Preliminary Ecological Appraisal of Land off Ysguborwen Road, Dwygyfylchi on Behalf of Cartrefi Conwy

Date	Author	Project Number	Approved by	Version	Comments
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Wildlife Trust Consultancies

Aelod o Cymdeithas Ymgyngoriaethau Ymddiriedoleathau Natur

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Site	Ysguborwen Road, Dwygyfylchi, LL34 6RU	**OS Grid Reference**	SH 73195 77330
Surveyors	Richard Cutts	**Survey Date**	16/07/2025
/Type of Survey	Preliminary Ecological Appraisal		
Summary of Proposed Work	The proposed works involve the creation of several residential dwellings with associated infrastructure.		
Designated Sites Affected	The is potential for two statutory designated sites and one non-statutory designated site to be affected by run-off from the site.		
Habitats Affected	Scrub, bracken and the majority of the (semi-improved) grassland on the site will be lost due to the development.		
Species Affected	The development has the potential to affect reptiles, hedgehogs and nesting birds, as well as other protected species that may occasionally use the site.		
Survey Conclusions	• The site had generally low biodiversity value, and the habitats present were not uncommon in the area. • Scrub on the western site boundary is providing habitat connectivity on a local scale. • The proposed works will remove the majority of the habitats on site, including nesting bird habitat.		
Further Surveys Required	• A reptile survey is recommended to inform mitigation measures.		
Avoidance Requirements	• Additional post-development lighting of retained habitat in adjacent areas (north/east of the site) should be avoided.		
Mitigation / Restoration Requirements	• General RAMS have been provided, including timing of works and lighting guidance • Site clearance: Further ecological advice must be sought immediately if a badger sett is discovered, or if potential bat roosting features are found in trees due to be felled. • Additional mitigation measures may be required for reptiles pending the results of a reptile survey.		
Compensation Requirements	• Loss of scrub and trees will be compensated for by the planting of hedgerows and trees. • Loss of grassland could be compensated for through enhancement of retained grassland areas; off site compensation could also be considered. • Erection of bird boxes is recommended to compensate for the loss of nesting habitat.		
Proposed Enhancements	• Retained grassland areas could be enhanced through reseeding and an appropriate mowing regime. • Pollinator-friendly planting areas could be incorporated into the site design. • Additional bird and bat boxes are recommended.		

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1.0 Introduction

1.1 Project Introduction

1.1.1 Enfys Ecology were commissioned by Cartrefi Conwy to undertake a Preliminary Ecological Appraisal (PEA) of an area of land at Ysguborwen Road in Dwygyfylchi, Conwy.

1.1.2 The proposed works involve the creation of several residential dwellings with associated infrastructure.

1.1.3 The site is a mixture of scrub and rough pasture.

1.1.4 The primary objectives (CIEEM, 2017a) of a Preliminary Ecological Appraisal Report (PEAR) are to:

- identify the likely ecological constraints associated with a project;
- identify any mitigation measures likely to be required;
- identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and,
- identify the opportunities offered by a project to deliver ecological enhancement.

1.1.5 This document has been produced to advise a client of ecological constraints and opportunities to inform their design options (avoidance), likely mitigation, restoration and compensation requirements, and the need for further surveys. In addition, the report may provide initial recommendations in relation to relevant ecological enhancement opportunities given the site's context. This report may not necessarily provide the Local Planning Authority with enough information to assess the ecological impacts of a proposal.

1.1.6 This report has been produced in accordance with CIEEM (2017a) 'Guidelines for Preliminary Ecological Appraisal' and CIEEM (2017b) 'Guidelines for Ecological Report Writing'.

1.1.7 This report has been produced by Richard Cutts. Richard has a background in ecological and geological fieldwork, and has been at Enfys Ecology since 2022. He has significant experience in undertaking Phase1 and UKHab surveys in North Wales. Richard also carries out a range of protected species work, including bats, amphibians, reptiles and badgers. He is a qualifying member of CIEEM and an approved assessor for Building with Nature.

1.1.8 The survey work to inform this report was carried out in July 2025. Habitats and species found within a discrete area of land are subject to change, this report should therefore be considered valid for a period of eighteen in accordance with best practice (CIEEM, 2019).

1.1.9 Relevant legislation and planning policy information are included in Appendix A.

1.2 Project Proposals

1.2.1 The reports / drawings provided by the client at the time of production of this PEAR are detailed in Table 1.1.

Table 1.1: Project Information Sources

Information	Organisation	Reference and Date
Boundary Survey Layout	Caulmert	6005-CAU-XX-XX-SK-C-0108 rev. P01 (31/07/2025)
Draft Site Layout	Caulmert	6005-CAU-XX-XX-DR-C-1400 rev. P03 (Oct 2024)

2.0 Site Description

2.1 Survey Area

2.1.1 The site contained agricultural grassland (rough pasture) with scrub and trees along the western side, which continued along the northern edge. Residential areas, the outskirts of Dwygyfylchi, were present to the east and south. Agricultural fields bounded the site to the west. A major road (the A55 North Wales Expressway) and railway line (North Wales Main Line) run south-west to north-east close to the northern site boundary. The coastline is a short distance (approximately 60m) to the north-west, beyond the road and rail line. The nearest watercourse, the Afon Gyrach, is approximately 600m to the east. The survey area is shown in Figure 2.1 below.

Figure 2.1: The survey area (red outline)
Base image © Google Maps 2025

2.2 Wider Area - Connectivity and Green Infrastructure

2.2.1 The site is positioned between the coastline (north and west) and the town of Dwygyflychi to the south-east. The larger town of Penmaenmawr is a short distance to the south-west. The Carneddau mountain range and the edge of the Eryri National Park are less than 500m to the east and south of the site. Lowland areas surrounding the site are a mixture of urban development and agricultural fields, while the uplands are dominated by heathland with steep rock exposures (including quarries) in places. Field boundary hedgerows and private gardens provide some habitat connectivity between the site and the wider landscape, including the watercourse and blocks of woodland to the east, but connectivity is heavily restricted by the sites position in a narrow strip of land between the coastline (and major infrastructure) and the residential areas of Dwygyfylchi (with fragmented connectivity via private gardens).

2.2.2 (PPW 12, paragraph 6.2.1). Green infrastructure (GI) is defined in Planning Policy for Wales (PPW) Edition 12[1] as "*the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places*". Green infrastructure (GI) can function at a range of different scales; from entire ecosystems such as wetlands and rivers to parks, fields and gardens at the local scale and street trees, hedgerows, roadside verges, and green roofs/walls at the micro scale. Development proposals should take GI into consideration in order to avoid negative impacts on habitats and species, and seek ways to maintain and enhance biodiversity.

2.2.3 Specific breakdown of the GI within an area is perhaps more relevant in urban or more fragmented sites than rural locations. This site, consisting of open green space at the edge of an urban area, was at time of survey considered to be entirely comprised of areas considered green infrastructure under current planning guidance. The entire site is in a semi natural state, and is likely to support a range of species, both plant and animal, but with restricted connectivity to similar semi-natural habitats.

2.2.4 The wider area is shown in Figure 2.2 below.

[1] See: https://www.gov.wales/planning-policy-wales

Figure 2.2: The site (red outline) and the wider surrounding area
Base image © Google Maps 2025

3.0 Methodology

3.1 Desk Study

3.1.1 A desk study was undertaken through Cofnod, the North Wales Environmental Information Service, to determine the presence of statutory and non-statutory sites for nature conservation, and records of protected, or species and habitats of principal importance listed under Section 7 of the Environment (Wales) Act 2016. Desk study data was provided by Cofnod on 5th March 2025. The records were used to inform the survey and recommendations, and to provide context for evaluating the species and habitats found during the survey. Any relevant species results from the desk study are referred to in Section 4.

3.1.2 The desk study used a 1km search radius for this project.

3.2 Field Survey

3.2.1 The field survey was conducted on 16th July 2025 by Richard Cutts, a suitably experienced professional ecologist.

3.2.2 The weather conditions during the survey were warm and dry.

3.2.3 All parts of the site were visited were possible, the habitats were mapped following the standard Phase 1 Habitat Survey methodology (JNCC, 2010). Any rare or invasive species or incidental sightings of protected species were recorded, as necessary. A search for evidence or potential for protected species was carried out, including amphibians, bats, and reptiles. Evidence of badgers (*Meles meles*) including setts, dung pits, hairs, footprints, and scratching posts or trees was searched for. Trees with suitable features for roosting bats, including knot holes and other crevices, hollow trunks and dense ivy coverage were identified.

