



Preliminary Ecological Appraisal

Rhosddu Industrial Estate, Main Rd, Old Rhosrobin, Gwersyllt, Wrexham, LL11 4YL

LVW Group

Status	Issue	Name	Date
Draft	1	Jessica Sibley BSc (Hons) MSc, Consultant Ecologist	24/11/2023
Reviewed	1.1	Elen Griffin BSc (Hons), MRSB, Ecological Consultant	06/12/2023
Final	2	Jessica Sibley BSc (Hons) MSc, Consultant Ecologist	06/12/2023

Arbtech Consultant's Contact Details:

Jessica Sibley
Consultant Ecologist
Tel: 07512307230 Email: jessicasibley@arbtech.co.uk
<https://arbtech.co.uk>

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by LVW Group to undertake a Preliminary Ecological Appraisal (PEA) at Rhosddu Industrial Estate, Main Rd, Old Rhosrobin, Gwersyllt, Wrexham, LL11 4YL (hereafter referred to as “the site”). The survey was required to inform a planning application for the installation of three units on-site with associated parking (hereafter referred to as “the proposed development”).

The following is work you will need to commission to comply with planning policy and legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 7 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Designated sites	There is one statutory site within 2km of the site, it being Gatewen Marsh SSSI located ~1.5km southwest from the site. The site lies within the risk impact zone for Afon Dyfrdwy (River Dee) SSSI, and the proposed development is not listed as high risk with regards to this designation. The presence of non-statutory designated sites within 2km of the site cannot be established without data from Cofnod.	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).
Habitats and flora	There are no notable habitats within the site, but broadleaved woodland pockets are present within 2km of the site, the closest of which is located ~420m south from the site. Habitats on site comprise small patches of modified grassland, scattered young/semi-mature trees, and hardstanding which are common and widespread and have low ecological value. No protected or notable plant species were recorded during the survey, across the site.	No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to a line of trees north of the site, indirect effects such as pollution or tree damage could occur during construction. The proposed development will result in the loss of ~0.1ha modified grassland and some young/semi-mature scattered trees. This is likely to have a minimal impact on biodiversity due to the low ecological value of these habitats. There are no protected or invasive non-native plant species within the construction footprint.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). To compensate for the proposed habitat losses at the site, the following habitat creation measures should be incorporated: Planting of species-rich wildflower grassland retained to a taller sward (i.e., 10-30cm), across remnants of retained grassland.

Amphibians	There are no ponds on-site, however, there are seven ponds within a 500m radius of the site, which may be possible GCN breeding ponds. The site is surrounded by hardstanding which would likely deter GCN from utilising the site, however, more common amphibians which have better mobility than GCN may commute across this site.	No impacts are anticipated on GCN, as a result of the proposed development as this species is considered to be absent from the site. However, more common amphibians may be impacted by the proposed development.	Owing to the nature of the proposed development and the low potential for impacts to GCN, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, which is detailed in Table 7 of this report.
Roosting bats	The trees on the site have negligible value for roosting bats due to a lack of potential roost features. The building on the site was not subject to a roost assessment as it will not be directly impacted by the proposed works.	Trees: Bats are very unlikely to be roosting on the site and as such, there are not anticipated to be any impacts on roosting bats. Building: The on-site building may contain suitable features for roosting bats.	Trees: In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice. Building: In the event of any works to the building on the site, a separate PRA should be conducted to determine any impacts to roosting bats.
Foraging and commuting bats	The on-site scattered trees could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of small numbers of scattered young/semi-mature trees and ~0.1ha modified grassland but given their low value and the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. The proposed development may include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which is detailed in Table 7 of this report.
Badger	The site lies in a gated fenced industrial estate with limited opportunities for badgers, other than the occasional foraging and commuting.	No works will be undertaken within 30m of a badger sett. ~0.1ha modified grassland and scattered young/semi mature trees will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of badgers, if present.	A precautionary working method will be implemented during construction, which is detailed in Table 7 of this report.
Hedgehog	There are some scattered young/semi-mature trees on-site suitable for hedgehogs for shelter, and there are some small patches of grassland on-site suitable for hedgehogs for foraging. Hedgehogs may utilise this site, on occasion.	Some scattered young/semi-mature trees and ~0.1ha modified grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive	A precautionary working method will be implemented during construction, which is detailed in Table 7 of this report.

		habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.	
Birds	There are some scattered young/semi-mature trees on-site which may support more common nesting birds, based on the location of the site (i.e., within a built-up industrial estate).	Some young/semi-mature trees will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Any vegetation clearance should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by LVW Group to undertake a Preliminary Ecological Appraisal (PEA) at Rhosddu Industrial Estate, Main Rd, Old Rhosrobin, Gwersyllt, Wrexham, LL11 4YL (hereafter referred to as “the site”). The survey was required to inform a planning application for the installation of three units on-site with associated parking (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development. No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author’s knowledge, by any other consultancy.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SJ 32873 52640 and has an area of approximately 0.4ha a fenced industrial site with grassland, hardstanding and one building. It is surrounded by an industrial estate in the immediate vicinity including hardstanding, buildings, and access roads. There are grasslands and lines of trees/scattered trees to the north, east, and west of the industrial estate in the nearby vicinity. There is also a pond located ~130m northwest of the site boundary. To the south of the industrial estate are residential areas and the centre of Wrexham. The wider landscape comprises rural areas with the Welsh-English border to the east. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report describes the baseline ecological conditions at the site, evaluates habitats within the survey area in the context of the wider environment and describes the suitability of those habitats for notable or protected species. It identifies possible ecological constraints as a result of the proposed development and summarises the requirements for further surveys and mitigation measures to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation. To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken to record baseline information on the site and surrounding area including habitat types and their suitability for notable or protected species.
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.
- Potential impacts on features of value, as a result of the proposed development, have been identified.
- Recommendations for further surveys and mitigation have been made.
- Opportunities for the enhancement of the site for biodiversity have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of the magic.gov.uk database for statutory designated sites. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

