



# FFORDD GLANFFYNNON, LLANRUG

## PRELIMINARY ECOLOGICAL APPRAISAL

DATE	ECOLOGIST	APPROVED	VERSION	COMMENTS
2/7/24	Anne Butler	Richard Cutts	V1	
22/5/25	Daisy Askari	Richard Cutts	V2	Updated with final site plans.

Report Ref: EE.4657.25.AB

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## Ffordd Glanffynnon, Llanrug: Preliminary Ecological Appraisal

### Executive Summary

<b>Site</b>	Ffordd Glanffynnon, Llanrug	<b>Grid Reference:</b>	SH 5360 6310
<b>Surveyor(s)</b>	Anne Butler	<b>Survey Date:</b>	20/06/2024
<b>Type of Survey</b>	Preliminary Ecological Appraisal (PEA).		
<b>Summary of Proposed work</b>	Housing development		
<b>Habitats affected</b>	<ul style="list-style-type: none"> <li>• Trees</li> <li>• Dense/continuous scrub</li> <li>• Semi-improved neutral grassland</li> <li>• Marshy grassland</li> <li>• Earthbank (stone-faced)</li> <li>• Hedgerows</li> </ul>		
<b>Statutory sites affected</b>	None		
<b>Non-statutory sites affected</b>	Glanffynnon Wildlife Site		
<b>Main results of survey</b>	<p>The development will result in the partial loss of Glanffynnon Wildlife Site and some of its designated habitats.</p> <p>Birds, reptiles and bats may be impacted.</p>		
<b>Additional surveys</b>	A reptile survey is recommended due to the habitats on site and connectivity to known reptile populations.		
<b>Mitigation</b>	Mitigation measures have been given to avoid impacts to protected species: bats, birds, badgers, otters and reptiles. A buffer zone will be created to retain some of the marshy grassland and protect the stream.		
<b>Compensation</b>	New native hedge planting and bat and bird boxes will compensate for the loss of scrub, hedge, semi-improved grassland and marshy grassland habitats.		
<b>Enhancement</b>	Enhancements to be confirmed pending further site design and incorporation of compensation measures. Enhancements could include enrichment of retained grassland areas, addition bat and bird boxes, creation of refugia, and constructing retaining walls with gaps/crevices suitable for reptiles and other animals.		

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### 1.0 Introduction

- 1.1 Enfys Ecology Limited were commissioned by Atticus Land and Development to undertake a Preliminary Ecological Appraisal (PEA) of an area adjacent to Ffordd Glanffynnon, within the red boundary as shown in Figure 1 below.



**FIGURE 1.1 AERIAL PHOTO SHOWING APPROXIMATE SURVEY AREA OUTLINED IN RED**  
**BACKGROUND IMAGE © GOOGLE MAPS 2024**

- 1.2 The area surveyed is centred on approximate grid reference SH 5360 6310.
- 1.3 The proposed works comprise a housing development and associated infrastructure. The final plans for the proposed works were received in May 2025 (Figure 1.2):

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**FIGURE 1.2. PROPOSED HOUSING DEVELOPMENT AT Ffordd GLANFFYNNON**  
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- 1.4 Enfy's Ecology carried out a PEA of the site, including a Phase 1 Habitat Survey, protected species survey and a desk study examining local ecological records held by Cofnod, North Wales Environmental Information Service.
- 1.5 The PEA was commissioned to determine whether the proposed works would affect protected species. The surveys were also designed to provide baseline ecological data with respect to the species and habitats present on the site, identify any potential ecological constraints to the proposed works arising from the site or surrounding area, and recommend

suitable general mitigation, compensation and enhancement strategies for these issues, as appropriate.

- 1.6 The survey work to inform this report was carried out in June 2024, within the optimal time of year for this type of survey (April to September). 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 two years (from June 2024) in accordance with best practice.