3.3 Limitations

3.3.1 Some areas of the site could not be accessed or thoroughly searched due to dense and impenetrable bramble and blackthorn scrub. This has been target noted where particularly relevant, but it was in general not feasible in a reasonable timescale to directly assess the north-western corner of the site. However due to the topography these areas were viewed from nearby, and a representative sample of habitats was visited. This is not considered to have affected the results of the survey as vegetation types could be seen and recorded, however it is possible that some plant species were missed even if locally dominant (in a small area). It was also not possible to assess the boundaries, or the extent of a drainage ditch, in the north-western corner of the site. The habitat map in Section 4 should not be taken as

definitive with respect to the exact boundaries of some habitats in the dense areas, but gives an accurate impression of the habitats represented at the site.

3.3.2 The results of this survey consist only of those species encountered during a short space of time on one day. Species that use the site infrequently or are present at different times of the year may not be recorded, and the absence of species from the results of a single survey should not be taken as indicating the species' definite absence from the area in question. Descriptions of plant species concentrate on the most obvious and abundant species present as determinant of habitats present.

3.3.3 While reasonable efforts have been made to search for invasive non-native species (INNS), and any seen were recorded, this is not a comprehensive invasive species survey and does not claim or imply the definite absence of Japanese knotweed or other invasive plants, for which a specific survey should be commissioned.

3.4 Terminology

3.4.1 In this report 'site' and 'survey area' are used to refer to the area surveyed by the ecologist, which is subject to the proposed development or planning application. The only exception may be some unavoidable use of 'site' when discussing designated sites such as SSSIs. 'Search area' refers to the area from which data was obtained for the desk study.

3.4.2 English species names are generally (but not exclusively) used in the text for readability, however Appendix C contains a list of species recorded and gives scientific names.

4.0 Results

4.1 Desk Study – Designated and Notable Sites

4.1.1 There were three statutory designated within 1km of the survey area.

4.1.2 There were two non-statutory designated sites within 1km of the survey area.

4.1.3 There was one area of ancient woodland within 1km of the survey area.

4.1.4 Details of the designated sites are provided in Table 4.1.

Table 4.1: Designated Sites within 1km of the Site

Name	Designation	Approximate distance from site (km)	Reason for designation
Liverpool Bay/Bae Lerpwl (Wales)	SPA	0.33 (north-west)	Breeding and overwintering birds, including EC Habitats and Species Directive Annex I species: Little tern, common tern, red-throated diver, little gull
Y Fenai a Bae Conwy/Menai Strait and Conwy Bay	SAC	0.33 (north-west)	Annex I coastal habitats
Sychnant Pass	SSSI	0.95 (east)	Upland heath and acid grassland; nationally very uncommon moth species
Orme View vegetated shingle	Wildlife Site (Candidate)	0.06 (north/west/north-east)	Vegetated shingle
Orme View Reedbed	Wildlife Site (Candidate)	0.3 (north-east)	Reeds

4.2 Desk Study – Species Records

4.2.1 Cofnod hold 448 records within 1km of the site from the previous 20 years, including 52 records of UK and European protected species; individual records can include a number of sightings and therefore reflect the minimum number of plants or animals of a given species observed in the area. There was a single older record (1995) of a polecat (*Mustela putorius*) from within the survey area itself.

4.2.2 The results of the desk study for protected fauna are detailed in Table 4.4, Section 4.7. Results of the Cofnod data search are provided in Appendix B; full data (e.g. specific locations) has not been provided for sensitive data.

4.2.3 There were no records of notable flora from within the study site. There were records of native bluebell (*Hyacinthoides non-scripta*) just over 1km to the south-east of the site.

4.2.4 There were no records of invasive non-native species (INNS) from within the site. Numerous invasive non-native plants have been recorded from within 1km of the site: Cherry laurel, *Himalayan* honeysuckle, hybrid bluebell, Japanese knotweed, montbretia, *Rhododendron ponticum*, three-cornered garlic, and wall cotoneaster. The closest records are three-cornered garlic (0.5km south-east), *Rhododendron ponticum* and cherry laurel (0.54km east), and Japanese knotweed (0.55km east). Records of non-native animals include Canada goose, harlequin ladybird and (offshore) modest barnacle.

4.3 Phase 1 Habitat Survey

4.3.1 The following Phase 1 Habitat and feature types were recorded within the site:

A2.1	Dense scrub
A3.1	Scattered/planted broadleaved trees
B6	Species-poor semi-improved grassland
C1.1	Continuous bracken
J2.1.2	Intact hedge (species-poor)
J2.2.2	Defunct hedge (species-poor)
J2.4	Fence
J2.5	Wall
J2.6	Ditch
J3.6	Buildings

4.3.2 A Phase 1 Habitat map with target notes is provided in Figure 4.1 below. Descriptions of the habitats are provided in Table 4.2 with information associated with target notes provided in Table 4.3. Where relevant, photographs are included with the text.

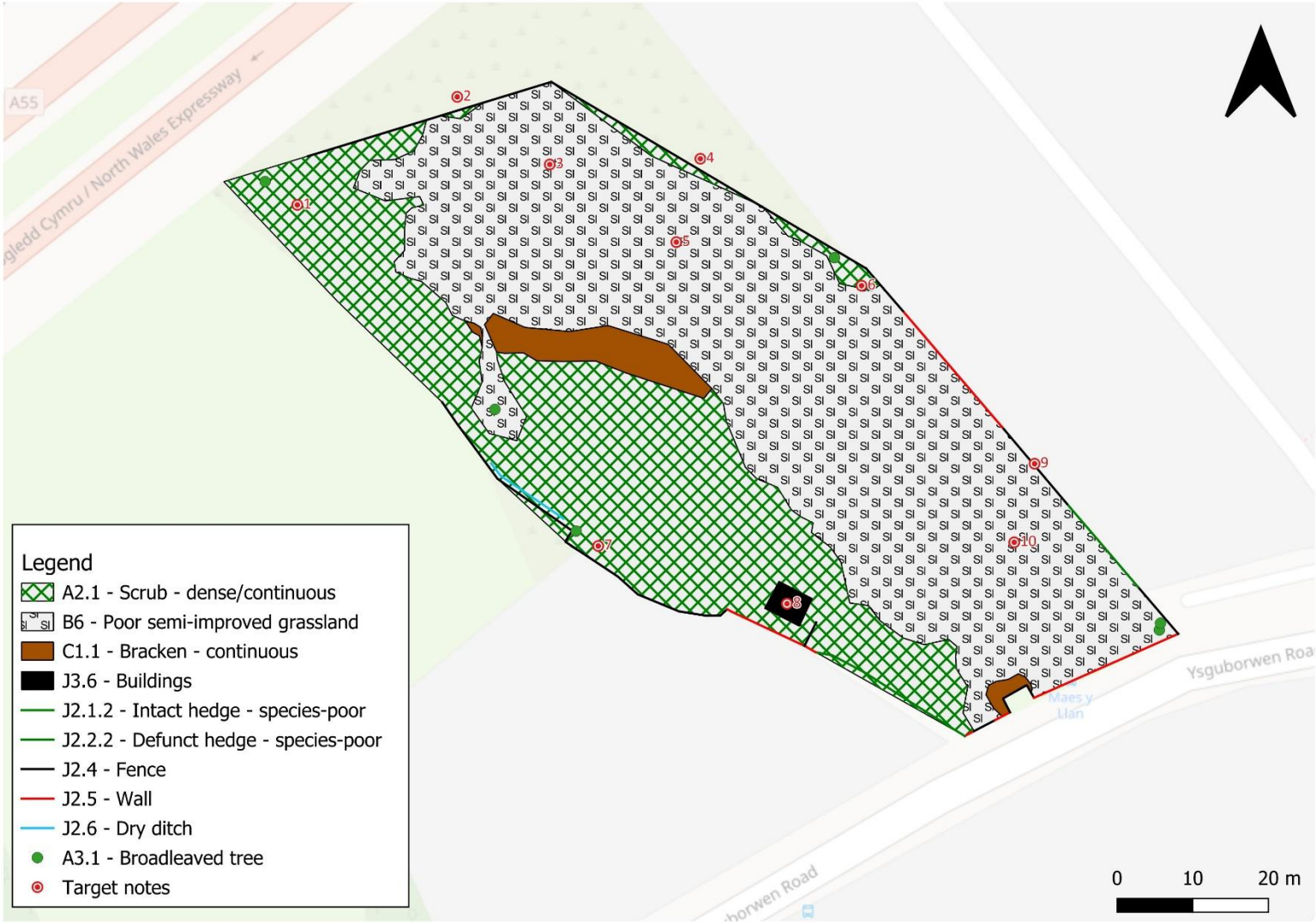


Figure 4.1: Phase 1 Habitat Survey Map

Base image © OpenStreetMap Contributors 2025

Table 4.2: Habitat Descriptions

Species-poor semi-improved grassland	
Approximately two thirds of the site was occupied by rough grassland, with a short but uneven sward with patches of bare earth visible. The grass species included sweet vernal grass and perennial ryegrass, cock's foot, Yorkshire fog and creeping bent. Several typical grassland forbs were present, including clover, nettle, creeping buttercup, ribwort plantain, hawkbits, dandelion, hogweed, knapweed, dock and thistle. However, these were typically present in low numbers and mostly concentrated around the field margins; only thistle and nettle were widespread and locally abundant.	 **Semi-improved grassland with patches of bare ground; view north from the south-eastern coner of the site.**  **Semi-improved grassland; view south from the north-eastern corner of the site.**  **Semi-improved grassland; view south from the northern site boundary.**  **Semi-improved grassland, with taller and more diverse vegetation along the field boundary; view north along north-eastern site boundary.**

Scrub

Scrub occupied approximately one-third of the site, mostly along the south-western site boundary.