2.2 Field Survey

The survey was undertaken by Jessica Sibley BSc (Hons) MSc, Consultant Ecologist (Accredited Agent on Natural Resources Wales Licence: S092694/1) on 21/11/2023.

An extended habitat survey was undertaken, following the methodology set out in The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023). All land parcels are described and mapped and, where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management. Botanical species lists were compiled with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species.

Ponds on and adjacent to the site were assessed for their suitability to support great crested newts using the *Habitat Suitability Index (HSI) Assessment Methodology* (Oldham et al, 2000). A visual inspection of the trees on the site was undertaken from ground level using binoculars. Trees were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 below. Roost suitability is classified based on the features present (i.e., PRF-I, PRF-M) and dictates if any further surveys required before works can proceed.

Table 1: Features of a tree that are correlated with use by bats

Classification	Feature of tree and its context
PRF-M	A tree with one or more potential roost sites that are obviously suitable for use by bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. PRF-Ms could support roosts of high conservation value such as maternity or hibernation roosts.
PRF-I	A tree containing only very limited number of roosting features which could be used sporadically by individual or small numbers of bats. PRF-Is may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators.
Negligible	No suitable roost features and unsuitable for use by bats.

2.3 Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape and the ecology and biology of species as currently understood.

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

The survey was completed outside of the optimal survey period (April to October) limiting the identification of ground flora species.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 2 below. The presence of non-statutory designated sites within 2km cannot be established without biological records data from Cofnod - North Wales Environmental Information Service. However, it is considered unlikely that such sites would be present in the immediate vicinity due to the lack of greenspace and built-up nature of the land surrounding the site.

The site lies within the impact risk zone for Afon Dyfrdwy (River Dee) SSSI. The proposed development is not listed as a possible high risk with regard to this designation.

Table 2: Statutory designated sites within 2km radius of the site

Designated site name	Distance from site	Reasons for notification from Natural Resources Wales
Gatewen Marsh Site of Species Scientific Interest (SSSI)	~1.5km southwest	One of only three significant examples in the former county of Clwyd of the “southern mesotrophic mires” wetland type. This type is more characteristic of south-west Wales and, in North Wales, is largely restricted to Ynys Môn and Dwyfor. The site occupies the flat valley bottom of a tributary of the River Gwenfro, the stream running through the eastern side of the marsh. At its northern end the marsh is bounded by the spoil banks of the former Gatewen Colliery, and mining subsidence, following closure of the colliery, has been a major factor in creating suitable conditions for the development of wetland vegetation. The marsh is unusual in containing substantial stands of Great Reedmace <i>Typha latifolia</i> in shallow water with Brooklime <i>Veronica beccabunga</i>, Water Plantain <i>Alisma plantagoaquatica</i> and Bottle Sedge <i>Carex strata</i>. The fringes of these areas support stands of Common Spike-rush <i>Eleocharis palustris</i> with Water Mint <i>Mentha aquatica</i>, Gipsy-wort <i>Lycopus europaeus</i>, Narrow-leaved Water-parsnip <i>Berula erecta</i> and Lesser Spearwort <i>Ranunculus flammula</i>. Further north are stands of Great Pond-sedge <i>Carex riparia</i> and Burreed <i>Sparganium erectum</i> with Reed-grass <i>Phalaris arundinacea</i> on the fringes and Broadleaved Pondweed <i>Potamogeton natans</i> in open channels. Willows <i>Salix spp.</i>, are establishing in part of the site and the area adjacent to the colliery spoil banks is dominated by Great Hairy Willow-herb <i>Epilobium hirsutum</i> suggesting past disturbance.

3.2 Field Survey Results

The results of the field survey are illustrated in Appendix 3. The weather conditions recorded at the time of the survey are shown in Table 3.

Table 3: Weather conditions during the survey

Date:	21/11/2023
Temperature	8°C
Humidity	80%
Cloud Cover	45%
Wind	11mph
Rain	None

Habitats and Flora

The following habitats are present within and adjacent to the site:

- Modified grassland (g4) with scattered trees (11) and young trees – self set (202) (within)
- Building (u1b5) (within)
- Other developed land (u1b6) with gravel beds (310) (within)
- Developed land; sealed surface (u1b) (adjacent)
- Other standing water (r1g) (off-site)
- Other neutral grassland (g3c) with a line of trees (33) (off-site)

A description and photograph of each habitat is provided in Table 4.

No protected or non-native invasive plant species (as listed under Schedules 8 or 9 of the Wildlife and Countryside Act 1981) were identified on the site. However, Japanese knotweed *Fallopia japonica* (a non-native invasive plant species) was recorded associated with a nearby verge to the site.

