation and can cause a 'light barrier' effect in some species, in particular, *Rhinolophus*, *Plecotus* and *Myotis* species. All of these species are known to be present in the area from the results of the biological records search.

Even species such as *Pipistrellus* can be discouraged from flying across brightly lit spaces and any illumination of roost entrances could result in the abandonment or failure of uptake of a roost.

Key flight paths identified in studies, (BCT 2018) include hedgerows, woodland edges and river corridors.

The habitat fragmentation caused by inappropriate exterior illumination can potentially result in a negative impact at a regional level as the impact can extend to roosts some distance from the proposed development site.

Recommendations are made in Section 8.2.2. to ensure that this does not occur.

7.3 Great Crested Newts, Amphibians & Reptiles (Herpetofauna)

While the water body is considered to offer little in the way of breeding potential for great crested newts, with a 'Habitat Suitability Index' of 0.28 in 2017, combined with a deterioration of the habitat since then, there is the potential for great crested newts and other herpetofauna to be present in some

of the terrestrial habitats. The industrial debris in the form of broken concrete and tarmac that makes up some of the spoil heaps would make excellent refuges for these taxa. This material is primarily concentrated on the eastern site boundary. The semi-improved grassland and scrub habitats also have the potential to harbour these taxa.

The insensitive removal of the debris could result in amphibian and/or reptile fatalities resulting in a negative impact at a local level.

The adder, grass snake, common lizard, slow worm, common toad and great crested newt are all included in Section 7 of the Environment Wales Act as being 'Priority Species' across Wales, including Wrexham. Any negative impact must therefore be avoided.

7.4 Hedgehogs

There is some potential for hedgehogs to be present on the site in the vegetation around the site perimeter, and to be present throughout the site during the hours of darkness.

As in the case of badgers, while there will be no impact on hedgehogs as a result of habitat loss, there is a potential impact as a result of the hazardous nature of construction sites. Again, entrapment in open excavations is the primary risk which could result in animal fatalities. This could have a negative impact at a local level.

The hedgehog is a 'Priority Species' across Wales including Wrexham and as a result, any negative impact must be avoided.

7.5 Nesting Birds

There is the potential for nesting birds to be present at the appropriate time of year, primarily utilising the dense bamboo, scrub and scattered trees.

Any disturbance during the nesting season resulting in the failure of the brood has the potential to have a negative impact at a local level.

All birds, with the exception of some 'Pest Species' which can be controlled under licence are protected while nesting under existing UK legislation. This factor must be taken into account with regards to the timing of any works which could impact on potential nesting habitat.

8 **Mitigation & Recommendations**

8.1 Habitat

8.1.1 *Broadleaved Woodland*

The broadleaved woodland of the Wildlife Site is outside of the site boundary and will be physically unaffected by the proposed works. No mitigation measures are therefore required from a habitat perspective.

Some recommendations have however been made to prevent any impact on bat species known to be present within this woodland area, see Section 8.2.2.

8.1.2 *Introduced Species*

The introduced species in the form of bamboo on the site is currently already having a negative impact on Biodiversity and it is recommended that this invasive species is eradicated as part of the Biodiversity enhancement strategy, see Section 9.

8.1.3 *Scattered Trees*

It is recommended that the trees on the site are retained, if possible, although it is understood that some removal may be required along the boundary with Ash Road North. If any trees do require removal, it is recommended that new trees are planted in compensation. Any new trees should be native species of local provenance.

8.1.4 *Scrub*

The botanical species assemblage of the scrub habitats comprises a very limited range of common and widespread species of no conservation or Biodiversity concern. No mitigation measures are therefore required for the loss of this habitat.

There are however potential protected species issues in the form of hedgehogs, herpetofauna and nesting birds which will be required to be taken into consideration, see Section 8.2.

8.1.5 *Semi Improved Grassland*

It is recommended that the areas of semi-improved grassland around the site perimeter are retained as these areas have regenerated from what was originally amenity grassland into a significantly more valuable habitat to a range of taxa.

It is also recommended that a favourable management regime is introduced as part of the Biodiversity enhancement strategy to satisfy Wrexham Borough Council's obligations under the Environment (Wales) Act, see section 9.

8.1.6 *Spoil Heaps*

The spoil heaps are currently of negligible botanical value as the majority of these features have not been in place for long enough to develop any significant vegetation associations. These features will obviously all be lost to facilitate the new development. No mitigation measures are required from a botanical perspective for the loss of the spoil heaps.