In the north-western corner of the site this consisted of dense and impenetrable bramble and blackthorn, with some ivy but no other apparent ground flora. Small blackthorn were encroaching onto the adjacent grassland.

To the south, on the other side of a small grassy clearing beneath a large sycamore, the scrub was older and more diverse. In addition to bramble and old blackthorn, dogwood, willow and elder also made up a large proportion of the scrub; many of the older willow and elder had fallen or grown sub-horizontally facing towards the north-east creating a low, tangled structure despite their age. Vegetation was older and taller towards the south-western site boundary, where hazel and large sycamore were also present. The understorey was sparse throughout, with young bramble in more open areas. Piles of brash and garden waste were present in the south-west, adjacent to a neighbouring garden.

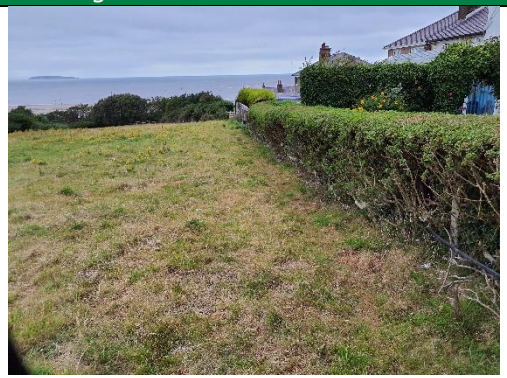
Small patches of scrub were also present on the north-eastern site boundary, where bramble and dogwood were encroaching from neighbouring areas. These areas also included vetch and creeping cinquefoil, which were not observed elsewhere on site.

Dense bramble and blackthorn; north-western corner of the site.

Bramble, dogwood and elder dominated scrub in the south-west of the site, becoming older and taller to the south-west.

Small cleared with the scrub in the south-west of the site, with sub-horizontal elder; view east from south-western site boundary.

Encroaching scrub on the north-eastern site boundary.

Bracken		
A patch of dense bracken was present along the edge of the scrub near to the centre of the site. A small amount of bracken was also present around a bus stop which was inset into the southern site boundary.	 **Dense bracken.**	 **Dense bracken (right) on the edge of scrub (right).**
Hedgerows		
The majority of the site boundaries were fences backed/encroached by scrub and woodland, but sections of formal hedgerows were present alongside neighbouring gardens. These included privet (south-east) and leylandii (south-east and south-west).	 **Privet hedge (right); view north along site boundary from south-eastern corner.**	 **Mature leyandii hedge (background) behind bramble scrub (foreground); south-western corner of the site.**

<table>
<tr><th colspan="3">Ditch</th></tr>
<tr><td>A shallow ditch was present along part of the western site boundary; to the north, it disappeared below dense scrub and could not be traced any further, but likely continued along most of the length of the boundary.

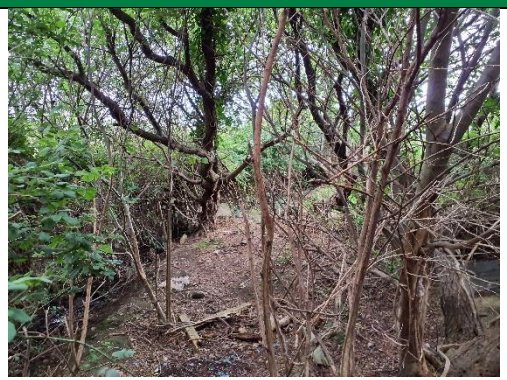
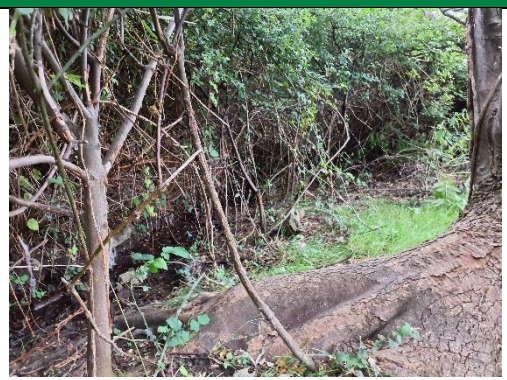
Where they could be observed, the ditch and banks consisted of bare earth with very sparse vegetation, and no specifically aquatic/aquatic marginal vegetation was present. A small amount of standing water was present at the base of the ditch.</td><td> 
Privet hedge (right); view north along site boundary from south-eastern corner.</td><td> 
Mature leyandii hedge (background) behind bramble scrub (foreground); south-western corner of the site.</td></tr>
</table>

Table 4.3: Target Note Descriptions

Target Note	Description	
1	The north-western corner of the site was inaccessible due to dense scrub. A tree (arrow) was present at the south-western end of the site, but it could not be determined if this was within the survey boundary or in the adjoining land.	
2	A stand of holm oak was present immediately north of the site, with their canopies partially overlapping the site boundary.	
3	Large patches of bare earth with gravel and cobbles were present near to the northern corner of the site.	
4	Dense dogwood and bramble scrub was present immediately to the north-east of the survey area, and was encroaching through the boundary fence.	

5	A large patch of bare earth with gravel and cobbles was present in the northern part of the site.	
6	A brash pile was present on the eastern site boundary (arrow), adjacent to a patch of bramble scrub and neighbouring gardens.	
7	An area that appeared to have been largely cleared of smaller scrub was present on the western site boundary, adjacent to the neighbouring garden. It contained a large amount of randomly-piled brash, some waste material, and some garden plants; the latter appeared to have been discarded over the boundary fence rather than spread naturally.	
8	An electrical substation was present within the scrub in the southern part of the site.	

9	A small rubble pile was present adjacent to the eastern site boundary.	
10	A patch of bare earth with gravel was present in the south-eastern part of the site.	

4.4 Flora

4.4.1 Floral diversity of the site was low on average, due in part to large areas of the site being covered by dense bracken, bramble and blackthorn, which had few other species. The grassland areas were also largely species-poor. The southern area of scrub was more diverse, with a range of more established tree species, but the understorey was extremely sparse. Overall site diversity was improved by very localised increases in species near to several of the boundaries.

4.4.2 None of the species recorded during the survey are protected by the Wildlife and Countryside Act 1981 (as amended) or listed under Section 7 of the Environment (Wales) Act 2016. No other nationally or locally rare species were recorded.

4.4.3 Appendix C contains a list of plant species recorded during the survey.

4.5 Invasive Non-Native Species

4.5.1 No invasive non-native plant species (INNS) were observed on the site at the time of the survey.

4.6 Fauna

4.6.1 No protected or notable species or signs of the presence of protected or notable species were seen within the survey area during the survey.

4.6.2 The survey results for protected species including records within a 1km radius of the site are described in Table 4.4 below.