Table 4: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
Modified grassland (g4) with scattered trees (11) and young trees – self set (202) (within)	Small sections of the site are modified grassland, which are subject to regular human management (i.e., mowing). Sward height is short at ~5cm, and species richness is relatively poor within the sward. Species comprise: D: Perennial rye-grass <i>Lolium perenne</i>. O: Dandelion <i>Taraxacum officinale</i> agg., red fescue <i>Festuca rubra</i>, creeping buttercup <i>Ranunculus repens</i>, ribwort plantain <i>Plantago lanceolata</i>, common yarrow <i>Achillea millefolium</i>, henbit deadnettle <i>Lamium amplexicaule</i>, <i>Saxifragaceae</i> sp., daisy <i>Bellis perennis</i>, and black medic <i>Medicago lupulina</i>. R: Dog daisy <i>Leucanthemum vulgare</i>, and shepherd's purse <i>Capsella bursa-pastoris</i>. Condition Indication: There are a few consistent forbs throughout the sward, however, vascular plants do not exceed ~5 per m². Sward height is consistently ~5cm, with no microclimates to provide opportunities for vertebrates and invertebrates to live and breed across the parcel. No scattered scrub was recorded across the parcel or site. There does not look to be significant physical damage to the habitat parcel, however, the grassland is regularly mown to retain a short sward and it possibly experiences regular footfall. Cover of bare ground is between 1-10% across the habitat parcel, and cover of bracken <i>Pteridium aquilinum</i> is less than 20% (none was recorded). No invasive non-native species were recorded associated with the habitat parcel. However, based on the time of year, it is possible these species would not be visible. As part of the site there are also scattered semi-mature and young set-set trees. Species comprise: F: Goat willow <i>Salix caprea</i>. O: Field maple <i>Acer campestre</i>. There is some occasional buddleia <i>Buddleja</i> sp., associated with the young self-set goat willow. Condition Indication: All of the on-site trees are native UK species. None of the on-site trees are mature. There is likely a regular pruning regime associated with these trees. There are no ecological niches associated with these trees (i.e., cavities,	

	deadwood, ivy, or loose bark). More than 20% of the tree canopies are oversailing vegetation beneath (i.e., ~30-40%).
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Building (u1b5) (within)	There is one on-site building (pictured opposite). This building was not assessed for Potential Roost Features (PRFs), as it will not be directly impacted by the proposed works. In the event of any works to this building, a separate Preliminary Roost Assessment (PRA), should be conducted for this building, including internal inspection.	
Other developed land (u1b6) with gravel beds (310) (within)	The majority of the site is hardstanding with sections covered in gravel beds, used as an on-site parking area and access road. This habitat is thought to have low ecological value, in this context.	

		
Developed land; sealed surface (u1b) (adjacent)	Adjacent to the site surrounding the site is built-up areas to the north, south, east, and west, including buildings (u1b5), access roads, and parking areas (u1b6) , which form part of the industrial estate in which the site is set.	

		
Other standing water (r1g) (off-site)	Approximately 130m northwest of the site is a pond. The pond is ~0.18ha in size. There is evidence of wildfowl presence associated with the pond including moorhens and ducks. There is also some scattered litter within the pond. Plant species/trees associated with the pond banks comprise: A: Yorkshire fog <i>Holcus lanatus</i>, bramble <i>Rubus fruticosus</i> agg. O: Creeping buttercup, spear thistle <i>Cirsium vulgare</i>, common ragwort <i>Jacobaea vulgaris</i>, goat willow, willow <i>Salix</i> sp., nettle <i>Urtica dioica</i>, and some bryophytes. Visible emerging vegetation comprises: O: Rush <i>Juncus</i> sp., and bulrush <i>Scirpoides holoschoenus</i>. This pond was not condition assessed as it lies off-site (~130m northwest) and will not be directly impacted by the proposed works. However, a HSI was undertaken of the pond which can be found in Table 6.	

Other neutral grassland (g3c) with a line of trees (33) (off-site)	Approximately 180m northwest of the site, adjacent to the off-site pond is what is most likely neutral grassland. The sward height varies between ~10-40cm. Species comprise (but are not exclusively): D: Yorkshire fog. O: Spear thistle, creeping buttercup, nettle, Cock's foot <i>Dactylis glomerata</i>, and red fescue. R: False oat-grass <i>Arrhenatherum elatius</i>, and hogweed <i>Heracleum maximum</i>. This grassland was not condition assessed as it lies off-site (~180m northwest) and will not be directly impacted by the proposed works. Approximately 140m northwest of the site bordering the grassland and pond is a line of trees. This line of trees continues east and is ~40m north of the site boundary in part, however, this section was not accessible as it can only be accessed by third party land. The section assessed comprises: A: Goat willow. F: Hawthorn <i>Crataegus monogyna</i>. O: Field maple, oak <i>Quercus sp.</i> R: Alder <i>Alnus sp.</i> With an understorey of: A: Bramble. O: Nettle, holly <i>Ilex aquifolium</i>, and cleavers <i>Galium aparine</i>. R: Gorse <i>Ulex sp.</i> This line of trees was not condition assessed as it lies off-site (~140m northwest) and will not be directly impacted by the proposed works.	
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Japanese knotweed	Within the line of trees off-site, a patch of Japanese knotweed was recorded which is an invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981. This lies off-site. Grid reference: SJ 32593 52528.	
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Fauna

An assessment of the suitability of the site trees for roosting bats is provided in Table 5.
An assessment of the suitability of the site for protected or notable species is provided in Table 6.