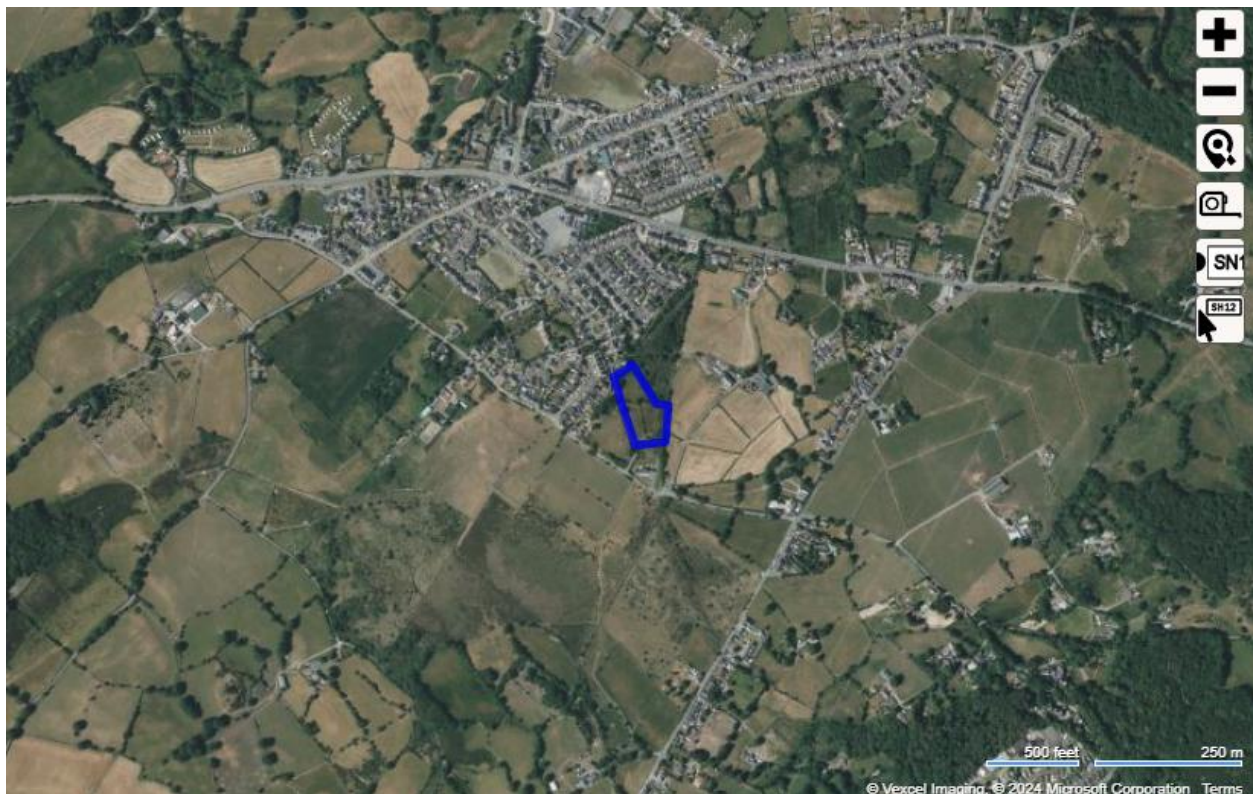


### 2.0 Site Description

#### 2.1 Survey Area

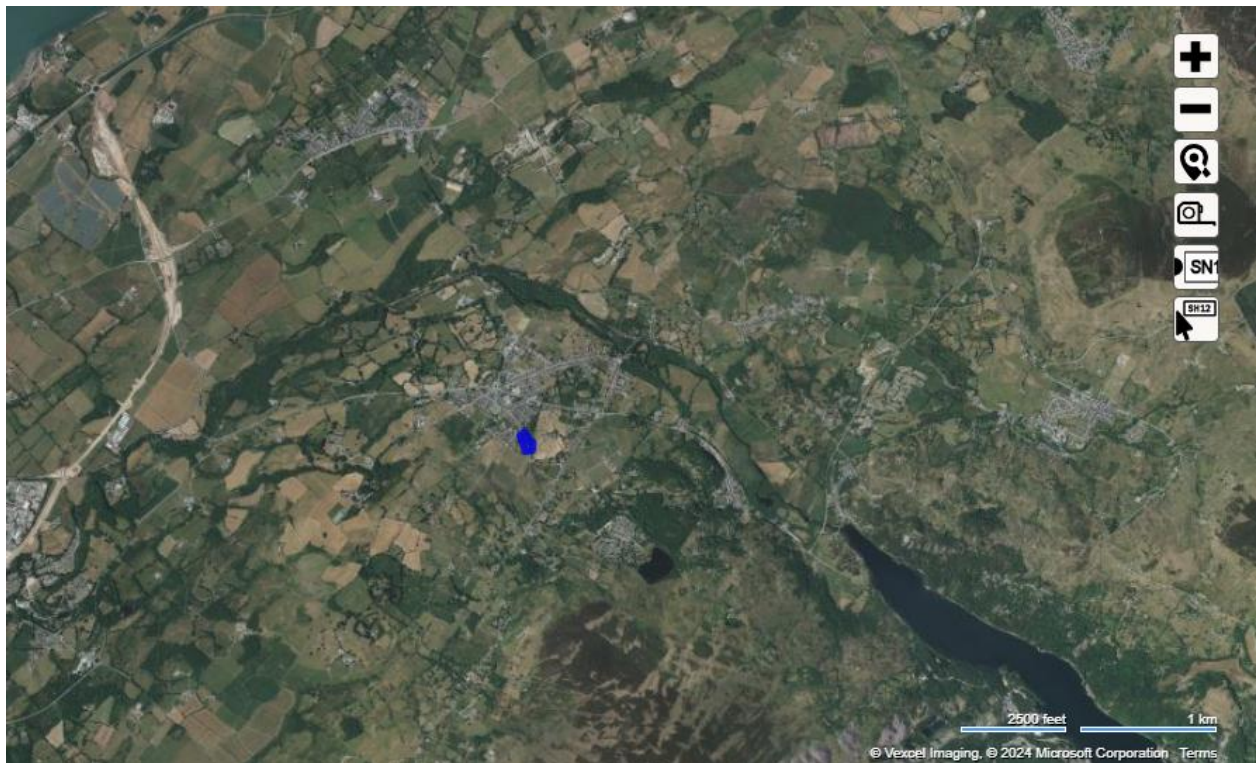
- 2.1.1 The area surveyed is shown in Figure 2.1, below. The site comprises three fields with hedgerows with trees, walls and stone-faced earthbanks (cloddiau). A minor road lies immediately to the west of the site and a stream runs along the south-eastern boundary. There is woodland to the north-east with no demarcating boundary.

The village of Llanrug lies to the north of the site, and the Afon Seiont runs to the north of Llanrug, approximately one kilometre from the site. Grazed agricultural land with some patches of scrub and woodland lie to the south of the site.



**FIGURE 2.1. SURVEY LOCATION IN BLUE SHOWING THE SURROUNDING AREA**  
**BACKGROUND IMAGE © GOOGLE MAPS 2024**

- 2.1.2 Llyn Padarn and the mountain habitat of Snowdonia lie to the south-east (Figure 2.2). Beyond the town of Llanrug, lowland habitats extend to the coast and the Menai Strait to the north and north-west.



**FIGURE 2.2. THE SITE (IN BLUE) IN ITS WIDER ENVIRONMENT**  
**BACKGROUND IMAGE © GOOGLE MAPS 2024**



### 3.0 Methodology

#### 3.1 Preliminary Ecological Appraisal (PEA) - Desk Study

The desk study was undertaken through Cofnod, North Wales Environmental Information Service, to determine the presence of statutory and non-statutory sites for nature conservation, and records of species or habitats of principal importance, listed under Section 7 of the Environment (Wales) Act 2016, from within a 1km radius of the site. The records were used to inform the survey and recommendations, and to provide a context for evaluating the species and habitats found during the survey. Any relevant results from the desk study will be referred to in Section 4. The NBN Atlas (NBNAtlas.org) was also used to search for records of Great Crested Newts outside the 1km search area.

#### 3.2 Preliminary Ecological Appraisal (PEA) - Survey

The survey was conducted by walking over the site. All habitat types on site were visited. Notes were taken on the habitat types present, and their suitability for protected species, and target notes were used to record any habitats or features of particular note, following the standard methodology and professional guidelines (JNCC, 2010; CIEEM, 2017).

#### 3.3 Survey Details

The PEA was conducted on the 20<sup>th</sup> June 2024 by Anne Butler, a suitably experienced professional ecologist. Photographic evidence was taken where necessary. Conditions were calm, dry, sunny and warm (20 degrees Celsius).

#### 3.4 Limitations

3.4.1 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 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. Where possible, an attempt has been made to list the dominant species present, but this is not exhaustive. Any rare or notable, protected, or invasive, species that were observed are identified. Whilst every reasonable effort is made, Enfys Ecology cannot guarantee that all protected and invasive species have been identified and that the survey results are definitive.

3.4.2 The immediate surrounding areas were not accessed. The scrub and woodland bordering the immediate north-east of the site was dense and not accessed, although tree and shrub species and any animal tracks into the woodland were noted.

#### 3.5 Report and Terminology

3.5.1 For the purposes of this report, the term 'survey area' and 'site' is used to refer to the area surveyed on the ground by the ecologist at the clients' request, which includes the entire

area subject to the proposed works. 'Search area' is used to refer to the wider 1km radius from which records were sought for the desk study.

- 3.5.2 English species names are generally used in the text with Latin names provided in the species list in Appendix B.