Table 4.4: Results of Protected and Notable Species Assessment

Species	Suitability of Habitat	Desk Study Records	Further Species Consideration Required?
Amphibians – including great crested newts *Triturus cristatus* (GCN)	The site has no standing water, and so there was limited breeding habitat for amphibians within the survey area. It is possible that common amphibians could use the ditch at the western margin if water levels were high, but this is considered unlikely. However the whole area is suitable for foraging and common amphibian species could be present on site. Great crested newts are very unlikely to bred on site, and there are no known breeding ponds within the vicinity. Given the lack of records in the area, while it is possible that GCN could use the terrestrial habitats on site, it is considered highly unlikely that they are present.	There were no records of amphibians within 1km of the site.	No
Badger *Meles meles*	No evidence of badgers was seen. The site is suitable for badger foraging and they are very likely to use the site if present in the area. The area is likely to be suitable for sett building in places, particularly where bare ground is exposed within areas of scrub, parts of which could not be thoroughly investigated. As no evidence of badger activity was seen, including trails, it is not thought likely that a sett is present; however, the presence of a sett cannot be ruled out in the areas which could not be accessed.	There was one record of badgers, dead on the trunk road (A55) 0.28km to the south-west of the site.	Yes

Table 4.4: Results of Protected and Notable Species Assessment

Species	Suitability of Habitat	Desk Study Records	Further Species Consideration Required?
Bats	The site is unlikely to be suitable for roosting bats, as the only trees on site large enough to support large enough gaps, cracks or crevices for bat use were early mature sycamore on the western boundary with no apparent suitable features. Narrow-trunked willows and elder under 5m high were the only other larger trees with any potential features (very rare shallow cracks and holes), and are considered marginally, but possibly, suitable for bats. The stand of holm oak immediately north of the site may also have potential roost features, although none were observed from within the survey area. The entire area is very suitable for bat foraging, and bats likely fly around or across it.	There were 18 records of bats within 1km of the site, including common pipistrelle, soprano pipistrelle, Daubenton's, lesser horseshoe and noctule. The nearest record was a common pipistrelle 0.16km to the south-east, and a common pipistrelle roost has been recorded 0.46km to the south.	Yes
Birds	All of the taller vegetation on site should be considered suitable habitat for nesting birds. There is little potential for ground nesting species as the grassland was grazed short and very exposed.	There are 225 records of 84 species of birds within a 1km radius of the site. Records include numerous Schedule 1 species: Barn owl, goshawk, merlin, peregrine, chough, redwing, fieldfare, common scoter, Dartford warbler, purple sandpiper, black-necked grebe, hen harrier, crossbill, red kite, whimbrel, and osprey.	Yes
Dormice *Muscardinus avellanarius*	The denser stands of scrub would provide some potential habitat, but the more open scrub in the southern part of the site would be less suitable. As there are no nearby records of dormice and poor connectivity to good-quality blocks of habitat, dormice are considered highly unlikely to be present on the site.	There were no records of dormice within 1km of the site; the nearest recent dormice records are approximately 10km to the south-east (NBN Atlas).	No

Table 4.4: Results of Protected and Notable Species Assessment

Species	Suitability of Habitat	Desk Study Records	Further Species Consideration Required?
Hedgehog *Erinaceus europaeus*	The entire site is suitable for hedgehogs.	There were six records of hedgehog within 1km, the closest being 0.04km south-east of the site.	Yes
Reptiles	The entire site area is suitable for reptile species, particularly the interface between scrub and bracken and the open grassland areas, which are suitable for basking. The site is relatively well connected to the surrounding habitats, for example along the strip of habitat adjacent to the A55 trunk road. Therefore the potential presence of reptiles on site cannot be discounted.	There were five records of grass snake, one record of slow worm and one record of adder within 1km. The closest was a grass snake 0.33km from the site.	Yes
Water vole *Arvicola amphibius*	The ditch on site is shallow and lacking both vegetation and permanent water, making it largely unsuitable for water vole. With no records in the area, the presence of water vole is considered highly unlikely, but cannot be ruled out.	There were no records of water voles within 1km of the site.	No
Otter *Lutra lutra*	The ditch could provide a commuting route for otters, but is unsuitable for foraging and holt-building. With more suitable habitat within the vicinity, otters are considered unlikely to be present on the site but may use it on occasion.	There were two records of otters, both from the Afon Gyrach to the east of the site (0.55km from the site at its closest point); the closest record was 0.7km from the site.	No
Other species	The area is suitable for polecat *Mustela putorius*, but provides limited areas for them to create dens; polecats are therefore considered unlikely to be resident on the site, but may use it on occasion for foraging.	There were two recent records of polecats, with the closest 0.45km to the east, and one older (1995) record of polecat from within the site.	No

5.0 Discussion

5.1 Proposed Works

5.1.1 The proposed works to the site include the creation of several housing units with associated infrastructure; draft plans provided to Enfys Ecology have been used for assessing the impacts of the development and detail 12 dwellings.

5.2 Impacts on Designated and Notable Sites

5.2.1 The proposed works have the potential to impact on the following statutory designated nature conservation sites: Liverpool Bay/Bae Lerpwl (Wales) SPA; Y Fenai a Bae Conwy/Menai Strait and Conwy Bay SAC.

5.2.2 These marine sites are a very short distance downslope of the site and could be affected by any run-off. This may be alleviated to some extent by the presence of a major trunk road and railway with attendant drainage infrastructure between the site and the SPA/SAC, although flood mitigation measures related to the infrastructure could cause bypass of surface waters.

5.2.3 The ditch on the western side of the site may also have a direct hydrological link with the coastline, although it was not possible to investigate this further.

5.2.4 The proposed works also have the potential to impact on the following non-statutory statutory designated nature conservation sites: Orme View vegetated shingle Candidate Wildlife Site.

5.2.5 This coastal habitat may be affected by site run-off, as described above for the statutory sites, albeit with a higher risk due its proximity; as this wildlife site lies between the site and the SPA/SAC, it may act as a buffer and reduce any impacts on the statutory sites should run-off occur.

5.3 Habitats

5.3.1 Table 5.1 provides information with respect to the habitats which were recorded on site and whether these habitats are listed as a 'habitat of principal importance' under Environment (Wales) Act 2016. Consideration of the potential impacts of the proposed project on the habitats are also discussed.

Table 5.1: Overall Site Assessment Rating

Habitat Recorded	Habitat Value*	Brief Discussion
Semi-improved grassland	-	Habitat is not considered to be in good condition on the site, being species-poor and heavily grazed. Majority of the habitat to be lost.
Bracken	-	Bracken is encroaching the grassland and reducing biodiversity at site scale. There will be a total loss of areas of bracken under the current development plans.
Scrub	-	Relatively low diversity, and lacking understorey, but the most valuable habitat on site with the potential to support a range of species. There will be a total loss of the scrub on site under the proposed plans.
*HPI – Habitat of Principal Importance under Environment (Wales) Act 2016		

5.3.2 The site is, on the whole, relatively low diversity and the habitats present are neither habitats of principal importance nor uncommon in the local landscape.

5.3.3 The grassland on site will largely be lost to the proposed development, but is a poor example of this habitat type, even in comparison to similar habitat in the area.

5.3.4 Removal of scrub from the site will represent a loss of biodiversity and green infrastructure as, despite its relatively low quality, this habitat could support various species and provides habitat connectivity between blocks of trees/scrub to the north and south-west.

5.4 Flora

5.4.1 None of the plant species recorded during the survey are protected by the Wildlife and Countryside Act 1981 (as amended) or listed on Section 7 of the Environment (Wales) Act 2016. In addition, no nationally or locally rare species were recorded.

5.5 Fauna

5.5.1 No signs of protected or notable species were seen on site, and faunal diversity is expected to be low given the poor quality of the habitats on site; however, despite this there is potential for a range of species to be using the site. Clearance of the site will cause displacement and disturbance of any species using the site.

5.5.2 The trunk road (A55) and railway line to the north of the site will act as a major dispersal barrier for terrestrial animals between the site and coastal habitats a short distance (approximately 55m) to the north-west. Instead, they will encourage dispersal parallel to the shoreline, particularly for reptiles and small mammals.

5.5.3 ***Reptiles*** **-** The site provides suitable foraging habitat and shelter for reptiles, and there are records of several species in the area. As there are habitat corridors across the local area

which could be used by reptiles, it is likely that reptiles may be present on the site although large numbers are not anticipated. Given the level of proposed disturbance and habitat destruction, any reptiles using the site would be at risk of harm during the works. **It is therefore recommended that a reptile survey is conducted** to determine if reptiles are using the site and to inform any additional mitigation measures.

5.5.4 **Badgers** – Badgers are considered unlikely to be resident on the site, but there is a possibility that setts are hidden in areas of dense scrub that could not be accessed. **If at any point a badger sett is discovered on or adjacent to the site, all works must immediately stop and an ecologist must be consulted for further advice** (see Section 6.3.7 for further details).

5.5.5 ***Bats* -** The site is unlikely to be used by roosting bats, but bats probably use the area for foraging. The works are considered unlikely to significantly affect bats or bat use of the site, but post-development lighting may restrict their use of the site in the long term. No specific surveys or mitigation will be necessary for bats (however, see Section 5.5.5 and 5.5.6, below), and there is likely to be potential to increase the suitability of the area for bats by adding roosting features, i.e. bat boxes to the site.