Table 5. Assessment of the suitability of the site trees for roosting bats

Tree/group of trees ID	Assessment of suitability	Photograph
T01:T04	T01:T04 are field maple trees. T01:T03 look to be semi-mature, whereas T04 is young. Grid reference (central point): SJ 32908 52637. Based on the age, size, and condition of these trees, alongside a lack of suitable bat roosting features, these trees have negligible value for roosting bats.	

G01	G01 is a small group of young goat willow trees, with some buddleia presence. Grid reference (central point): SJ 32857 52606. Based on the age, size, and condition of these trees, alongside a lack of suitable bat roosting features, these trees have negligible value for roosting bats.	
G02	G02 is a larger group of young goat willow trees, with some buddleia presence. Grid reference (central point): SJ 32879 52677. Based on the age, size, and condition of these trees, alongside a lack of suitable bat roosting features, these trees have negligible value for roosting bats.	

Table 6: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability																								
Amphibians	Great Crested Newts (GCN) exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). There are no ponds on-site, however, there are seven ponds within a 500m radius of the site (P1:P7). P1 is located ~130m northwest of the site boundary and was subject to a Habitat Suitability Index (HSI) assessment, which can be found in Table 6a below. P2 is located ~240m northwest of the site boundary. P3:P6 are located ~430m west of the site boundary. P7 is located ~190m east of the site boundary. P2:P7 were not subject to a HSI assessment as they lie on third party land and access was not possible at the time of survey. The western/northwestern ponds (P1:P6) have surrounding grassland and there is an associated line of trees, suitable for GCN and other more common amphibians for foraging, shelter, and hibernation. Between these habitats, the pond and the site however are busy industrial estate infrastructures (i.e., car parking/buildings). This would likely deter GCN from the site. On-site there is grassland, which is a suitable amphibian foraging habitat, however, it is retained to a short sward (~5cm) which would likely increase predation risk for amphibians. There are also some scattered young trees, which have limited to no value for GCN, but may provide shelter on occasion to more common amphibians. P7 is disconnected from the site by a busy road (the B5425/Llay New Road), with curbs and regular traffic flow. It is unlikely GCN will commute to the site which has little vegetation on-site of value for GCN, there are no on-site ponds (i.e., suitable breeding habitat), and the site is surrounded by hardstanding. However, common amphibians (which have better mobility than GCN) may commute across the site if present in P1:P6 west/northwest of the site boundary, on occasion. <i>Table 6a: HSI calculation of ponds.</i> <table> <tr> <th>SI Description</th><th>SI Value P1 (Grid reference: SJ 32671 52609)</th></tr> <tr> <td>Geographic location</td><td>1.00</td></tr> <tr> <td>Pond Area</td><td>0.85</td></tr> <tr> <td>Pond Permanence</td><td>0.90</td></tr> <tr> <td>Water Quality</td><td>0.33</td></tr> <tr> <td>Shade</td><td>1.00</td></tr> <tr> <td>Waterfowl Effect</td><td>0.01</td></tr> <tr> <td>Fish Presence</td><td>0.67</td></tr> <tr> <td>Pond Density</td><td>0.70</td></tr> <tr> <td>Terrestrial Habitat</td><td>0.67</td></tr> <tr> <td>Macrophyte Cover</td><td>0.50</td></tr> <tr> <td>HSI Score</td><td>0.46</td></tr> </table>	SI Description	SI Value P1 (Grid reference: SJ 32671 52609)	Geographic location	1.00	Pond Area	0.85	Pond Permanence	0.90	Water Quality	0.33	Shade	1.00	Waterfowl Effect	0.01	Fish Presence	0.67	Pond Density	0.70	Terrestrial Habitat	0.67	Macrophyte Cover	0.50	HSI Score	0.46
SI Description	SI Value P1 (Grid reference: SJ 32671 52609)																								
Geographic location	1.00																								
Pond Area	0.85																								
Pond Permanence	0.90																								
Water Quality	0.33																								
Shade	1.00																								
Waterfowl Effect	0.01																								
Fish Presence	0.67																								
Pond Density	0.70																								
Terrestrial Habitat	0.67																								
Macrophyte Cover	0.50																								
HSI Score	0.46																								