There are however potential protected species issues to be taken into consideration in the form of herpetofauna. The more industrial waste in the form of broken concrete and tarmac along the eastern

boundary has the potential to provide a valuable habitat for amphibians and reptiles and this will be lost as a result of the proposed development.

Recommendations have therefore been made to translocate some of this material to provide an alternative refuge for these taxa, see Section 8.2.4.

8.2 Protected Species

8.2.1 *Badgers & Hedgehogs*

A precautionary approach is recommended in relation to the potential presence of badgers and hedgehogs to be on site during the groundworks and early construction phases of the proposed development. The simple measures below should therefore be implemented to remove the risk to these taxa from entrapment.

- Escape ramps must be fitted to any excavations left open overnight to allow animals to escape.
- These excavations must be checked for the presence of animals prior to work commencing each morning.
- All open pipes must be securely capped at the end of each day.
- Site hygiene with regards to food waste must be enforced to reduce the chances of animal being tempted to stray onto the construction site overnight.

8.2.2 *Bats*

Exterior Lighting

There is the potential for additional lighting on the site to inhibit movements in the Wildlife Site woodland outside the eastern site boundary. There is also the potential for additional lighting on this boundary to result in the abandonment of roosts in tree hollows.

The other three site boundaries are already brightly illuminated, along with the majority of the industrial estate. The following measures therefore are only applicable to the eastern boundary with the woodland.

- There must be no exterior lighting directed towards the woodland outside the site's east boundary.
- All exterior lighting on the eastern side of the new industrial unit will be 'low level' and will be movement activated.
- The illumination used will be 'Light Emitting Diodes' (LEDs).
- The illumination will be directional and downward facing to avoid illumination of the wider area. This is easily achieved when using LEDs.
- There must be no upward illumination in any direction where it could inhibit bat movements.
- All luminaires will lack any UV component.
- Luminaires with a 'warm white' spectrum should be used, (ideally <2700 Kelvin) to reduce blue light component.

- Luminaires should feature peak wavelengths higher than 550nm to avoid the light component most disturbing to bats.
- The location of exterior lights (if any) must be clearly shown on the architect's drawings submitted with the planning application.

New Planting

It is also recommended that new tree planting to enhance Biodiversity takes place along this eastern boundary to eventually further screen to the woodland from light pollution.

8.2.3 *Nesting Birds*

It is recommended that any vegetation clearance that could have an impact on nesting birds is carried out outside the bird nesting season, recognised by RSPB as 1st March – 30th September. If this is not possible a thorough search for active nests must be carried out by a suitably experienced person prior to clearance commencing. In reality, this is very difficult and can lead to serious delays at the construction stage if active nests are found. If any active nests are found work must be delayed until such time as the young have fledged. In particular, the bamboo on the site has very dense foliage and a search for nests may not be feasible.

8.2.4 *Great Crested Newts & Herpetofauna*

Due to the potential for great crested newts and other herpetofauna species to be present, it is recommended that the removal of the industrial debris along the eastern side of the site is supervised by a suitably experienced ecologist who will guide the working methods.

If great crested newts are found at any time during this supervised work, or at any point during the proposed development, Natural Resources Wales, (NRW) must be contacted as there may then be a requirement for a licence to complete the works.

The ecologist should also carry out an induction relating to the legal status of the species, prior to works commencing.

To replace and enhance some of the habitat in the form of industrial spoil heaps which will be lost as a result of the site clearance, five new hibernacula should be constructed using the industrial spoil removed from these heaps. These features should be constructed following the Building with Nature Biodiversity Specification #2 (See Appendix 1) in a discrete area along the eastern site boundary adjacent to the woodland habitat. These features must be shown on the architect's drawings submitted with the planning application

9 Biodiversity Enhancement

Under Chapter 6 of Planning Policy Wales 11, Planning Authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This policy addresses the Section 6 Duty of the Environment (Wales) Act 2021 and results in the likelihood of planning applications being refused unless they can show a positive impact on biodiversity.

In this case, Biodiversity enhancements will be achieved through the eradication of the bamboo recorded on the site. This will have a positive impact on Biodiversity at a local level by preventing this plant from spreading further and outcompeting a more diverse botanical assemblage.

It is also recommended that new native tree planting takes place along with the excavation of new ponds and favourable management regimes for semi-improved grassland areas.

Bamboo Eradication

The bamboo species on the site, *Phyllostachys aurea* is particularly invasive and should be eradicated. The most effective way of achieving this is to cut the plant back to ground level and then apply an appropriate systemic herbicide to the more vulnerable new growth. Due to the persistence of this species, this may require repeat applications.