### 4.0 Survey Results: Preliminary Ecological Appraisal

#### 4.1 Statutory Designated Sites

4.1.1 No statutory designated sites are located within a 1km radius of the survey area.

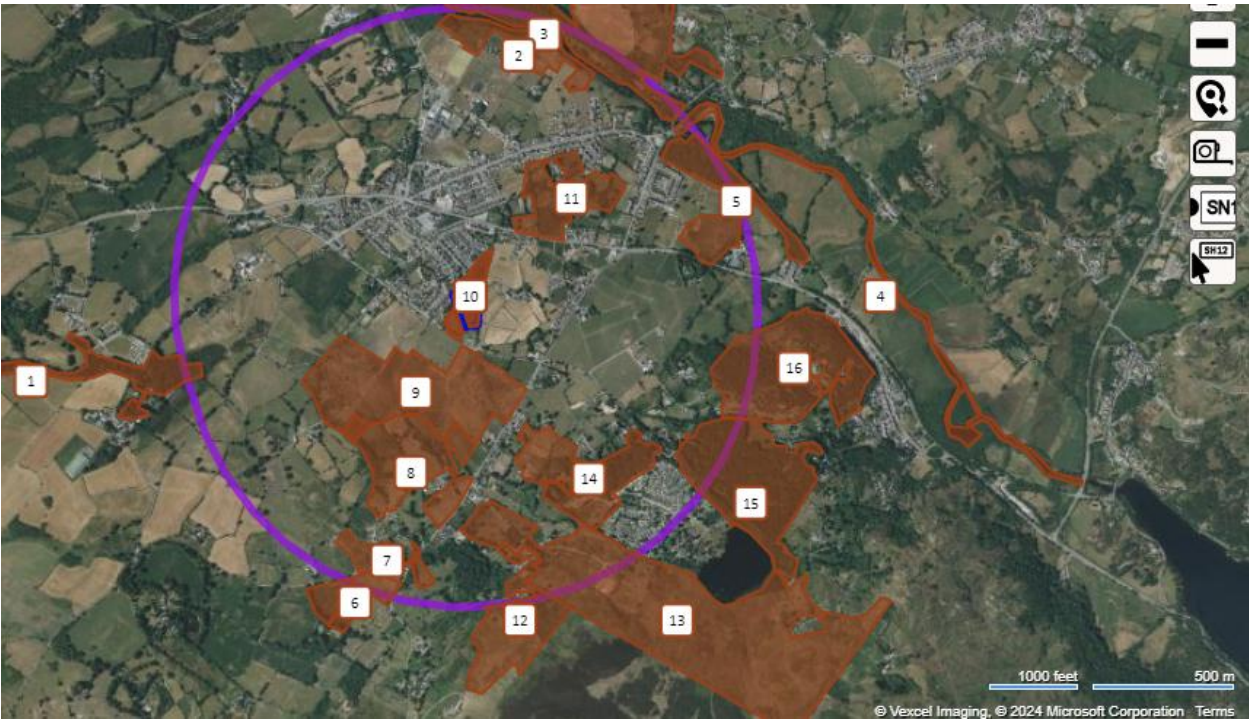
#### 4.2 Non-Statutory designated sites

4.2.1 The majority of the survey area is included in Glanffynnon Wildlife Site (ref. 0978), which is shown in red, below. The site is designated for its lowland meadow, rush pasture and wet woodland.



**FIGURE 4.1. GLANFFYNNON WILDLIFE SITE**  
**BACKGROUND IMAGE © GOOGLE MAPS 2024**

4.2.2 There are sixteen wildlife sites within a one kilometre radius of the survey area, as shown in Figure 4.2 and listed in Table 4.1, below.



**FIGURE 4.2. WILDLIFE SITES WITHIN 1KM RADIUS OF SITE**  
**IMAGE © COFNOD 2024**

4.2.3 The closest sites, other than Glanffynnon Wildlife Site (which overlaps the survey area), are Tan y Coed Wildlife Site (ref. 977), which is 70m from the proposed development site and was designated for its rush pasture and dry heath, and Rhos Ddu Wildlife Site (ref. 979) which is 280m from the site and was designated for its rush pasture, wet woodland, lowland meadow and river corridor.

**TABLE 4.1: WILDLIFE SITE FEATURES**

Number on map	Wildlife Site ref.	Name	Designated features
1	387	Coed Plas Tirion	Broadleaved woodland
2	953	Pen y Buarth	River corridor, lowland meadow, lowland mixed deciduous woodland
3	954	Pont Rhythallt (candidate site)	Broadleaved woodland, semi-improved neutral grassland, marshy grassland
4	955	Afon Rhythallt (candidate site)	Running water
5	956	Afon Rhythallt Mosaic (candidate site)	Broadleaved woodland, coniferous woodland, neutral grassland
6	972	Bryn Maen (candidate site)	Semi-improved neutral grassland
7	973	Trevor Terrace (candidate site)	Semi-improved neutral grassland



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8	976	Gelliody Farm (candidate site)	Semi-improved neutral grassland and marshy grassland
9	977	Tan-y-Coed	Rush pasture and dry heath
10	978	Glanffynnon	lowland meadow, rush pasture and wet woodland
11	979	Rhos Ddu	lowland meadow, rush pasture and wet woodland, river corridor
12	985	Hafod Las (candidate site)	Dry dwarf shrub heath
13	986	Parc y Gleision (candidate site)	Bracken, dry dwarf shrub heath, acid grassland
14	987	Tan y Coed Terrace (candidate site)	Broadleaved woodland, semi-natural neutral;
15	988	Bwlch (candidate site)	Broadleaved woodland, dry dwarf shrub heath
16	989	Pen y Gaer (candidate site)	Coniferous woodland, broadleaved woodland, bracken, neutral grassland

### 4.4 Extended Phase 1 Habitat Survey

#### 4.4.1 The following Phase 1 habitat and feature types were recorded within the site:

- A2.1 Dense/continuous scrub
- A3.1 Scattered trees (along the boundary)
- B2.2 Neutral grassland – semi-improved
- B5 Marshy grassland
- G2.2 Running water – mesotrophic
- J2.1.1 Intact Hedge – native species-rich
- J2.1.2 Intact hedge - native species-poor
- J2.2.1 Defunct hedge – native species-rich
- J2.2.2 Defunct hedge – native species-poor
- J2.5 Wall
- J2.8 Earthbank (stone-faced)
- J3.6 Buildings

4.4.2 A Phase 1 habitat map of the site, with target notes is provided in Figure 4.3 below. Please note that the positions of the hedges, walls and earthbanks have been shown separately for ease of reading, whereas in reality, they formed part of the same boundary.

4.4.3 Table 4.2 below provides a description of the habitats including some species information within the survey boundary. Photographs of the site are included with the table. The tiles used for the reptile survey can be seen in some of the photos.


4.5 Details of target notes from the map are provided below (see Table 4.3).

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**FIGURE 4.3. PHASE 1 HABITAT MAP**  
 BACKGROUND IMAGE © GOOGLE MAPS 2024

**TABLE 4.2: HABITAT DESCRIPTIONS**

Description	Photo
	<i>Dense/continuous scrub</i>
<p>Bramble scrub with blackthorn, inside and along the boundary of the northern field (photo, left).</p> <p>No physical boundary was identified on the north-eastern edge of the site. The blackthorn and grey willow scrub was encroaching from the scrub woodland to the north-east of the site (photo, right). Oak saplings and European gorse were also noted here.</p>	



*Scattered trees (along the boundary)*

South-eastern boundary

Mainly ash trees (several appeared to have ash die-back), rowan and holly, with an understorey of foxglove, ivy, honeysuckle, tutsan, meadowsweet and nettle (photo, left).