	HSI Category	Poor
Reptiles	The site lies within a busy industrial estate, surrounded by hardstanding. There is some short sward grassland on-site, but no refugia and the grassland does not have varying length vegetation suitable for reptiles for shelter/commuting/basking. Footfall at the site is moderate to high which would likely deter reptiles. Furthermore, the majority of the site is a car park. It is unlikely reptiles will use this site. However, there is suitable reptile habitat for foraging and shelter north of the site (i.e., grassland, and tree lines).	
Badgers	No evidence of badgers was found on-site (i.e., hairs, latrines, setts or runs). The majority of the site is hardstanding, with small patches of short sward grassland, suitable only for occasional foraging. The site is flat terrain, unsuitable for sett excavation. There is suitable badger habitat north of the site including grassland for foraging and a tree line along a verge, suitable for sett excavation. However, these habitats lie >30m from the proposed development boundary (i.e., ~45-50m). Furthermore, the site is fenced which may restrict badger access to the site from the suitable northern habitat. It is unlikely badgers will use this site other than to commute through on occasion.	
Bats	None of the on-site trees have suitable roost features (i.e., PRF-Is or PRF-Ms). The on-site building was not subject to a full roost feature assessment as it will not be directly impacted by the proposed works. There is a possible bat commuting corridor north of the site (i.e., a line of trees on a verge), and there is also grassland habitat further north which is likely suitable for bats for foraging.	
Hazel Dormouse	The site lies outside of the known geographic range for hazel dormice (either natural or reintroduced). Furthermore, there is no suitable on-site habitat for hazel dormice (i.e., woodland or connecting hedgerows). The site comprises mostly hardstanding with some scattered young/semi-mature trees and short sward grassland, in the middle of an industrial estate. It is unlikely hazel dormice will use this site.	
Hedgehog	There are some scattered young/semi-mature trees on-site suitable for hedgehogs for shelter, and there are some small patches of grassland on-site suitable for hedgehogs for foraging. Hedgehogs are known to be urban tolerant. Hedgehogs may utilise this site, on occasion.	
Otter	There are no on-site watercourses, or adjacent watercourses to the site. The site does not comprise any riparian habitat, and there are no opportunities for holt or natal den creation on-site. Otters are unlikely to use this site, which comprises mostly hardstanding in a built-up industrial estate.	
Water Vole	There are no on-site watercourses, or adjacent watercourses to the site. There is one small wet ditch northwest of the site ~45m from the site boundary, which may be used by water voles. However, the site does not comprise any riparian habitat, and there are no opportunities for burrow creation on-site. Water voles tend to remain within ~5m of the banks of a watercourse. Water voles are unlikely to use this site, which comprises mostly hardstanding.	
Birds	There are young/semi-mature trees on-site which may be suitable for nesting birds. No birds' nests were identified in any on-site trees, however, there may be opportunities for more common species of bird associated with the trees. Some Schedule 1 species of bird may be found associated with the line of trees and grassland habitat, ponds, and wet ditch, west/northwest/north of the site. However, they are unlikely to nest on-site which has limited suitable vegetation. The site comprises mostly hardstanding and is small and likely unable to support any significant breeding or wintering bird populations.	
Invertebrates	The on-site grassland is relatively species poor and retained to a short sward, therefore it is unlikely to support any notable species of invertebrates. Furthermore, the on-site trees are young/semi-mature and lack lifted bark/cavities, which would be suitable for notable species of invertebrates.	

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

Likelihood of the Presence of Protected Species

Where physical evidence of the presence of protected species is indeterminate during the survey, the habitats on site are evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Where this report supports a planning application, the ecological interest of the study area (i.e., the area covered by the desk study and field survey) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 7 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development which will comprise the installation of three units on-site with associated parking.

Table 7: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Designated sites	There is one statutory site within 2km of the site, it being Gatewen Marsh SSSI located ~1.5km southwest from the site. The site lies within the risk impact zone for Afon Dyfrdwy (River Dee) SSSI, and the proposed development is not listed as high risk with regards to this designation.	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).	None.

¹ The Local Planning Authority has a duty to ask for enhancements under the Planning Policy Wales (2021).

	The presence of non-statutory designated sites within 2km of the site cannot be established without data from Cofnod.			
Habitats and flora	There are no notable habitats within the site, but broadleaved woodland pockets are present within 2km of the site, the closest of which is located ~420m south from the site. Habitats on site comprise small patches of modified grassland, scattered young/semi-mature trees, and hardstanding which are common and widespread and have low ecological value. No protected or notable plant species were recorded during the survey, across the site.	No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to a line of trees north of the site, indirect effects such as pollution or tree damage could occur during construction. The proposed development will result in the loss of ~0.1ha modified grassland and some young/semi-mature scattered trees. This is likely to have a minimal impact on biodiversity due to the low ecological value of these habitats. There are no protected or invasive non-native plant species within the construction footprint.	Best practice measures to minimise the possibility of pollution must be implemented during construction. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). To compensate for the proposed habitat losses at the site, the following habitat creation measures should be incorporated: Planting of species-rich wildflower grassland retained to a taller sward (i.e., 10-30cm), across remnants of retained grassland.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development: - Planting of species-rich wildflower grassland. - Planting of native hedgerows along site boundaries. - Planting of native trees and shrubs. Species-specific enhancement opportunities are detailed later in this table.
Amphibians	There are no ponds on-site, however, there are seven ponds within a 500m radius of the site, which may be possible GCN breeding ponds. The site is surrounded by hardstanding which would likely deter GCN from utilising the site, however, more common amphibians which have better mobility than GCN may commute across this site.	No impacts are anticipated on GCN, as a result of the proposed development as this species is considered to be absent from the site. However, more common amphibians may be impacted by the proposed development.	Owing to the nature of the proposed development and the low potential for impacts to GCN, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures: - Grassland vegetation will be retained to a short sward throughout the works (i.e., ~5cm), to discourage amphibians from the working area, during the works. - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians could use.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for amphibians: Retention of grassland with a taller sward (i.e., ~10-30cm), post the survey works.

			- Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - If any common amphibians are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. - In the unlikely event that a great crested newt is identified, works must cease and advice must be sought from a suitably qualified ecologist.	
Reptiles	The site comprises mostly hardstanding, with short sward grassland. It is disconnected from extensive suitable reptile habitat, by hardstanding and infrastructure. It is unlikely reptiles will use this site.	No impacts are anticipated on reptiles as a result of the proposed development.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for reptiles: Retention of grassland with a taller sward (i.e., ~10-30cm), post the survey works.
Roosting bats	The trees on the site have negligible value for roosting bats due to a lack of potential roost features. The building on the site was not subject to a roost assessment as it will not be directly impacted by the proposed works.	Trees: Bats are very unlikely to be roosting on the site and as such, there are not anticipated to be any impacts on roosting bats. Building: The on-site building may contain suitable features for roosting bats.	Trees: In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice. Building: In the event of any works to the building on the site, a separate PRA should be conducted to determine any impacts to roosting bats.	The installation of four bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be installed on the three new units, and existing building. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the

				entrance, away from artificial light. The bat boxes will be a specification suitable for crevice/void-dwelling bats such as: • Habibat Bat Box • Beaumaris Bat Box • NHBS Improved Cavity Bat Box • Vivara Pro Woodstone Bat Box • Eco bat box Or a similar alternative brand.
Foraging and commuting bats	The on-site scattered trees could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of small numbers of scattered young/semi-mature trees and ~0.1ha modified grassland but given their low value and the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. The proposed development may include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Light spill on to retained trees/vegetation should be avoided. • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native trees, shrubs and hedgerows.

			directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. • Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	
Badger	The site lies in a gated fenced industrial estate with limited opportunities for badgers, other than the occasional foraging and commuting.	No works will be undertaken within 30m of a badger sett. ~0.1ha modified grassland and scattered young/semi mature trees will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of badgers, if present.	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which badgers could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist.	None.
Hazel dormouse	There is no suitable on-site habitat for hazel dormice (i.e., woodland or connecting hedgerows). The site comprises mostly hardstanding. It is unlikely	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.

	hazel dormice will use this site.			
Hedgehog	There are some scattered young/semi-mature trees on-site suitable for hedgehogs for shelter, and there are some small patches of grassland on-site suitable for hedgehogs for foraging. Hedgehogs may utilise this site, on occasion.	Some scattered young/semi-mature trees and ~0.1ha modified grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.	A precautionary working method will be implemented during construction, including the following measures: - Grassland vegetation will be retained to a short sward throughout the works (i.e., ~5cm), to discourage hedgehogs from the working area, during the works. - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: - Installation of hedgehog houses close to retained vegetation. - Retention of existing fence gaps or installation of fence gaps for commuting hedgehogs associated with any fences installed.
Otter	There are no on-site watercourses, or adjacent watercourses to the site. The site does not comprise any riparian habitat, and there are no opportunities for holt or natal den creation on-site. Otters are unlikely to use this site, which comprises mostly hardstanding in a built-up industrial estate.	No impacts are anticipated on otters as a result of the proposed development.	None.	None.
Water vole	There are no on-site watercourses, or adjacent watercourses to the site. There is one small wet ditch	No works will be undertaken within 5m of the top of the banks of the watercourse. Therefore, no impacts are anticipated on water vole as a result of the proposed development.	None.	None.

	northwest of the site ~45m from the site boundary, which may be used by water voles. However, the site does not comprise any riparian habitat, and there are no opportunities for burrow creation on-site. Water voles tend to remain within ~5m of the banks of a watercourse. Water voles are unlikely to use this site, which comprises mostly hardstanding.			
Birds	There are some scattered young/semi-mature trees on-site which may support more common nesting birds, based on the location of the site (i.e., within a built-up industrial estate).	Some young/semi-mature trees will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Any vegetation clearance should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	The installation of four bird boxes at the site will provide additional nesting habitat for birds. The bird boxes will be installed on the new units and the on-site building. Such as: • Vivara Pro WoodStone Swift Nest Box • House Sparrow Terrace FSC Nest Box • Swallow Nest Bowl General purpose bird boxes should be positioned 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Species-specific bird boxes should be installed in line with manufacturers specifications.

				Swift and sparrow boxes should be positioned in the eaves and can be incorporated in the plans in the design stages.
Invertebrates	The on-site grassland is relatively species poor and retained to a short sward, therefore it is unlikely to support any notable species of invertebrates. Furthermore, the on-site trees are young/semi-mature and lack lifted bark/cavities, which would be suitable for notable species of invertebrates.	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates: Planting of pollinator-friendly species in the retained grassland swards.