New Tree Planting

It is recommended that any new tree planting as part of the site landscaping scheme utilises native species of local provenance.

The following species are considered appropriate for this site:

Oak; (*Quercus petraea*)
 Rowan; (*Sorbus aucuparia*)
 Holly; (*Ilex aquifolium*)
 Crab apple; (*Malus sylvestris*)
 Elder; (*Sambucus nigra*)
 Cherry; (*Prunus avium*)

Establishing the New Planting

All plants must be securely protected from any rabbits/livestock.

Any plant casualties within the first 5 years must be replaced.

To ensure that the new planting does not have to compete with other vigorous plant species, ground preparation must include the eradication of deep-rooted perennial weeds.

It is recommended that small, bare rooted plants are used as these become established more easily.

Bare root planting must take place in autumn/winter when the plants have dropped their leaves.

Watering during dry weather in the first 12 months is recommended as this can significantly reduce the number of casualties.

New Pond Creation

It is understood that two new ponds are to be created on the western boundary of the site. It is recommended that the ponds include the following characteristics:

- The ponds should be deep enough to prevent consistent drying out in the summer but should be no deeper than 4m. Ponds should hold water throughout summer at least once every three years.
- The ponds should have shallow margins to allow easy access for amphibians for spawning.
- Any pond management must take into account the amphibian spawning cycle and be carried out during the winter.
- The introduction of very vigorous plant species such as *Typha latifolia* must be avoided as this would soon cause management problems.
- The south side of ponds should not be shaded.

If these ponds are to be used by amphibians, it is imperative that fish are not introduced.

New Marginal Planting

It is recommended that vegetation on the two ponds is largely allowed to regenerate naturally. There are however some beneficial species which are slow to colonise and their introduction would provide more immediate habitat enhancement. The following species are recommended.

Marsh marigold; (*Caltha palustris*)

Yellow flag iris; (*Iris pseudacorus*)

Purple loosestrife; (*Lythrum salicaria*)

Water forget-me-not; (*Myosotis scorpioides*)

Water mint; (*Mentha aquatic*)

To minimise the risk of introducing invasive species, all plants must be sources from a reputable supplier and preferably using plants of local provenance.

Semi-Improved Grassland Management

Wildflower meadows require ongoing management to ensure that they do not degenerate into rough grassland. Mowing and the removal of arisings, to prevent enrichment of the soil, are key components of this management. The long-term aim must be to continually reduce the high nutrient levels which favour the coarser grasses to the detriment of the flowering plant species. It is also essential that this is carried out at the appropriate time of year to allow for seed production and dispersal.

- Cut down growth to 70-100mm from early September. Remove all arisings to prevent enrichment of the soil.
- Continue to lightly mow the remaining area as required over the winter months, removing the clippings each time.
- No mowing to be carried out from March – September.

- It is recommended that a composting area is established for the disposal of the mowing as this will also provide a valuable habitat for herpetofauna.

10 Legal Implications

10.1 Badgers

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under this Act it is an offence to damage, destroy or obstruct access to a badger sett, and also to disturb a badger whilst it is occupying a sett.

Undertaking an activity within 30 metres of a badger sett, which could result in damage to the sett, obstructing access to it or disturbance of any occupying badgers, may constitute an offence. This distance may be extended to 100 metres if the activity involves blasting or pile-driving.

NRW, the statutory conservation authority, are empowered under the 1992 Act to issue a licence permitting potentially damaging or disturbing activities to be undertaken within 30 metres or 100 metres of a badger depending on the nature of the activity undertaken as part of a local authority consented development.

In other circumstances such as commercial forestry operations and flood defence, licences are granted by the Welsh Government.

There is no current mechanism in place for the licensing of works for public safety. In these circumstances work must be carried out under the guidance of a detailed method statement which must first be approved by NRW.

A licence may also be granted for the exclusion of badgers from a sett and the ultimate destruction of the sett feature. An assessment of the impact of this action and the provision of appropriate mitigation measures are usually a pre-requisite to granting a destruction licence. Licences are normally only granted between 1st July and 30th November of any year.

10.2 Bats

Bats are protected under UK law by the Wildlife and Countryside Act 1981 (as amended) and also under European law by the Conservation of Habitats and Species Regulations 2021. Under these laws it is an offence to deliberately kill or injure a bat, to disturb a bat or to damage, destroy or block access to a roost. Bat roosts are protected under these laws whether the animals are present at the time of survey or not. NRW are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest.