South-western field.

Two large oak trees were noted (photo, right).





***Neutral grassland – semi-improved***

Northern and south-eastern field

The grass was long and showed little obvious signs of enrichment; perennial rye grass was found only occasionally (less than 5%).

The grasses that were abundant were red fescue, Yorkshire fog and sweet vernal grass. Crested dog's-tail and common bent were frequent. Cock's-foot grass was occasional. Field rush was also noted.

Of the herbs, white and red clover were fairly frequent (white clover more so). Other herbs noted included common cat's-ear (abundant), meadow buttercup (occasional/frequent), ribwort plantain (occasional/frequent), black knapweed (occasional), dandelion, and common sorrel (occasional, but frequent in the northern field).

South-western field

The species diversity was similar to the above, with all of the above named species and with the addition of yarrow (occasional) and hogweed (occasional/frequent). Perennial rye-grass



was a little more frequent although indicators of improved grassland were not abundant enough to dictate classification as improved grassland.



<i>Improved grassland</i>	
<p>In a small area around the entrance to the field, near the pile of grass cuttings, the grass was greener and lusher and contained more indicators of improvement; the percentage of perennial rye-grass was higher and there were more broad-leaved docks and a patch of nettles.</p>	



***Marshy grassland***

South-eastern field ( left)

Grassland dominated by rushes (mainly sharp-flowered rush with patches of soft rush). The predominant grasses were crested dog's tail, Yorkshire fog, red fescue and sweet vernal grass. Meadow foxtail was also noted in occasional patches. Sedges were present. The herbs noted were meadow buttercup, common sorrel, broad-leaved dock, lady's smock and marsh bedstraw (occasional).

Northern field (right)

Sharp-flowered rush and compact rush with tormentil, Yorkshire fog and sweet vernal grass.





*Running water – mesotrophic*

A small stream running along the eastern boundary wall and into the scrub woodland outside the site. Hemlock water-dropwort, compact rush and broad buckler fern were growing beside the stream. Most of the hemlock water-dropwort had been recently cut.



***Buildings***

A small shed of concrete breeze-block construction. The surveyor was informed by the landowner that the corrugated iron roof had apparently blown off in a storm so there was no roof remaining. Dense ivy and elder grew around the outside of the shed.



*Intact Hedge – native species-rich*

South-eastern field, northern boundary

Hedge consisting of ash, rowan, oak, blackthorn and European gorse, with field rose and foxglove.

South-western field – western boundary

Hedge on the south-western boundary with sycamore, hawthorn and rowan. Also European gorse and bramble.





*Intact hedge - Native species-poor*

South-western field – southern boundary

An intact hedge with wild plum.

South-western field – northern boundary

Also an intact hedge, that had hawthorn, European gorse, holly and dog rose.

Northern field – western boundary (photo, right)

This was predominantly hawthorn, with European gorse. With the bramble scrub, the boundary was three to four metres wide.







***Defunct hedge – Native species-rich***

Hedge between south-western and south-eastern fields

A defunct hedge with a variety of young trees and shrubs: oak, ash, hawthorn and European gorse; also nettles and rosebay willowherb. Note also the stone-faced earthbank in the photo.




***Defunct hedge – Native species-poor***

South-eastern field - southern boundary



A hedge with ash, wild plum, dog rose and hawthorn.




<i>Wall</i>	
Dry-stone walls along several of the field boundaries.	
<i>Earthbank (stone-faced)</i>	
Stone-faced earthbanks were noted along boundaries in the south of the site.	<p>4</p> 



**TABLE 4.3: TARGET NOTE DESCRIPTIONS AND PHOTOS CORRESPONDING WITH PHASE 1 MAP**

Target note	Description	Photo
1	Pile of grass cuttings	
2	Pile of corrugated metal (the remains of the shed roof)	

Target note	Description	Photo
3	Corrugated metal, rock pile	

#### 4.6 *Invasive Species*

4.6.1 No invasive non-native species were noted on the site.

#### 4.7 *Flora*

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

#### 4.8 *Fauna*

4.8.1 The survey results for protected species including records within 1km of the site are described in Table 4.4 below. No signs of protected species, other than nesting birds were noted during the survey.

**TABLE 4.4: PROTECTED SPECIES SURVEY AND DESK STUDY RESULTS**

Species	Suitability of habitat	Records within 1km of the survey area within the last 20 years
Amphibians – great crested newts (GCN)	<p>There were no freshwater ponds in the survey area. The nearest potentially suitable pond is 440m away, however there are no records of GCN in this pond.</p> <p>On the survey site, the scrub, trees, walls, stone-faced earthbanks, piles of metal and grassland could all provide potential foraging, basking or hibernation habitat for GCNs. There is a minor road between the potential breeding site and this survey site which limits the connectivity between the two sites somewhat.</p> <p>Therefore although the site has some suitability for hibernating or foraging GCNs, there is no suitable breeding pond on the site and as the nearest GCN record is around 26km away it is <b>considered unlikely that GCN would use this site.</b></p>	There are no records of great crested newt within 1km of the site and the nearest record is approximately 26km away (NBN Atlas).
Badger	<p>The survey site was surveyed for badger tracks, foraging areas, latrines and setts; none were found.</p> <p><b>The bramble and blackthorn scrub on the survey site would be suitable for setts. The grassland would be suitable for foraging.</b> The adjacent scrub/woodland area (outside the site boundary) is suitable for setts.</p>	A dead badger has been recorded on a roadside 'near to Llanrug'. The exact location was not recorded but it was between 680 and 1600 metres from the survey area.
Bats	<p>Many of the trees on the site were thin and unsuitable as bat roosts. There were some large mature trees, however, and although no obvious bat roosting features were visible, any bat roosts may have been obscured by ivy or not visible without climbing the tree.</p> <p>The scrub, hedgerow and trees <b>would provide suitable bat foraging habitat.</b></p>	There are around 7 records of bats within 1km of the site.