5.5.6 No suitable potential roost features were identified during the survey, all areas of the site could not be accessed or viewed due to dense vegetation. While it is considered unlikely that potential roost features are present (due to the nature of the vegetation), **if any deep cracks or holes are discovered in trees during site clearance works should stop until they can be checked by a suitably qualified ecologist**.

5.5.7 The electrical substation (see Target Note 8 in Table 4.2) was generally well-sealed but bats could potentially access the interior via louvres. It is understood that this structure will be retained and unaffected by the works; however, if it is to be modified or demolished then further inspection for signs of bats or bat activity will be required prior to any works.

5.5.8 ***Other Species* -** A range of other species could be using the site, but no further specific surveys are required other than pre-works checks (see Section 6.3) as, with the exception of hedgehogs and nesting birds, no protected species are considered likely to be present. General RAMS set out in section 6.3 should be followed, and will also minimise any potential impacts on any other small animals using the site.

5.6 Invasive Non-Native Species (INNS)

5.6.1 No invasive non-native species (INNS) are thought to be present on the site. However, areas of dense scrub could not be fully inspected and there is a chance that INNS are present in these areas. Should any INNS be discovered during clearance works, all works in the area must immediately stop and must not continue until the distribution of the INNS has been assessed and a biosecurity risk assessment detailing appropriate control measures is in place.

6.0 Avoidance, Mitigation and Restoration

6.1 The Step-Wise Approach

6.1.1 Development proposals should take green infrastructure into consideration in order to avoid negative impacts on habitats and species, and seek ways to maintain and enhance biodiversity. Impacts on habitats and species should be treated in a step-wise manner (Planning Policy Wales PPW12, paragraph 6.4.15), by seeking to:

- **Avoid** damage to biodiversity in its widest sense by maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly Section 7 habitats and species where present, through careful development design and consideration of long-term maintenance and management and ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species.
- **Mitigate** or **restore** by identifying measures to address the specific negative effects by repairing damaged habitats and disturbed species. The measures should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area.
- As a last resort off-site **compensation** for unavoidable damage must be provided. This must be of significant magnitude to fully compensate for any loss.
- All development must **deliver a net benefit** for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed).

6.2 Avoidance

6.2.1 No Habitats of Principal Importance for Wales are present on site or will be impacted by the development.

6.2.2 Scrub provides a valuable contribution to the green infrastructure provided by the site, including provided habitat connectivity between adjacent areas; however, it will not be possible to avoid loss of this habitat based on the current proposals.

6.2.3 With respect to the potential impact of bats from lighting associated with development schemes, the Institute of Lighting Professionals (2023) 'Bats and Artificial Lighting at Night' guidance suggests that the ecological mitigation hierarchy applies to lighting design: Impacts to biodiversity should be avoided in the first instance through design and where this has been clearly demonstrated not to be possible, appropriate mitigation needs to be put in place. Compensation is the least desirable option, so all other avenues should first be explored and ruled out. In parallel, opportunities to design lighting betterment for biodiversity should be sought wherever possible.

6.2.4 It is therefore important to integrate avoidance measures into developmental design, by retaining ecologically functional 'dark corridors' within schemes wherever feasible, and in

preference to seeking lighting mitigation strategies. Consideration should be given to the lighting effect of a scheme on Key Habitat and Supporting Habitat areas for bats, as well as commuting routes. Additional lighting of retained habitat to the north and east of the site should therefore be avoided; it is also recommended that lighting of the western site boundary is kept to the minimum possible, even though the potential existing commuting corridor (scrub) is intended to be removed.

6.2.5 General biosecurity measures which should be adopted as part of any development project are provided in Appendix E.

6.3 Mitigation

6.3.1 This section sets out the likely mitigation measures which could be adopted as part of the project to minimise potential impacts on biodiversity features.

6.3.2 The following general mitigation measures should be adopted at all times during the works:

- Prior to the start of works, a toolbox talk should be given to everyone involved in the project to set out any ecological protection measures and a log of this should be kept.
- Working areas should be kept to the minimum required.
- Works should be avoided within 1 hour of dawn and dusk where possible, in order to avoid disturbance to nocturnal animals. If works during this time are needed, all lighting should be directional and directed away from boundary edges and any surrounding habitat.
- Storage of fuel must follow best practice. Potential pollutants should be restricted to site compounds and hardstanding areas. Spill kits should be readily available throughout the works.
- Should it be necessary to have any excavations left open overnight a suitable ramp (such as a plank or branch) must be provided to allow badgers and other animals to escape the pit. Ramps could be created by grading the slope at the edges or using scaffold boards.
- All materials brought onto site should be stored on hard standing where possible. Materials should be stored on raised pallets or bagged, to prevent amphibians (or other wildlife) from taking refuge beneath them.
- Any terrestrial mammals seen must be allowed to leave the area on their own. If this is not possible e.g. the animal is injured or trapped then an ecologist must be called.
- If at any point in the works an amphibian or reptile is found within the works area all works in the vicinity of the sighting must immediately cease. Common amphibians should be moved from the working area by site workers (wearing gloves) and placed in a nearby hedgerow. Reptiles will usually retreat to a safe area of their own accord. If, at any point,

GCN are discovered during the works then works will have to stop and a licence may be required from NRW before they can continue.

6.3.3 The following mitigation measures should be adopted during the construction-phase in order to minimise any potential impacts on habitats or species.

6.3.4 ***Retained Habitats*** - Appropriate protection fencing should be used during the construction period to ensure that there is no access to, or risk of damage to areas of retained habitat within / adjacent to the study site.

6.3.5 ***Designated Sites -*** Steps must be taken to ensure there is no run-off of sediment or pollutants from the site, before during and post construction, as this could adversely affect designated sites downslope of the development (see Section 5.2). This should be addressed as part of a Construction Environmental Management Plan (CEMP) for the development.

6.3.6 ***Amphibians / Reptiles*** - Care must be taken regarding clearance of any piles of brushwood, rubble, plant material or other 'habitat piles' in the colder months due to the possibility of disturbing hibernating animals including amphibians and reptiles. Such piles should not be disturbed between October and April or when daytime temperatures are below 10°C.

6.3.7 Further mitigation measures for reptiles, which could include exclusion and directional clearance of the site, or in extremis translocation of individuals to receptor site, may be required depending on the results of a reptile survey.

6.3.8 ***Badgers*** - If at any point a badger sett is discovered on or adjacent to the site, then a suitably qualified ecologist should be informed, the ecologist will assess the sett and advise if any further action is required. No works should take place within 10m of a sett, and not within 30m if using machinery, unless under an appropriate licence. **Works in close proximity to an active badger sett are likely to require a licence and must not proceed until one is obtained**.

6.3.9 ***Bats*** - After avoiding, wherever possible, the potential impacts of Artificial Lighting At Night (ALAN) through scheme designs, if further mitigation measures are required in the form of lighting controls, ILP (2023) recommend that a lighting professional helps to select those light sources, lamps, LEDs and their fittings which are most appropriate for the project. Further details regarding lighting designs from ILP (2023) are given in Appendix D. The following overarching mitigation measures are recommended:

- Dense vegetation should be included in urban landscapes to protect against ALAN for open-space foraging bats in city landscapes, and provide potential longer-term roosting opportunities.
- Careful choices would need to be made about the type of lighting chosen for a scheme, and this should be designed through a multi-disciplinary design approach. Whilst Part Night Lighting (PNL) schemes and the installation of LED lights may have energy-saving benefits, they can result in an increase in light intensity, impacting on bat behaviours, and the lighting design for each site should be developed using information from bat surveys, and pre-development light level data.

6.3.9 Trees being removed must be checked for any defects such as knotholes, cracks and lifted bark, as they may be used by roosting bats; **any such features must be checked by a suitably licensed ecologist prior to felling**.

6.3.10 ***Hedgehogs*** - Care must be taken regarding clearance of any piles of brushwood, rubble, plant material or other 'habitat piles' in the colder months due to the possibility of disturbing hibernating animals including hedgehogs. Such piles should not be disturbed between October and April or when daytime temperatures are below 10°C.

6.3.11 ***Nesting Birds*** – All vegetation clearance during the nesting season (March-September inclusive) may impact nesting birds, and so further survey may be required in order to establish if nests are present. Therefore it is recommended that as far as possible all vegetation clearance takes place outside these months. If this is not possible, all vegetation to be cleared MUST be thoroughly checked for nests, immediately prior to the works**; if any active nests are present all works in the vicinity must cease until all chicks have fledged**.