10.3 Hedgehogs

The hedgehog is a priority species across North Wales, including Anglesey and is included in Section 7 of the Environment Wales Act (2021) as a species of importance to the maintenance and enhancement of Biodiversity in Wales.

10.4 Herpetofauna

Great crested newts are given full protection under the 'Conservation (Natural Habitats, &C) Regulations 1994 (the Habitats Regulations) as amended in 2007 & 2009.

They also receive protection under the Wildlife & Countryside Act 1981 (as amended). The legislation makes it an offence to deliberately capture, injure or kill a great crested newt or to deliberately take or destroy their eggs. It is also an offence to damage or destroy a breeding or resting place or to possess a live or dead specimen.

The 2007 amendment to the Habitats Regulations raised the threshold above which a person will commit the offence of deliberately disturbing a great crested newt. Now a person will commit an offence only if he deliberately disturbs the animals in a way likely to significantly affect (a) the ability of any significant group to survive, breed, rear or nurture their young, or (b) the local distribution or abundance of the species. The amendments have also removed many of the defences including the 'incidental result defence' which was previously an defence in acts where the offence was incidental as a result of a lawful activity which could not reasonably be avoided.

All British herpetofauna receive limited legal protection under Schedule 5 of the Wildlife & Countryside Act which protects the animals and their spawn from sale.

The existing offences under the Wildlife & Countryside Act, which cover the obstruction of places used for shelter or protection along with issues of disturbance and sale, still apply.

The adder, grass snake, common lizard, slow worm, common toad and great crested newt, are all included in Section 7 of the Environment Wales Act as 'Priority Species'.

10.5. Nesting Birds

Under Section 4 of the 1967 Act, any person who wilfully disturbs any wild bird included in Schedule 1 of the 1954 Act, while it is on or near a nest containing eggs or unflown young, shall be guilty of an offence and liable to prosecution. It is also an offence to disturb the dependent young of 'Schedule 1' species after they have left the nest. With the introduction of the Wildlife and Countryside Act 1981, all nesting birds received even greater protection under the Act. Once a bird places a single piece of material into place it then constitutes a nest. The nest is then protected by the Wildlife and Countryside Act, which makes it an offence to cause damage to the bird, nest, eggs or chicks and immediate habitat which is likely to result in damage by causing the bird to desert its nest.

In 2000, the Countryside and Rights of Way Act (CROW Act), was made law strengthening the legal protection for many species and introducing 'reckless disturbance' as an offence.

Planning Authorities are also obliged to take nesting birds into account in relation to planning decisions following guidance from the Welsh Government detailed in Technical Advice Note (TAN) 5.

11 References

Amphibian and Reptile Enhancement, Biodiversity Specification #2

Bat Conservation Trust (2018) Bats and artificial lighting in the UK

Precautionary method of working for reptiles, common toads, hedgehogs, badgers and nesting birds
Biodiversity Specification #1

12 Appendices

12.1 Instructions on hibernacula construction

Amphibian and Reptile Enhancement

Biodiversity Specification #2

This specification details three habitat enhancement features for native reptiles and amphibians. Please refer to your planning consent to determine which parts of this document are relevant to your application site.

1. Hibernaculum

A structure which provides reptiles and amphibians with shelter during the winter.

Location

Un-disturbed location where flooding is unlikely. Must be within or next to suitable habitat* and:

- Either, in a shady spot within 250m of a pond (amphibians)
- Or, in an open, sunny location (reptiles)

Preparation

Cleared in accordance with Biodiversity Specification #1 or bespoke Precautionary Working Method Statement if conditioned by planning consent.



Size

Minimum 2m long, 1m wide and 1m high.

Construction

1. Strip turf and excavate a hole 1m² minimum to a depth of 50cm or, where flooding cannot be ruled out, remove turf from an area measuring 1m² minimum but do not excavate.
2. Fill the footprint or hole with cut timber, brash and grubbed-up tree roots. A small amount of inert rubble, bricks or rocks may be placed at the bottom (<20% of total).
3. Pack untreated bark chippings or top soil into larger gaps.
4. Cover with soil or turf, leaving small areas of timber or rubble exposed to allow access.

Maintenance

Leave the structure un-disturbed. Vegetation may be cut during dry weather between April and September if desired, but no shorter than 150mm.



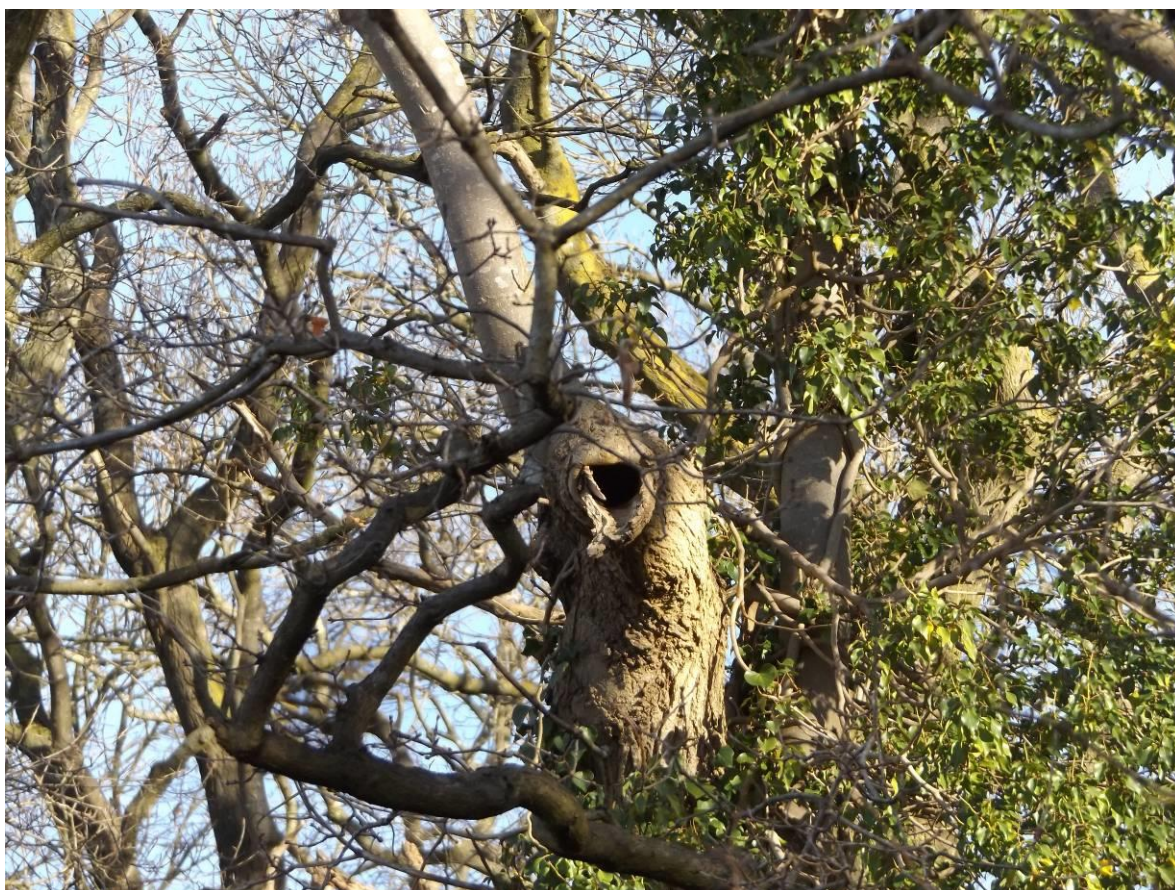
Helping create better places for people and wildlife in line with the BwN green infrastructure standards. <http://buildingwithnature.org.uk/>

Pg.1

12.2 Site photographic record



The proposed development site with the broadleaved woodland outside the eastern site boundary in the background



There are potential bat roosts in tree hollows in the broadleaved woodland



Semi-improved grassland with scattered trees



Semi-improved grassland on the southern site boundary



Dense bramble scrub on the western site boundary



The line of scrub along the northern boundary



Dense growth of bamboo on the southern boundary



Topsoil spoil heaps near the southern site boundary



The more industrial spoil heaps near the eastern boundary



Some of the industrial spoil could harbour herpetofauna



The remnants of the standing water habitat

12.3 Phase 1 Habitat Map



<u>Key</u>	
	Bamboo
	Scattered Trees
	Scrub
	Spoil Heaps (Topsoil)
	Spoil Heaps (Industrial)
	Semi Improved Grassland
	Standing Water

12.4 Review Table

Name	Task	Date
Chris Hall	Author	08.02.2023
Lizzie Richardson	Review	20.02.2023
Ben Box	Proofreading	21.02.2023