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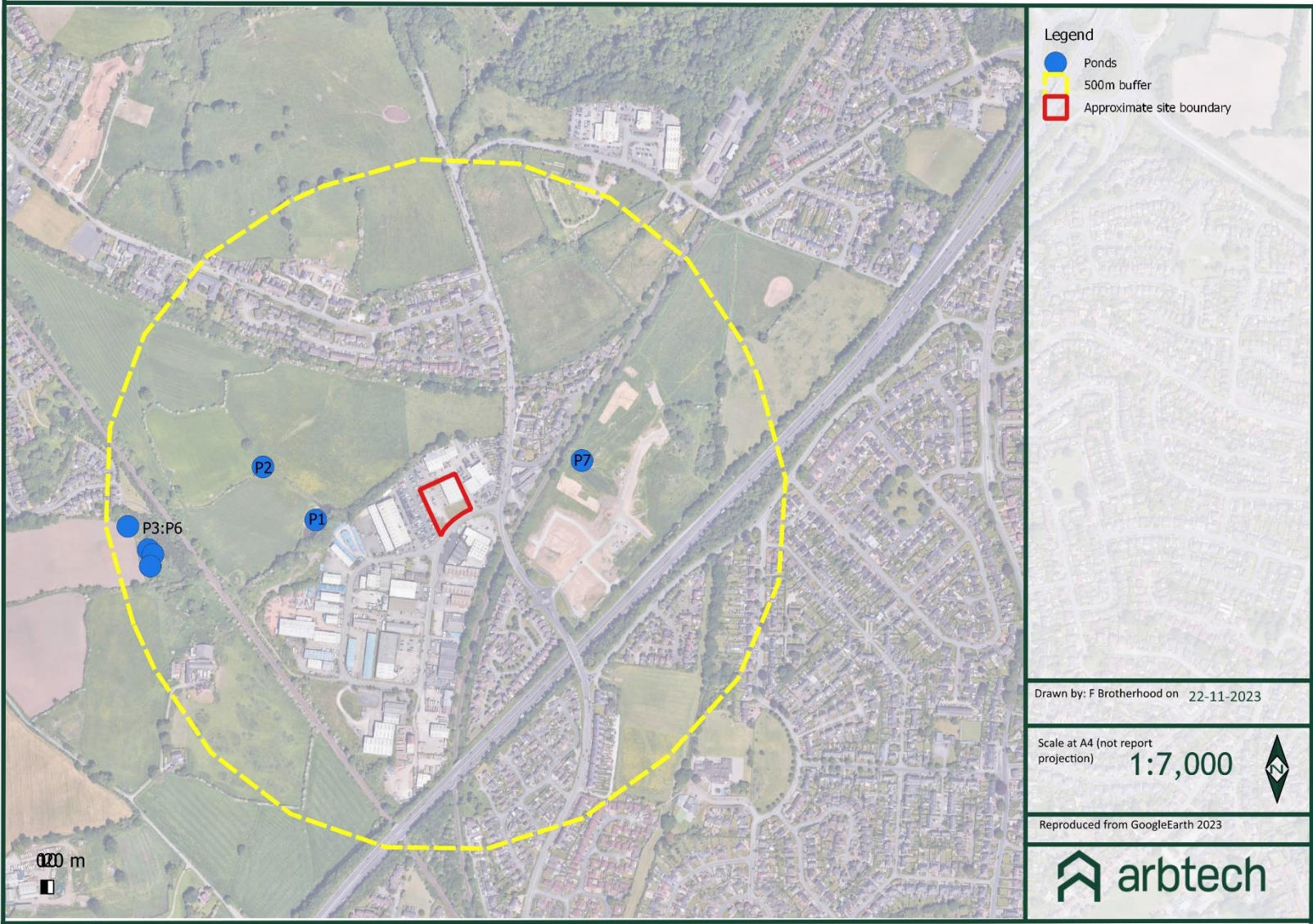
Appendix 2: Site Location Plan



Appendix 3a: Habitat Survey Plan



Appendix 3b: Pond Location Plan



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds (the Wild Birds Directive) respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as Sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many Annex II species): a strict protection regime must be applied across their entire natural range, both within and outside Natura 2000 sites.

Annex V species (over 90): their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

The Conservation of Habitats and Species Regulations 2017 (as amended) form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as “*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*”. However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett

- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A development licence will be required from the relevant countryside agency (i.e. Natural Resources Wales) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agencies to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

Works should be planned to avoid the possibility of killing or injuring any wild bird or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Amphibians and Reptiles

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural Resources Wales) will be required for works likely to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Water Voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural Resources Wales) must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural Resources Wales) will be required for works likely to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural Resources Wales) will be required for works are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSL. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Hazel Dormice

Hazel dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:

- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require a European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural Resources Wales). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White Clawed Crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

- Protected against intentional or reckless taking
- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

The relevant countryside agency (i.e. Natural Resources Wales) will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation Afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally picking, uprooting or destruction of any wild Schedule 8 species
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) will be required from the relevant countryside agency (i.e. Natural Resources Wales) for works which are likely to affect species of plants listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*

- Himalayan balsam *Impatiens glandulifera*

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any landowner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY***Environment (Wales) Act 2016 and the Biodiversity Duty***

The Environment (Wales) Act 2016 introduces a new biodiversity duty, which highlights biodiversity as an essential component of ecosystem resilience. This new duty replaces the biodiversity duty in the Natural Environment and Rural Communities Act 2006 (referred to as the NERC Act). Part 1 of the Act deals with Sustainable management of natural resources including Biodiversity and Resilience of Ecosystems Duty. The Environment Act enhances the current NERC Act duty to require all public authorities, when carrying out their functions in Wales, to seek to “maintain and enhance biodiversity” where it is within the proper exercise of their functions. In doing so, public authorities must also seek to “promote the resilience of ecosystems”. As under the NERC Act the new duty will apply to a range of public authorities such as the Welsh Ministers, local authorities, public bodies and statutory undertakers. This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