7.0 Compensation and Enhancement

7.1 Compensation

7.1.1 This section of the report identifies which habitats/species features may need to be compensated for as part of the proposed development, and provides information to incorporate the recommended compensation proposals into the scheme design.

7.1.2 Consideration of the development proposals for the site have identified that compensation for the loss of / damage to the following habitats may be required:

- Species-poor semi-improved grassland
- Scrub

7.1.3 Trees, shrubs and hedgerows should be planted to compensate for loss of the scrub within the site. This woody vegetation should be planted as hedgerows and across the public areas of the development, and should comprise native species which are wildlife friendly and good for pollinators. Examples of suitable species are given in Table 7.1.

Table 7.1: Recommended Native Tree and Hedgerow Species

Latin name	Common name
Acer campestre	Field maple
Cornaceae	Dogwood
Corylus avellana	Hazel
Crataegus monogyna	Hawthorn
Euonymus europaea	Spindle
Ilex aquifolium	Holly
Prunus avium	Wild Cherry
Prunus domesticus	Denbigh Plum
Prunus domesticus	Damson
Prunus padus	Bird Cherry
Pyrus pyraster	Wild Pear
Rosa canina	Dog rose
Sorbus aria	Whitebeam
Sorbus aucuparia	Mountain ash/rowan
Sorbus torminalis	Wild service tree
Viburnum lantana	Wayfaring tree
Viburnum opulus	Guelder rose

7.1.4 As it will not be possible to compensate for the loss of grassland within the site, but this loss could be offset to an extent through enhancement of retained areas of grassland; see Section 7.2.2, below. Alternatively, off-site compensation could be considered.

7.1.5 ***Birds -*** To compensate for the loss of features which could be used by nesting birds at least 10 bird boxes should be incorporated into the site's layout. Bird boxes should include:

- Boxes with a 32mm entrance (sparrow boxes)
- Boxes for smaller birds (25-28mm entrance)
- Boxes with 45mm opening (starling box)

7.1.6 The boxes should be placed near to and facing areas of trees and other vegetation such as gardens or the site boundaries. These should be installed on the buildings between 2-4m from the ground and facing north/north-east. The boxes should ideally be woodcrete or woodstone boxes rather than wooden boxes as they will last longer and with limited maintenance.

7.1.7 ***Hedgehogs -*** As hedgehogs have been recorded in the adjacent residential areas, a 'hedgehog highway' comprising a 13 x 13cm (5 x 5") square hole at the bottom of every fence or gravel board should be created. This will ensure they can continue to move through the area to forage. The hole is designed to be too small for most pets to get through.

7.2 Enhancement

7.2.1 Planning Policy Wales (PPW12, paragraph 6.4.5) confirms that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species (not including non-native invasive species), locally or nationally and must work alongside nature and it must provide **a net benefit for biodiversity** and improve, or enable the improvement, of the resilience of ecosystems.

7.2.2 Based on the development proposals provided at Enfys at this stage in the design process, it is recommended areas of grassland retained as public/amenity spaces are enhanced in order to increase biodiversity. Grassland diversity can be encouraged through reseeding with an appropriate species-rich seed mix or locally sourced green hay, combined with a low pressure/frequency mowing regime; while some areas may require regular mowing for access, the majority should be cut infrequently (ideally only once or twice per year) if possible.

7.2.3 Pollinator-friendly planting areas could also be included within public areas and shared gardens. Invasive species must be avoided, even if commercially available (e.g. cotoneasters, *Buddleja davidii*).

7.2.4 ***Bats -*** To enhance the site for bats, bat boxes could be incorporated into the site's layout. Bat boxes should be erected onto or in-built into the new houses, located along potential commuting and foraging routes such as along the northern, western and eastern boundaries. The boxes should be at least 3m above the ground and be placed on elevations facing preferably south, south-east and south-west and away from windows and lighting. The positions of these will be agreed with an experienced ecologist and must be placed where there will be the least likely disturbance from light spill, windows doors and patios.

7.2.5 ***Birds*** **-** Erection of bird boxes, in additional to those installed as compensation for the loss of nesting habitat (see Section 7.1.5), would provide an overall enhancement to the site.

7.2.6 As swifts have been recorded within 0.1 km of the site erecting a minimum a four swift boxes, in addition to the other bird boxes, would further enhance the site. Swifts prefer to nest in colonies so multi-cavity swift nest boxes should be erected in pairs across the site. Inbuilt swift boxes would be preferable if there is room to incorporate them, but external boxes can be erected as an alternative. The boxes should be at least 5m high on the northern or eastern elevations of the buildings. If externally mounted, they will need to be attached securely so as not to be moved by any strong winds. To increase the chances of swifts using the boxes they should contain an internal egg cup so the eggs do not move around within the box. There are different types of nest boxes available but the HabiSabi double swift box is recommended as it is multicavity and can be opened up to insert a nest cup before it is erected onto the wall. Ready-to-insert egg cups are available online; it is recommended that an egg cup is used in each of the two cavities of each of the nest boxes.

8.0 Further Works

8.1 Further Works

8.1.1 Table 8.1 below provides further information on the necessary further works recommended on site.

Table 8.1: Further Survey Work Required

Habitats / species	Further survey requirements
Reptiles	Reptile survey is recommended to inform mitigation measures.

8.1.2 Table 8.2 below provides a summary of ecological considerations associated with the proposed development. Note that "Pre-construction" means prior to the works phase beginning on site, whereas "Immediately prior to clearance" means during the works, but prior (ideally within 48 hrs) to that particular operation (e.g. tree felling, demolition) beginning.

Table 8.2: Summary of Other Ecological Considerations

Constraint	Work Stage	Species	Work	Location	When possible
If any vegetation clearance in March – September	Immediately prior to clearance, whenever this occurs	Nesting birds	Nesting bird checks (see Section 6.3.11).	Any scrub, tree, or tall vegetation clearance	March-September
Cracks, holes, peeling bark or other potential roost features found in trees	During clearance	Bats	Seek ecological advice before felling	Trees, scrub	All year
If badger sett located	All	Badgers	Stop works and seek ecological advice	Site	All year

8.2 Green Infrastructure Statement

8.2.1 Planning Policy Wales (PPW12, paragraph 6.2.12) states that a green infrastructure statement should be submitted with all planning applications. This statement should be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal. This will need be provided to support a planning application, and should illustrate how the step-wise approach has been adopted in relation to the project proposals.

8.2.2 Further information regarding green infrastructure requirements within Conwy County Borough Council is given in Appendix A.

9.0 References

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APPENDIX A Legislation and Planning Policy

Amphibians

The most common species are protected from sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These are as follows: common frog, *Rana temporaria*; common toad, *Bufo bufo*; palmate newt, *Lissotriton helveticus*; and, smooth / common newt, *Lissotriton vulgaris.* This legislation protects them from sale, or advertising / offering them for sale.

The UK's two rarest amphibians are protected under the Conservation of Habitats and Species Regulations 2017 (known as 'the Habitats Regulations'). This is because they have declined throughout Europe in recent decades. The Habitats Regulations lists the following amphibians as European Protected Species (EPS):

- Great crested (or Warty) newt, *Triturus cristatus*
- Natterjack toad, *Epidalea calamita*

Under the Habitats Regulations, it is an offence if you:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb wild animals of any such species;
- Deliberately take or destroy the eggs of such an animal; or,
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance is defined as that which is likely:

- To impair their ability: to survive, to breed or reproduce, or to rear or nurture their young, or, in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- To affect significantly the local distribution or abundance of the species to which they belong.

There are other offences relating to the possession, transport, selling or exchange of a protected species.

Badgers

The Protection of Badgers Act 1992 fully protects badgers and their setts. Offences include:

- killing, injuring and taking (or attempting these);
- possession of a dead badger (or derivative);
- cruelly ill-treating a badger;
- damaging a badger sett or any part of it;
- destroying a badger sett;
- obstructing access to / entrance of a badger sett;
- causing a dog to enter a badger sett;
- disturbing a badger whilst occupying a sett.

Badgers are also listed on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), which prohibits certain methods of killing and capture.

Bats

All species of bat, their breeding sites and their resting places in England and Wales are protected through a 'dual' system of protection, under the England and Wales Habitats Regulations and Wildlife and Countryside Act (1981) as amended. Because two regimes give legal protection to bats, the implications of both regimes must be fully understood.

Regulation (Reg.) 43 of the England and Wales Habitats Regulations makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats (which includes any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong);
- damage or destroy a breeding site or resting place of a bat; or
- possess, control, transport, sell or exchange, or offer for sale or exchange, any live or dead bat or part of a bat or anything derived from a bat or any part of a bat

Under Section 9 of the W&CA (s.9(4)(b), 9(4)(c) and 9(5) only), it is an offence (in relation to bats) to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place of shelter or protection;
- intentionally or recklessly obstruct access to any structure or place used by a bat for shelter or protection; or
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead bat or any part of, or anything derived from a bat (or be responsible for adverts suggesting the intention to do this).

Under both laws Natural Resources Wales are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest. It is not illegal to tend to a disabled bat pending recovery.

Birds

Under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way (CRoW) Act 2000, all wild birds, their nests and eggs are protected during the breeding season (typically March to August inclusive). This makes it an offence to:

- Intentionally kill, injury or take any wild bird.
- Take, damage or destroy the nest of a wild bird included in Schedule ZA1.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

Hedgehogs

Hedgehogs are listed under Section 7 of the Environment (Wales) Act 2016, therefore public bodies have a duty to conserve them in the exercise of their functions.

They are listed under Section 6 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence for them to be killed or taken by certain methods.

Reptiles

All British reptiles are protected from intentional killing, injuring and sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), including the four common species:

- Adder, *Vipera berus*
- Grass snake, *Natrix helvatica**
- Slow worm, *Anguis fragilis*
- Common lizard, *Zootoca vivipara*

* The native UK grass snake (as referred to as the barred grass snake) was originally listed under *Natrix natrix* in the W&CA 1981 (as amended); formerly considered to be a sub-species of *N. natrix* (*N. natrix helvatica*), the barred grass snake was recognised as a separate species in 2017 following genetic analysis of European *Natrix* populations.

This legislation aims to protect them from persecution and also from exploitation in the pet trade, and for which the following are offences:

- Intentional killing, injuring or taking.
- Intentionally or recklessly damaging / destroying a place of shelter / protection.
- Intentionally or recklessly disturbing an animal in its place of shelter / protection.
- Intentionally or recklessly obstructing access to its place of shelter / protection.
- Possession (live or dead, including derivatives), sale and offering for sale.

The UK's two rarest reptiles are afforded additional protection under the Conservation of Habitats and Species Regulations 2017 (known as 'the Habitats Regulations'). This is because they have declined throughout Europe in recent decades. The Habitats Regulations lists the following reptiles as European Protected Species (EPS):

- Sand lizard, *Lacerta agilis*
- Smooth snake, *Coronella austriaca*

Under the Habitats Regulations, it is an offence if you:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb wild animals of any such species;
- Deliberately take or destroy the eggs of such an animal; or,
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance is defined as that which is likely:

- To impair their ability: to survive, to breed or reproduce, or to rear or nurture their young, or, in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- To affect significantly the local distribution or abundance of the species to which they belong.

There are other offences relating to the possession, transport, selling or exchange of a protected species.

Otters

Otters are protected under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations', because they have declined throughout Europe in recent decades. The Habitats Regulations lists otters as a European Protected Species (EPS):

Under the Habitats Regulations, it is an offence if you:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb wild animals of any such species; or,
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance includes, but is not limited to, any disturbance which is likely:

- To impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or (in the case of animals of a hibernating or migratory species) to hibernate or migrate; or,
- To affect significantly the local distribution or abundance of the species to which they belong.

Under the Wildlife and Countryside Act 1981 (as amended) it is illegal to:

- Intentionally or recklessly disturb any otter while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)].
- Intentionally or recklessly obstruct access to any structure or place used by an otter for shelter or protection [Section 9(4)(c)].
- Sell, offer or expose for sale any otter [Section 9(5)].

It is, however, legal for you to tend a disabled otter with the intention of releasing it, or to kill an otter that cannot recover, as long as the injury was not a result of your unlawful act (Habitat Regulations 44(2); W&CA 10(3)(a)(b)). It is not necessary to obtain a licence to collect a dead otter (e.g. a road casualty) for the purpose of submitting it for post mortem as part of the Cardiff University Otter Project (see: https://www.cardiff.ac.uk/otter-project).

Water Vole

The water vole is listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), for which the following are offences:

- Intentionally killing, injuring or taking [Section 9(1)].
- Possession or control of a water vole (live or dead) [Section 9(2)].

- Intentionally or recklessly damaging/destroying a place of shelter/protection [Section 9(4)(a)].
- Intentionally or recklessly disturbing any water vole while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)].
- Intentionally or recklessly obstructing access to any structure or place used by a water vole for shelter or protection [Section 9(4)(c)].
- Selling, offering or exposing for sale any water vole [Section 9(5)].

Protected Plants

The Wildlife and Countryside Act 1981 (as amended) makes it illegal to uproot any wild plant without the permission of the landowner. In addition, plants which are either rare or vulnerable to exploitation are listed on Schedule 8, for which it is an offence to:

- Intentionally pick, uproot or destroy.
- Sell, offer or expose for sale.

Invasive Non-Native Species

Invasive non-native species are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), for which the following are offences:

- Release into the wild, or to allow the escape of, any animal which is not ordinarily resident, or a regular visitor to, Great Britain in a wild state, or which is included in Part 1, Schedule 9.
- Plant in the wild, or otherwise cause to grow there, any plant included in Part 2, Schedule 9.

National Planning Policy

National Planning Policy in Wales is set out in Planning Policy Wales, Edition 12, issued in February 2024. This document sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, MTANs and policy clarification letters comprise national planning policy.

PPW Edition 12 Section 6.4 states that "*biodiversity underpins the structure and functioning of ecosystems*" and identifies that the "*planning system has a key role to play in helping to reverse the decline in biodiversity and increase the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement*". The broad framework for implementing the Environment (Wales) Act 2016 Section 6 Duty, securing a net benefit for biodiversity and building resilience through the planning system includes addressing all of the following attributes: diversity, extent, condition, connectivity, and adaptability to change.

Green infrastructure (GI) is defined in Planning Policy for Wales (PPW) Edition 12 as "*the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect*

places". Green infrastructure can function at a range of different scales, from entire ecosystems to street trees and is capable of providing several functions at the same time and as a result offers multiple benefits, for social, economic and cultural as well as environmental resilience.

Development proposals should take biodiversity and green infrastructure (GI) into consideration in order to avoid negative impacts on habitats and species, and seek ways to maintain and enhance biodiversity. Impacts on habitats and species should be treated in a step-wise manner (PPW 12, paragraph 6.4.15), by seeking to:

- **Avoid** damage to biodiversity in its widest sense by maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly Section 7 habitats and species where present, through careful development design and consideration of long-term maintenance and management and ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species.
- **Mitigate** or **restore** by identifying measures to address the specific negative effects by repairing damaged habitats and disturbed species. The measures should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area.
- As a last resort off-site **compensation** for unavoidable damage must be provided. This must be of significant magnitude to fully compensate for any loss.
- All development must **deliver a net benefit** for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed).

PPW12 also sets out the national policy requirements in relation to planning permissions where protected species, trees, hedgerows and woodlands and *irreplaceable natural resources* have the potential to be impacted.

Local Planning Policy

General - Local Policy

Conwy County Borough Council's 'Conwy Local Development Plan 2007 – 2022' covers that part of the Conwy County Borough outside Snowdonia National Park and acts as a single framework for the control of development and use of land within its administrative boundary.

It is understood that Conwy County Borough Council are currently working on a Replacement Local Development Plan, which is proposed to be produced in draft for consultation in 2024.

Biodiversity – Local Policy

Conwy CBC's Policy NTE/3 – Biodiversity (Section 4.6.4) sets out the requirements in relation to new development and biodiversity, identifying the need for sensitive siting, layout and design to avoid and minimise impacts, the requirements for mitigation, and identifies the importance of integrating biodiversity measures in the built environment, as well as creating, enhancing and managing wildlife habitats and natural landscapes. The importance of habitat and landscape connectivity is noted. The policy requires all proposals to be supported by a Biodiversity Statement.

Policy NTE/3 – BIODIVERSITY

1. New development should aim to conserve and, where possible, enhance biodiversity through:
    a. Sensitive siting; avoiding European protected sites or those of national or local importance;
    b. Sensitive layout and design which avoids impacts or mitigates through an agreed programme for any identified adverse impact on biodiversity;
    c. Creating, enhancing and managing wildlife habitats and natural landscapes including connectivity;
    d. Integrating biodiversity measures into the built environment;
    e. Contributing to achieving targets in the Conwy Local Biodiversity Action Plan (LBAP);
    f. Providing for a management agreement with the Local Planning Authority to secure the retention and long term future of biodiversity interests where applicable.
2. All proposals should include a Biodiversity Statement detailing the extent of impact on biodiversity.
3. The Council will refuse proposals which would have a negative impact on a European Site, protected or priority species or habitat unless the impact is adequately mitigated and appropriate remediation and enhancement measures are proposed and secured by planning conditions or obligations.

view map

Conwy CBC's LDP (paragraph 4.6.4.1) recognises that "*Whilst the need for development will be carefully considered against its impact on biodiversity, opportunities can arise through sensitively located and carefully designed developments. Change can bring about new opportunities where the use of conditions and Section 106 agreements can be used to create new habitats and manage existing ones*".

Conwy County Borough Council's 'Supplementary Planning Guidance LDP5: Biodiversity in Planning' was adopted in November 2014. The SPD offers guidance on how to address and comply with the requirements in policy NTE/3. The main question to ask is whether all likely adverse effects on natural features, wildlife species and habitats have been avoided as far as possible. The SPD states that (paragraph 5.2):

In particular applicants should:

- *Avoid adverse impacts on designated sites (see NRW website) and protected species (including those listed in Appendix 3 of the SPD).*
- *Avoid adverse impacts to priority habitats and species identified in the Section 42 list of habitats or species of principle importance to Wales and the Conwy LBAP.*
- *Retain existing habitats and consider species in the site layout and design integrating the process into the DAS/Biodiversity Statement.*
- *Where appropriate prepare a landscaping scheme at pre-app stage taking into account the above prior to submitting an application.*
- *Avoid leaving existing habitats and species isolated within the finished development by linking them to adjacent habitats via appropriate wildlife corridors as identified in earlier survey work.*

Green Infrastructure – Local Policy

The Conwy LDP 2007 – 2022 does not include any specific policies regarding green infrastructure, however, the plan states that "*opportunities should be taken to achieve positive gain through the*

form and design of development...changes to the built environment should be ***viewed as an opportunity to fully integrate biodiversity within new development through innovation. Priority should be given to sites which offer habitat creation or linking which assists in achieving targets in the Conwy Local Biodiversity Action Plan (LBAP)"*** (paragraph 4.6.4.8).

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view map

Conwy County Borough Council's 'Supplementary Planning Guidance LDP5: Biodiversity in Planning' was adopted in November 2014. The SPD does not provide specific requirements in relation to green infrastructure however, it does identify the role of green infrastructure in achieving biodiversity gains (paragraphs 5.10 – 5.12).

Conwy County Borough Council. (2013). 'Conwy Local Development Plan 2007 – 2022'. Available: https://conwy.opus3.co.uk/ldf/documents/Adopted%20LDP

Conwy County Borough Council. (2014). 'Supplementary Planning Guidance LDP5: Biodiversity in Planning'. Available: https://www.conwy.gov.uk/en/Resident/Planning-Building-Control-and-Conservation/Strategic-Planning-Policy/Supplementary-planning-guidance-documents/Natural-Environment.aspx

APPENDIX B Desk Study

Desk Study Data included as separate Appendix

APPENDIX C Plant Species List

This list is not exhaustive but refers to species observed during the site visit. Mosses (except indicators of bog habitat if present), lichens, algae and other lower plants and fungi were not identified. No protected or notably rare plant species were found.

Table C.1: Plant Species List

English Name	Scientific Name
Autumn hawkbit	*Scorzoneroides autumnalis*
Bird's foot trefoil	*Lotus corniculatus*
Black knapweed	*Centaurea nigra*
Bracken	*Pteridium aquilinum*
Bramble	*Rubu fruticosus* agg.
Broad-leaved dock	*Rumex obtusifolius*
Cock's foot	*Dactylis glomerata*
Common mouse-ear	*Cerastium fontanum*
Common nettle	*Urtica dioica*
Common sorrel	*Rumex acetosa*
Common vetch	*Vicia sativa*
Creeping bent	*Agrostis stolonifera*
Creeping buttercup	*Ranunculus repens*
Creeping cinquefoil	*Potentilla reptans*
Creeping thistle	*Cirsium arvense*
Cuckoopint	*Arum maculatum*
Dandelion	*Taraxacum officinale*
Elder	*Sambucus nigra*
False oat grass	*Arrhenathium elatius*
Hazel	*Corylus avellana*
Hogweed	*Heracleum sphondylium*
Ivy	*Hedera helix*
Leylandii	*Cupressus × leylandii*
Perennial ryegrass	*Lolium perenne*
Privet	*Ligustrum* sp.
Ragwort	*Jacobaea vulgaris*
Red clover	*Trifolium pratense*
Red dogwood	*Cornus sanguinea*
Ribwort plantain	*Plantago lanceolata*
Rough hawkbit	*Leontodon hispidus*
Scarlet pimpernel	*Anagallis arvensis*
Spreading pellitory	*Parietaria judaica*
Sweet vernal grass	*Anthoxanthum odoratum*
Sycamore	*Acer pseudoplatanus*

Table C.1: Plant Species List

English Name	Scientific Name
White clover	*Trifolium repens*
Willow	*Salix* sp.
Willowherb	*Epilobium* sp.
Yorkshire fog	*Holcus lanatus*

APPENDIX D Bats and Lighting Design Recommendations

To assist with the decision-making process in relation to bats and lighting for development projects, the Institution of Lighting Professionals (2023) suggest that the following are considered when choosing luminaires:

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone *et al.*, 2012).
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - see ILP (2021) GN01.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand. Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

ILP (2023) provide guidance associated with the layout (location, orientation and height) of newly built structures and hard standing, as the design can have a considerable impact on light spill:

- Key or Supporting Habitat is often located alongside, or to the rear of buildings, on new developments. In this case, the removal or reduction of windows can be the most effective way to permanently limit light spill, potentially alongside the internal reconfiguration of the building, to ensure high-use spaces are not as impacted by loss of natural light.
- It may be possible to include Key or Supporting Habitat into unlit public open space such as parks. However, schemes should avoid including Key or Supporting Habitats in residential gardens, as uncontrolled and inappropriate lighting may be introduced by residents following occupation.
- It is often considered better for a residential scheme to specify good quality downward-directional external light fittings for security, and/or at the front entrance, on short PIR timers, rather than risk the imposition of poor quality and poorly controlled lighting at a later date.
- Buildings, walls and hard landscaping may be sited and designed so as to block light spill from reaching habitats and features.
- Paved surfaces should not be located within Key Habitat or buffer zones, unless they form part of unlit public open space.
- Taller buildings may be best located toward the centre of the site, or sufficiently set back from Key Habitats, to minimise the effect of their light spill.
- Column mounted luminaires can be located so that the rear shields are adjacent to habitats, or narrow optics selected that direct light into the task area where needed.
- As planting may be removed, die back or inadequately replaced over time, it should never be relied on as the sole means of attenuating light spill.

ILP. (2023). *Bats and Artificial Lighting At Night*. Guidance Note GN08/23. Institute of Lighting Professionals & Bat Conservation Trust.

APPENDIX E General Biosecurity Measures

Biosecurity means taking measures to ensure that good practices are in place to minimise the risk of importing and spreading invasive non-native species (INNS), pests and infectious disease. As non-native species or diseases could be transmitted in any water or material, a good biosecurity routine is essential, even if invasive non-native species are not apparent.

General good-practice biosecurity measures include:

- A toolbox talk detailing the general risks of invasive non-native species (INNS) relevant to the site and the project should be delivered to all workers, showing the various life stages and how to recognise these plants and animals.

- A cleaning station should be set up at the site exits including facilities to wash boots and vehicles.

- **All** footwear of staff leaving site (for **any** reason and no matter for how short a time) should be cleaned (i.e., visually free of soil and debris) before leaving site.

- Soil and vegetation should be washed off with clean water (and brushes). Water (which should not be contaminated with any disinfectant or other pollutants) should then be disposed of by pouring on site to soak away. No water should be disposed of directly into a watercourse.

- The wheels or tracks (and any other part which has come into contact with the soil) of all vehicles which have entered the area must be thoroughly washed and be free of soil and debris before leaving the site.

- No one should remove any soil or vegetation from the working area for any reason.

It may be necessary to produce a site-specific and project-specific Biosecurity Risk Assessment to support the construction-phase of the project, once detailed design works have been completed and timings and construction methods are known. This Biosecurity Risk Assessment should identify the specific biosecurity risks associated with the works and detail operational procedures to minimise the risk of spreading invasive non-native species (INNS) and other biosecurity risks.