Species	Suitability of habitat	Records within 1km of the survey area within the last 20 years
Birds	<p><b>The site is suitable for nesting or foraging birds.</b></p> <p>A great tit was seen carrying feeding material and presumed nesting on the site. Several birds were heard during the survey.</p> <p>The scrub, trees, hedges, building and walls would provide suitable nesting and feeding habitat for birds.</p> <p>Of the Schedule 1 species listed in the next column, the long grass is suitable as barn owl or red kite foraging habitat.</p>	<p>There are many records of birds within 1km of the site.</p> <p>The following birds have been recorded and are listed on Schedule 1 of the Wildlife and Countryside Act 1981.</p> <p>Barn owl 386m Peregrine 919m Red kite 912m</p>
Dormouse	The scrub and hedgerows would provide suitable habitat for dormice.	No dormice records within a 1km radius of the site. The nearest record is 18km away.
Hedgehog	The scrub and hedgerows would provide <b>foraging and possibly hibernation habitat for hedgehogs.</b>	Hedgehogs have been recorded 825m away.
Otter	No holts, spraints or potential lying up areas were noted in the survey area. It would be unlikely that otters would build a holt beside such a small stream and the stream is too small to provide suitable feeding habitat although it <b>may provide temporary seasonal habitat.</b>	A dead otter was recorded 820m away from the site.
Reptiles	<p><b>The site is potentially suitable for reptiles.</b></p> <p>The scrub, tree roots, walls, stone-faced earthbanks and hedgerows within the survey area are suitable for reptiles as resting and hibernating habitat. The grassland would be suitable for foraging. The pile of rocks and loose corrugated iron sheets are suitable as resting and basking habitat.</p>	A slow worm has been recorded 360m away and a lizard was recorded 400m from the site.



Species	Suitability of habitat	Records within 1km of the survey area within the last 20 years
Water Vole	<p>Water vole tend to be found beside slow moving watercourses and the stream was quite fast moving, which makes the habitat less suitable. They also need soft banks into which to make their burrows and there were many stones and rocks in the western stream bank, and the eastern bank was a stone wall, so, again, this reduces the suitability of the stream as water vole habitat.</p> <p>The western bank of the small stream was surveyed for water vole burrows, tracks, droppings and feeding signs. <b>No water vole signs were found.</b> The eastern bank consisted of a stone wall and was considered unsuitable. Therefore <b>it is unlikely that water vole are present on the site.</b></p>	No water voles have been recorded within 1km of the survey area.

## 5.0 Discussion and Evaluation

5.1 The findings of the survey and desk study will be evaluated in relation to the proposed plan for a housing development shown in Figure 1.2 in Section 1. Good practice (CIEEM, 2017) states that the mitigation hierarchy should be followed for all development, so that any losses of biodiversity should be avoided where possible, and only if this is not possible, should any losses be compensated for. No loss of irreplaceable biodiversity is acceptable. Replacement biodiversity should be equivalent to that lost, and, if of a different type of biodiversity, should deliver greater benefit. The further requirement for overall net enhancement is discussed in Section 8.

### 5.2 Statutory Sites

5.2.1 There are no statutory sites within 1km of the site.

### 5.3 Non-statutory Wildlife Sites

5.3.1 The majority of the site lies within Glanffynnon Wildlife Site. The habitats within this site that have contributed to its designation are rush pasture (marshy grassland) and semi-improved neutral lowland meadow.

5.3.2 The Phase 1 Habitat survey confirmed the habitats within the site as marshy grassland and semi-improved neutral grassland.

5.3.3 Gwynedd Council's Supplementary Planning Guidance on Wildlife Sites (2010) states that:  
*Proposals that are likely to have a direct or indirect unacceptable impact on a Wildlife Site will be refused unless:*  
*1. the damage to nature conservation features can be prevented and the developer takes steps to protect, enhance and manage the nature conservation features; or*  
*2. the proposal is required in order to fulfil social, environmental and/or economic needs that override the site's local importance.*  
*And that the following can be met:*  
*a. the location, design and construction of the development is such that damage to nature conservation features are minimised, and opportunities for nature conservation gain are taken,*  
*b. compensating and equivalent nature conservation features are provided,*  
*c. the remaining nature conservation features are protected and enhanced and provision is made for their management.*  
*d. Where appropriate opportunities are provided for the public to enjoy and interpret the site. When a development is permitted, planning conditions and/or obligations will be used in order to conserve the site's local biodiversity value, or provide appropriate mitigation measures by encouraging and promoting other new habitats either on the site or in an other appropriate site.*

5.3.4 In order to attempt to meet the requirement in a) above, it is proposed that a buffer zone is created to protect the streamside corridor and the adjacent marshy grassland in the south-eastern field. In order to attempt to meet the requirement in b) above, compensatory

habitats should be created and shown on a landscape plan, and to meet point c) above, the marshy grassland in the buffer zone should be managed to control scrub encroachment.

- 5.3.5 Presuming that the buffer zone, proposed above, is instated, approximately 0.4 hectares of Glanffynnon Wildlife Site will be lost to the development. This is approximately 20 percent of the Wildlife Site. Semi-improved grassland and marshy grassland from this part of the Wildlife Site will be lost, although some marshy grassland (approximately 40%) will be retained. These habitats cannot be re-created on the site so compensatory measures will be necessary. Very little of the Wildlife Site's woodland will be lost.
- 5.3.6 There would be potential to enhance the quality of the semi-improved grassland, however, only small areas of grassland habitat retention are currently planned, as ether part of SUDS areas or amenity spaces, so this will largely not be possible under the current plans. See Section 5.5.3 for a discussion of the quality of the semi-improved neutral grassland on the Wildlife Site.
- 5.3.7 The risk of pollution of the stream on the Wildlife Site will need to be minimised, and mitigation will be covered in the following Mitigation section.

#### 5.4 *Other Wildlife Sites*

- 5.4.1 As stated in Section 4.2.3, there are sixteen wildlife sites or candidate wildlife sites within a 1km radius of the site. The principal mechanism by which these sites could be impacted would be by pollution entering the stream. This risk can be controlled by instating a buffer zone beside the stream and ensuring pollution control measures are followed.
- 5.4.2 The loss of the semi-improved neutral grassland and partial loss of the rush pasture from Glanffynnon Wildlife Site may impact the connectivity and dispersal of mobile species that are found in the nearby wildlife sites. The two closest wildlife sites, Tan y Coed Wildlife Site (65m away) and Rhos Ddu Wildlife Site (280m away), are also designated for their rush pasture. Rhos Ddu is also designated for lowland meadow.
- 5.4.3 Therefore the risk of potential pollution to the stream from this development can be minimised but loss of rush pasture/marshy grassland or semi-improved neutral grassland habitat from Glanffynnon Wildlife Site may impact connectivity between other wildlife sites.

#### 5.4 *Flora*

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

#### 5.5 *Habitats*

##### 5.5.1 *Dense/continuous scrub*

Bramble and blackthorn scrub is a valuable habitat for wildlife although not an unusual habitat in its own right, and not a Habitat of Principal Importance under Section 7 of the

Environment (Wales) Act, 2016. Its loss can be tolerated if compensatory habitats are created.

**5.5.2 *Scattered trees***

The trees on the boundaries should be retained where possible, particularly the mature oak trees. Where tree losses occur, replacement native tree planting will be required.

**5.5.3 *Semi-improved neutral grassland***

All three fields were assessed as semi-improved neutral grassland which is a relatively valuable habitat. The grassland in the northern and south-eastern field contained a lower frequency of perennial rye grass (less than five per cent) and is assessed to be of slightly higher quality than the grassland in the south-western field (which is outside the Wildlife Site boundary). Additionally, the grassland in the aforementioned fields was continuous with marshy grassland and scrub so there would be more benefit for wildlife from the transition to other habitats.

Neutral lowland meadows are a Habitat of Principal Importance under Section 7 of the Environment (Wales) Act, 2016. This category mainly applies to the National Vegetation Classification category (NVC) of MG5, *Cynosurus cristatus*-*Centaurea nigra* grassland. Although this was not a detailed NVC survey, some conclusions can be drawn from the extent of the survey data collected. The grassland on the site contains some of the indicator species for the MG5 grassland and very little perennial rye grass that might indicate its assignment to MG6 grassland category. However, many of the herbaceous species that would confirm its assignment to MG5 were not seen. Therefore it is assessed as a diverse MG6 semi-improved grassland (likely to be MG6b, *Lolium perenne*-*Cynosurus cristatus* grassland, *Anthoxanthum odoratum* sub-community), of fairly high biodiversity value, close to, but not quite a lowland meadow or Habitat of Principal Importance under Section 7 of the Environment (Wales) Act, 2016.

Despite it not being assessed as a Habitat of Principal Importance, it does have fairly high value as a habitat in its own right, and is considered to have potential for restoration to MG5 grassland. However, there are no plans for the large-scale retention of this grassland so extensive restoration will not be possible. As there is no possibility of creating compensatory grassland on the site, compensatory alternative habitats will need to be created and should be of greater biodiversity benefit than the grassland lost.

**5.5.4 *Marshy grassland***

Marshy grassland is present on the eastern side of the site and transitions to semi-improved neutral grassland and scrub woodland or stream habitat in the north-east or south-east of the site, respectively. One type of marshy grassland, rush pasture, is a Habitat of Principal Importance under Section 7 of the Environment (Wales) Act, 2016. While the marshy grassland on site does not qualify as rush pasture HPI, it still has biodiversity value. Areas of marshy grassland should be retained and managed appropriately, and where this habitat is lost to the development compensatory habitat should be provided.



**5.5.5 *Running water – stream***

This small stream feeds the Afon Seiont. It will be important to keep this stream free of pollution, and for the stream sides to be retained, along with the adjacent marshy grassland to act as a buffer. Measures to control pollution are referred to in Section 6.

**5.5.6 *Buildings***

The concrete roof-less building does not have habitat value in its own right and can be lost to the development but may need avoidance measures regarding possible nesting birds (see Section 5.6).

**5.5.7 *Hedges***

All hedges are Habitats of Principal Importance under Section 7 of the Environment (Wales) Act, 20 Act, 2016. The current plans do not explicitly allow for the retention of any of the hedges.

As many of the hedges should be retained as possible, particularly the hedges on the western boundary (southern half) and the central boundary, running from the centre to the east of the site which were classified as native species-rich, intact hedges.

Where it is not possible to retain the hedges, compensatory native species-rich hedges should be planted and maintained; these should be of at least equivalent length to removed sections of hedgerow, or additional alternative compensation will be required.

**5.5.8 *Wall***

The stone walls have some habitat value, particularly for lichens and mosses so they should remain *in situ* along with the hedgerows that are to be retained; these also provide potentially valuable habitat for any reptiles or amphibians that may be present on site. Retained walls should be shown on a landscape plan.

**5.5.9 *Earthbank (stone-faced)***

Stone-faced earthbanks are distinctive to certain regions of North-west Wales and because of their potential wildlife value it would be ideal to retain them.

**5.6 *Fauna***

**5.6.1 *Great Crested Newts (GCN) and Common Amphibians***

GCNs are considered to be highly unlikely to be using the site so no mitigation measures will be required.

**5.6.2 *Badgers***

Badgers do not currently breed on the site but it is possible that they may move in to the site prior to development. It is also possible that they breed close to the site and use the fields for foraging. Mitigation measures are given in Section 6.

**5.6.3 *Bats***

It is possible that bats roost in crevices and holes in the mature trees on the site. Mitigation measures are given in Section 6. Bats are likely to use the hedgerows and trees for flightlines

and foraging, so compensation for any loss of these will be necessary (see Section 7). Precautionary measures will also be given should bats be found during construction work.

The scrub and woodland adjacent to the north-east of the site is highly likely to be used by bats for roosting and foraging. Light spilling from the proposed development to bat foraging or roosting areas would negatively impact their behaviour of the bats so light spill onto the woodland or hedgerows should be avoided. Mitigation for this risk is given in Section 6.

#### **5.6.4 *Birds***

Birds were noted to be nesting on the site. The hedgerow, earthbank and wall habitats are suitable for nesting birds. Compensatory measures must be given for the loss of hedgerows from the site. Reasonable avoidance measures are given to minimise the risk of the destruction of bird nests or nesting birds in Section 6, Mitigation. The disturbance of nesting birds would be an offence during the breeding season. The Schedule 1 birds that may use the site for foraging, such as barn owl and red kite would be unlikely to be significantly disturbed by the construction as they would fly away from the area.

#### **5.6.5 *Dormouse***

The nearest dormouse record is 18km from the site, so it is highly unlikely that dormice are present on the site. No survey or mitigation will be required for dormice.

#### **5.6.6 *Hedgehog***

It is possible that hedgehogs forage in the hedgerows on the site so avoidance measures are given in Section 6. It is also possible that hedgehogs hibernate on the site so reasonable avoidance measures will be necessary. Fencing erected for the housing should be designed to incorporate access for foraging hedgehogs, see Section 6.

#### **5.6.7 *Otter***

No otter holts were found during the survey although it is possible that otters use the site temporarily for foraging or commuting. Reasonable avoidance measures are given in Section 6.

#### **5.6.8 *Reptiles***

There is suitable habitat for reptiles, and reptiles are present in nearby habitats, so a reptile survey is recommended to determine if reptiles are present on the site. General avoidance measures will also be given in Section 6; additional measures may be required following the results of the reptile survey.

#### **5.6.9 *Water Vole***

No water vole signs were found beside the stream during the survey and they are considered unlikely to be present, so no specific mitigation is given.

## 6.0 Mitigation and Reasonable Avoidance Measures

### 6.1 *Non-statutory Wildlife Sites*

Impacts on the Glynnffynnon Wildlife Site will be unavoidable, but should be reduced as far as possible by minimising development in areas overlapping, and adjacent to, the Wildlife Site. Adequate protection and long-term management must be put in place for all areas of retained habitat within the Wildlife Site boundary, including ensuring continuation of habitat connectivity.

### 6.2 *Habitats*

Any trees, hedges, walls, earthbanks and areas of habitat to be retained must be shown on a landscape plan.

### 6.3 *Semi-improved neutral grassland*

Almost all of the semi-improved neutral grassland will be lost to the development so no mitigation is possible.

#### 6.2.1 *Marshy grassland*

The loss of the marshy grassland should be minimised by instating a wide buffer zone, as shown in the landscape plan. Without grazing, this buffer zone will tend to be lost to scrub over the years. Management to prevent the loss of the marshy grassland in the buffer zone should be carried out as detailed in Section 6.2.3, below.

#### 6.2.2 *Hedges*

It is recommended that hedges are retained wherever possible. Retention of the following hedges should be prioritised, as they provide the best habitat and connectivity:

- the western boundary hedge, running beside the road and
- the hedge running from the centre of the site to the eastern boundary.

All hedgerows due to be retained must be shown on a landscape plan. Tree protection areas must be instated around the mature trees in the hedges that are to be retained.

#### 6.2.3 *Running water – stream and marshy grassland*

There should be a buffer zone of at least 14m wide beside the stream during and post-construction. The buffer zone must be fenced and include a gate to allow for occasional scrub control on the marshy grassland. In the third year after completion of the development, any scrub on the marshy grassland in the buffer zone should be cleared. Further clearance should then take place every two years. Scrub control on the marshy grassland should be carried out outside the bird breeding season, i.e. outside the period March to September inclusive. To reduce the risk of impacts on the stream or downstream habitats, the following pollution control guidelines should be adhered to: Guidance for Pollution Prevention, GPP5, Works or maintenance in or near water, 2017.

#### 6.2.4 *Walls and stone-faced earthbanks*

The walls and stone-faced earthbanks that are due to be retained must be marked on a landscape plan.

### 6.3 *Species Mitigation*

#### 6.3.1 *Badgers*

A walkover of the site to check for badger signs should be carried out by an ecologist prior to work commencing, including checking for signs and paths in the scrub and woodland immediately adjacent to the site.

#### 6.3.2 *Bats*

If bats are encountered at **any point** during any works, all works **must immediately stop** and an ecologist with a bat licence must be called. A licence may then be required from Natural Resources Wales before works can continue.

Any lighting associated with the development, both during and after the works, has the potential to impact bats. In order to reduce the potential impact of any light spillage during the construction and post construction phases of the development, lighting design for the site (both during the works and of the completed development) should seek to minimise the levels of light shone above rooftop level anywhere on the site. The following recommendations will be followed (ILP, 2023; Stone, 2013):

- There must be no lights focused on any of the surrounding woodland or hedges.
- There must be no illumination of any bat boxes once the works are complete.
- Construction will start at least one hour after dawn and finish at least hour before dusk during the summer months (May – August) to prevent light and noise levels disturbing the bats using the woodland nearby.
- Any external or security lighting will be limited to provide some dark periods during the night. The lighting should be motion activated, and not stay on longer than one minute, in order to provide maximum darkness when not needed.
- Further lighting specifications are given in Appendix A.

#### 6.3.3 *Birds*

There is some potential for birds to be nesting in the hedges, walls, earthbanks, trees or building.

- Ideally, work should commence outside the main bird breeding season (March to September, inclusive).
- If work is to commence on the site during the bird breeding season **a bird survey should be carried out by an ecologist in the 48 hour period prior to works starting to ensure that no active nests will be affected.** If active nests are found then work must be delayed until all chicks have fledged.

#### 6.3.5 *Hedgehogs*

Any external fencing or walls constructed for the development should include hedgehog access areas at ground level at least 13cm square to allow for the movement of hedgehogs across the site.



**6.3.6 Otters**

Immediately prior to work commencing a walkover of the site should be carried out by an ecologist to ensure that no otters are present.

**6.3.7 Reptiles**

Mitigation for reptiles will be given in a separate Reptile Mitigation Plan, following completion of the current reptile survey.

**6.4 General Reasonable Avoidance Measures**

The following measures should be implemented at all times during the works:

- Working areas should be kept to the minimum required.
- Storage of fuel must be properly bunded and machinery provided with drip trays, especially when refuelling. Refuelling and storage of potential pollutants should be restricted to site compounds and hardstanding areas, well away from the ditches and field drains, so that runoff can be prevented from entering watercourses.
- Trench excavations should be covered overnight to prevent any mammals or amphibians from falling into them.
- At the end of works each day, the site should be inspected by a responsible individual to ensure that the above protocols are being complied with.
- Any terrestrial mammals seen, for example otters, badgers or hedgehogs, must be allowed to leave the area on their own. If this is not possible, e.g. the animal is injured or trapped, an ecologist must be called.
- 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, reptiles and hedgehogs. Such piles should not be disturbed between October and April or when daytime temperatures are below 10°C.

**6.5 Biosecurity**

**6.5.1** 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.

**6.5.2 Biosecurity measures:**

- Any machinery should be washed clean of any plant debris before entering and leaving the site to prevent transmission of seeds.
- **All** footwear of staff leaving site (for **any** reason and no matter for how short a time) must 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 hardstanding. Soil from this area of the site **must not** be moved elsewhere on site either intentionally or unintentionally.
- 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.

## 7.0 Biodiversity Compensation

- 7.1 To compensate for the loss of scrub, bat and bird boxes will be erected on the properties and mature trees. The details of the location of the bat and bird boxes will be shown on a landscape plan.
- At least five bat boxes should be erected on the south or west-facing elevations, away from light sources. They should be durable Woodcrete construction. They should be erected approximately four metres high.
  - At least three bird boxes of Woodcrete construction with entrances for small birds should be erected on the north or east-facing elevations or on mature trees, approximately three metres high.
- 7.2 As compensation for the loss of any trees, locally-native tree species will be planted on the site in the year after construction is completed; in accordance with Planning Policy Wales, a minimum of three trees should be planted for every tree that is removed. They will be appropriately managed and any replacements carried out over a five-year period. The species and locations will be shown on the landscape plan.
- 7.3 The loss of any hedgerows, the marshy grassland in the northern field, and the loss of all the semi-improved grassland across the site will be compensated for by the planting of additional native hedgerows across the site, or areas of native tree and shrub planting on the previous scrub or semi-improved grassland areas. If it is not possible to fit sufficient compensation planting within the site layout, additional compensation measures must be considered.
- 7.4 The extent of these new habitats will be such that the biodiversity value of the lost marshy grassland priority habitat and the semi-improved grassland will be exceeded, and will be in addition to any measures detailed above in 7.2 and 7.3. Suitable species will include sessile oak, ash, rowan, holly, hazel, elder, wild cherry, dog rose and hawthorn. The location and length of these hedges and/or woodland areas will be given on the landscape plan.

## 8.0 Biodiversity Enhancements

- 8.1 Planning Policy Wales (PPW) and the Welsh Government state that “*development should not cause any significant loss of habitats or populations of species, locally or nationally and **must** provide a net benefit for biodiversity*” in accordance with Section 6 Duty of the Environment (Wales) Act 2016\* (see below).

**\*Section 6 – Biodiversity and resilience of ecosystems duty**

Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales.

*6. Biodiversity and resilience of ecosystems duty*

*(1) A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.*

- 8.2 Suitable enhancements will need to be incorporated into the final site design, in addition to the compensation measures suggested in Section 7.
- 8.3 Options for habitat enhancements are anticipated to be limited, and restricted by the site layout. A range of additional enhancements could be considered, including:
- Enhancement of retained marshy/semi-improved grassland through seeding with wildflower mixes and appropriate management. This could include creation of wetland SUDs basins.
  - Further tree/hedgerow planting, in addition to any required for compensation (Sections 7.2 and 7.3).
  - Erection of bird and bat boxes, in addition to boxes erected for compensation (Section 7.1).
  - Erection of swift boxes or bricks under the eaves of the new buildings, on the north or east-facing elevations. Alternatively, three swift bricks will be used.
  - Creation of artificial refugia, brash piles or rubble piles in areas of retained habitat would benefit a range of species.
  - If retaining walls are required, construction methods which would provide habitat for a species, including reptiles, would enhance the site; examples include gabions, crib walls, or stone walls with crevices.



## 9.0 Legislation

### 9.1 *Badgers*

The Protection of Badgers Act 1992 makes it an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so)
- Cruelly ill-treat a badger
- Dig for a badger
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett
- Cause a dog to enter a badger sett
- Disturb a badger when it is occupying a sett

Licences may be issued for the taking and killing of badgers, or to interfere with a badger sett for certain limited operations or to prevent the spread of disease.

### 9.2 *Bats*

The Wildlife and Countryside Act 1981 (as amended) forms the key legislation protecting habitats and species in the UK. All UK bat species are fully protected under the 1981 Act through inclusion on Schedule 5. All bats are also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 which transcribes the EC Habitats Directive into UK law. In combination, this legislation makes it an offence to:

- Deliberately or recklessly take, injure or kill a bat;
- Deliberately or recklessly damage or destroy a place or structure used by bats for shelter or protection;
- Deliberately or recklessly obstruct access to a bat roost; or
- Deliberately or recklessly disturb bats while occupying a roost.

Bat roosts are protected under these laws whether the animals are present at the time of survey or not. 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.

### 9.3 *Birds*

Under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way 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; or,
- Take or destroy an egg of any wild bird.

Birds listed on Schedule I of the Wildlife and Countryside Act 1981 as amended by the Environmental Protection Act 1990 have extra protection. It is an offence to intentionally disturb any of these species during the breeding season without a valid licence.

#### 9.4 *Hedgehogs*

Hedgehogs are listed under Section 7 of the Environment Act (Wales) 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 which makes it an offence for them to be killed or taken by certain methods.

#### 9.5 *Otter*

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.

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, 9(4)(b);
- Intentionally or recklessly obstructs access to any structure or place used by an otter for shelter or protection, 9(4)(c); or,
- Sell, offer or expose for sale any otter, 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.

#### 9.6 *Reptiles*

All British reptiles are protected from intentional killing, injuring and sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These are as follows:

- Adder, *Vipera berus*;
- Grass snake, *Natrix helvatica*;
- Slow worm, *Anguis fragilis*;

- Common lizard, *Zootoca vivipara*; and,
- Sand lizard, *Lacerta agilis*

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; or
- Possession (live or dead, including derivatives), sale and offering for sale.

9.7 *Section 7 of the Environment (Wales) Act*

Listed habitats and species under Section 7 of the Environment (Wales) Act are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales.

## 10.0 References and Information Sources

CIEEM. (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

Gwynedd Council, Supplementary planning guidance: Wildlife Sites, (2010), available at: <https://www.gwynedd.llyw.cymru/en/Council/Strategies-and-policies/Environment-and-planning/Planning-policy/Supplementary-Planning-Guidance.aspx>, accessed 28/6/2024

Institute of Lighting Professionals. (2023). *Guidance Note 08/23: Bats and Artificial Lighting At Night*

JNCC (2010). *Handbook for Phase 1 Habitat Survey: a technique for environmental audit*. JNCC, Peterborough.

Stone, E.L. (2013) *Bats and lighting: Overview of current evidence and mitigation*, University of Bristol.



## 11.0 Appendices

### Appendix A

#### Lighting specification

The following luminaire specifications are provided by the Bat Conservation Trust and Institute of Lighting Professionals (2023) and must be incorporated into the lighting plan for the proposed development:

- All luminaires should lack UV elements when manufactured. Metal halide, 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 spectrum (ideally <2700 Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used.
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

**Appendix B**  
**Plant Species List.**

Note - this list is not exhaustive. No protected or notably rare species were found.

English Name	Scientific name
Ash	<i>Fraxinus excelsior</i>
Black knapweed	<i>Centaurea nigra</i>
Blackthorn	<i>Prunus spinosa</i>
Bramble	<i>Rubus fruticosus</i> agg.
Broad buckler fern	<i>Dryopteris dilatata</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Cock's foot grass	<i>Dactylis glomerata</i>
Common bent	<i>Agrostis capillaris</i>
Common cat's ear	<i>Hypochaeris radicata</i>
Common sorrel	<i>Rumex acetosa</i>
Compact rush	<i>Juncus conglomeratus</i>
Crested dog's tail	<i>Cynosurus cristatus</i>
Dandelion	<i>Taraxacum officinalis</i>
Dog rose	<i>Rosa canina</i>
Elder	<i>Sambucus nigra</i>
European gorse	<i>Ulex europaeus</i>
Field rose	<i>Rosa arvensis</i>
Field rush	<i>Luzula campestris</i>
Foxglove	<i>Digitalis purpurea</i>
Hawthorn	<i>Crataegus monogyna</i>
Hemlock water-dropwort	<i>Oenanthe crocata</i>
Hogweed	<i>Heracleum sphondylium</i>
Holly	<i>Ilex aquifolium</i>
Ivy	<i>Hedera helix</i>
Lady's smock	<i>Cardamine pratensis</i>
Lord's and ladies	<i>Arum maculatum</i>
Marsh bedstraw	<i>Galium palustre</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow foxtail	<i>Alopecurus pratensis</i>
Meadowsweet	<i>Filipendula ulmaria</i>
Nettle	<i>Urtica dioica</i>
Oak	<i>Quercus</i> sp.
Perennial ryegrass	<i>Lolium perenne</i>
Red clover	<i>Trifolium pratense</i>
Red fescue	<i>Festuca rubra</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rose-bay willowherb	<i>Chamaenerion angustifolium</i>
Rowan	<i>Sorbus aucuparia</i>

Sedges	<i>Carex</i> sp.
Sharp-flowered rush	<i>Juncus acutiflorus</i>
Sweet vernal grass	<i>Anthoxanthum odoratum</i>
Sycamore	<i>Acer pseudoplatanus</i>
Tormentil	<i>Potentilla erecta</i>
Tutsan	<i>Hypericum androsaemum</i>
White clover	<i>Trifolium repens</i>
Wild Plum	<i>Prunus domestica</i>
Wild plum	<i>Prunus domestica</i>
Yarrow	<i>Achillea millefolium</i>
Yorkshire fog	<i>Holcus lanatus</i>