Planning Policy Wales (2021)

Paragraph 6.4.3 of the document refers to Biodiversity and Ecological Networks and states:

The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. Information contained in SoNaRR, Area Statements and species records from Local Environmental Record Centres should be taken into account. Development plan strategies, policies and development proposals must consider the need to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Biodiversity and Resilience of Ecosystems Duty (Section 6 Duty)

Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. Planning authorities must also take account of and promote the resilience of ecosystems, in particular the following aspects:

- a) Diversity between and within ecosystems;

- b) The connections between and within ecosystems;
- c) The scale of ecosystems;
- d) The condition of ecosystems (including their structure and functioning); and
- e) The adaptability of ecosystems.

In fulfilling this duty, planning authorities must have regard to:

- a) The list of habitats of principal importance for Wales, published under Section 7 of the Environment (Wales) Act 2016;
- b) The State of Natural Resources Report (SoNaRR), published by NRW; and
- c) Any Area Statement that covers all or part of the area in which the authority exercises its functions.

Planning Authorities should also refer to up to date ecological survey information (where appropriate).

A proactive approach towards facilitating the delivery of biodiversity and resilience outcomes should be taken by all those participating in the planning process. In particular, planning authorities should demonstrate that they have sought to fulfil the duties and requirements of Section 6 of the Environment Act by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions.

The broad framework for implementing the duty and building resilience through the planning system includes addressing:

- Diversity: to ensure mechanisms are in place to minimise further loss and that circumstances allow for species' populations to expand and recolonise their natural range (former range) or adapt to future change. This means development should provide a net benefit for biodiversity, and at the very least, with no significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity;
- Extent: to ensure mechanisms allow for the maintenance of existing assets and networks and promote the restoration of damaged, modified or potential habitat and the creation of new habitat. This means that planning choices should incorporate measures which seek the creation and restoration of green networks and linkages between habitats and maintaining and enhancing other green infrastructure features and networks;
- Condition: Ecosystems need to be in a healthy condition to function effectively, to deliver a range of important ecosystem services. Planning decisions should not compromise the condition of ecosystems. By taking an integrated approach to development, for example, which considers both direct and wider impacts and benefits it should be possible to make a positive contribution. Planning for the long term management of retained habitats is key to maintaining condition through for example, the use of planning obligations;
- Connectivity: to take opportunities to develop functional habitat and ecological networks within and between ecosystems and across landscapes, building on existing connectivity and quality and encouraging habitat creation, restoration and appropriate management. The opportunities could include enlarging habitat areas, developing buffers around designated sites or other biodiversity assets or corridors, including transport and river corridors, and the creation of 'stepping stones' which will strengthen the ability of habitats and ecological networks to adapt to change, including climate change; and

- Adaptability to change: primarily in the form of climate change, for both species (diversity) and ecosystems requires action to protect the extent, condition and connectivity of habitats, features and ecological networks. Development plans, planning proposals and applications which build on protecting designated sites and securing and enhancing green infrastructure will be key ways of addressing the attributes of ecosystems resilience identified in the Environment Act as well as facilitating social and economic resilience aspirations of the Well-being of Future Generations Act.

Good Practice Guide GPG 3 (October 2015) NRW Approach to Bats and Planning

As explained in Planning Policy Wales (Chapter 5 - Conserving and Improving Natural Heritage and the Coast), the presence of a European protected species is a material consideration for a development proposal that would be likely to result in disturbance or harm to the species or its breeding sites or resting places. Planning Policy Wales also explains that planning authorities should seek the advice of Natural Resources Wales for all planning applications likely to result in disturbance or harm to bats and should always consult them before granting permission. Local Planning Authorities address this by screening applications to identify when there is a reasonable likelihood that bats may be present and, therefore, when to require a bat survey and report that will confirm if bats are present and if they likely to be disturbed or harmed by the proposal. The overall requirement on Local Planning Authorities, Natural Resources Wales and developers is to avoid harm or disturbance to bats and their breeding sites and resting places, unless Natural Resources Wales has given a licence to allow the harm or disturbance. Natural Resources Wales may only give a licence if the requirements for derogation are met, including that disturbance or harm to individual bats (or to their breeding sites and resting places) would not be detrimental to the maintenance of the population.

LOCAL PLANNING POLICY

Wrexham Unitary Development Plan (1996-2011) (February 2005)

The Wrexham Unitary Development Plan (1996-2011) can be viewed here: <https://www.wrexham.gov.uk/service/development-plans-and-other-planning-policy/wrexham-unitary-development-plan>

The following planning policies have implications in relation to biodiversity and the proposed development:

- **Biodiversity Conservation - Policy EC6:**
 - Development either within or close to sites of biodiversity interest will only be permitted where it can be clearly demonstrated that the need for the development outweighs the need to safeguard the intrinsic nature conservation value of the site. Where such development is permitted, damage should be kept to a minimum, and compensatory measures should be provided. Measures to improve the biodiversity value of sites and enhance their natural conservation interest and landscape quality including the establishment of local nature reserves, will be supported.
- **Biodiversity - Policy PS11:**
 - Encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced.