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**Ysgol Coed Mawr, Bangor
Proposed Development
Biodiversity Enhancement Plan and Green Infrastructure Statement**

21st February 2024



Report by: Ben Box

Client: Gwynedd Council

**Planning
Authority:** Gwynedd Council

**Grid
Reference:** SH 56633 70767

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1. Introduction

Cambrian Ecology Ltd was commissioned by Gwynedd Council to formulate a Biodiversity Enhancement Plan and Green Infrastructure Statement for works at the site of the former Ysgol Coed Mawr.

The former school has been demolished and the site is proposed for development with the construction of 10 dwellings.

The relevant Planning Authority is Gwynedd Council which requires a Biodiversity Enhancement Plan & Green Infrastructure Statement to be submitted in support of the application.

The proposed development is located within the city of Bangor at grid reference: SH 56633 70767.

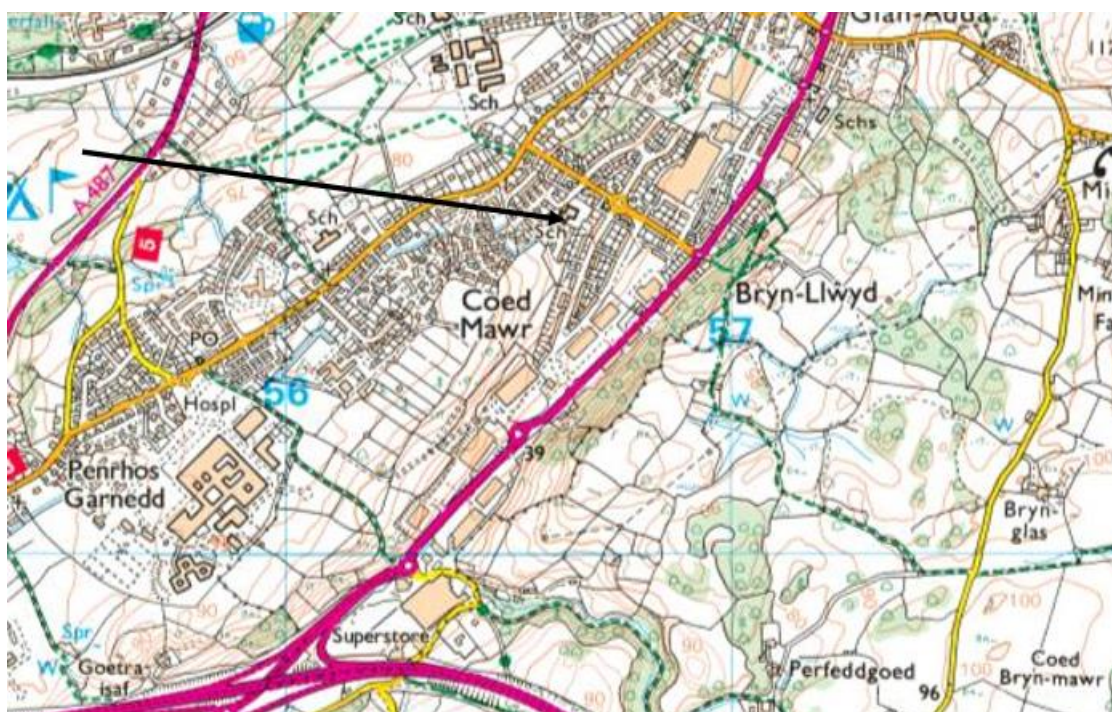


Fig.1: Site Location (black arrow)

2. Methodologies

The initial Preliminary Ecological Assessment (PEA) survey was conducted on 10th September 2020 by ecologist Chris Hall and a follow up survey was carried out by ecologist Lizzie Richardson on 6th May 2022. Lizzie has been working with CEL since 2021 and is a qualifying member of the Chartered Institute of Ecology & Environmental Management (CIEEM). She is an accredited agent on the bat and otter licenses of ecologist Chris Hall. Chris has been working as an independent ecologist for 17 years and has held a bat license from CCW/NRW for 26 years. He is an associate member of CIEEM.

This Preliminary Ecological Assessment (PEA) was then referred to for the formulation of this Biodiversity Enhancement Plan and Green Infrastructure Statement which was written by Ecologist Ben Box on 21st February 2024.

2.1 Desk Study

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

A biological records search was carried out with Cofnod for all priority species, habitats and designated sites as recommended in the guidance from CIEEM. This enables the proposed development site to be assessed in a wider context and a potential wider 'zone of influence' of the development to be taken into account. The search parameters were 2km from the survey site area for all protected species and sites and 10km for protected sites of relevance to bat species.

3 **Results**

3.1 Desk-Based Study

3.1.1 Protected Species

The Cofnod search revealed 114 bat records within the 2km search area (see Table 1). Records of other protected species considered potentially relevant to this report, are also included in Table 1 below.

Table 1: A summary of relevant protected species records returned in the data search.

Common Name	Zoological Name	No of Records
Badger	<i>Meles meles</i>	14
Bat (species unknown)	<i>Chiroptera spp</i>	11
Brown long-eared bat	<i>Plecotus auritus</i>	20
Common frog	<i>Rana temporaria</i>	27
Common lizard	<i>Zootoca vivipara</i>	8
Common pipistrelle bat	<i>Pipistrellus pipistrellus</i>	19
Common toad	<i>Bufo bufo</i>	27
Grass snake	<i>Natrix helvetica</i>	14
Hedgehog	<i>Erinaceous europaeus</i>	51
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	2
Lissotriton newt (species unknown)	<i>Lissotriton spp</i>	1

Myotis bat (species unknown)	<i>Myotis spp</i>	7
Natterer's bat	<i>Myotis nattereri</i>	5
Noctule bat	<i>Nyctalus noctula</i>	10
Palmate newt	<i>Lissotriton helveticus</i>	13
Pipistrelle bat (species unknown)	<i>Pipistrellus spp</i>	21
Polecat	<i>Mustela putorius</i>	14
Slow worm	<i>Anguis fragilis</i>	29
Soprano pipistrelle	<i>P. pygmaeus</i>	13
Whiskered/Brandt's bat	<i>Myotis mystacinus/brandtii</i>	6

3.1.2 Protected Sites

The survey site sits with 2km of four relevant statutory protected sites, the details of which are given below-

- The Coedydd Afon Menai Site of Special Scientific Interest (SSSI), ~1km away, is designated for its ivy-oak/ash; (*Hedera helix-Quercus/Fraxinus*) woodlands.
- The Glannau Porthaethwy SSSI, ~1.2km away, is designated for its marine biological features.
- The Eithinog SSSI, ~0.5 km away, is designated for its grassland fungal assemblages.
- Y Fenai a Bae Conwy Special Area of Conservation (SAC), ~1km away, is designated for its marine, intertidal and wetland habitats.

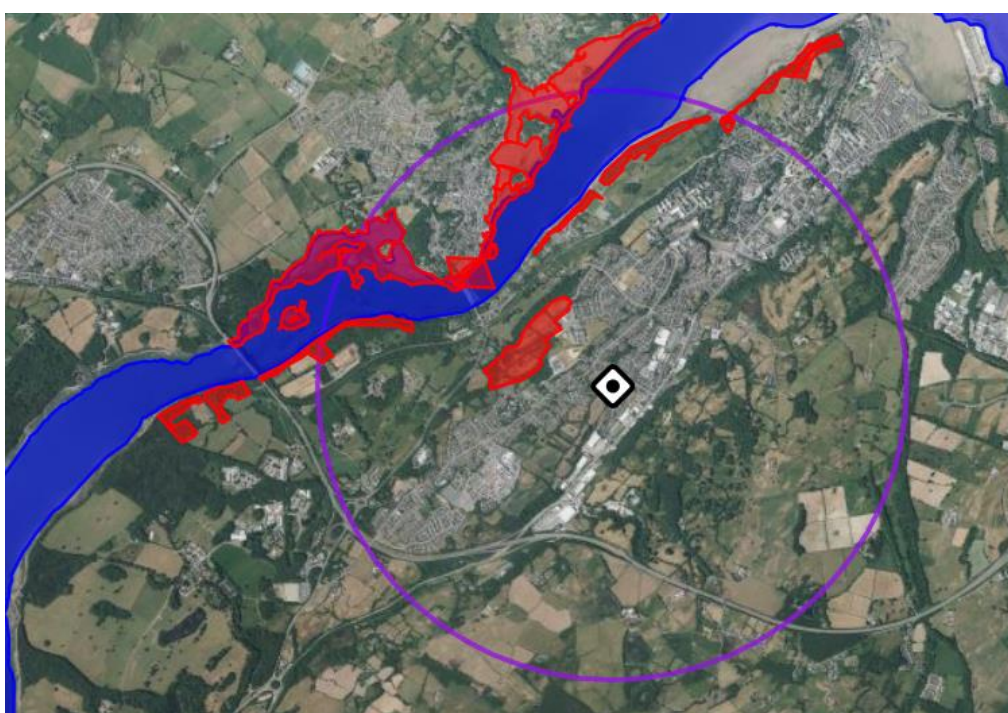


Fig. 2: The location of the survey area in relation to the proximal SAC (blue) and SSSIs (red).

The site also sits within 2km of 29 relevant non-statutory protected sites in the form of 26 Anglesey Wildlife Sites, a Local Nature Reserve (LNR) and two North Wales Wildlife Trust (NWWT) reserves. The closest of the Wildlife Sites is the Coed Bryn Llwyd site, ~0.3km away, which is designated for its broadleaved woodland habitat. The Eithinog NWWT reserve sits ~0.5km away and the Coed Nantporth NWWT reserve sits ~1.5km away. The Coed Cynrol LNR sits ~1.3km away on the other side of the Menai Strait.



Fig. 3: The location of the survey site in relation to the proximal Gwynedd Wildlife Sites (brown), LNR (orange) and NWWT reserves (light blue).



Fig. 4: The immediate habitats surrounding the surveyed site (red).

4 Biodiversity Enhancement & Green Infrastructure Statement

Under Chapter 6 of Planning Policy Wales 11, planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. It is also a priority for developments in Wales to consider ecosystem resilience and green infrastructure in the development of enhancement schemes. To satisfy this requirement, a green infrastructure statement must be submitted to accompany all planning applications.

4.1 Biodiversity Enhancement

The location of all biodiversity enhancements must be clearly shown on final plans for the development.

In this case, it is recommended that house sparrow; (*Passer domesticus*) colony boxes, swift; (*Apus apus*) bricks and bee bricks are included in the fabric of the new development. While the initial survey report recommended the use of bat tubes as an enhancement, it is now considered that, due to the location of the site and the lack of general bat activity during the bat emergence surveys, this approach would not be appropriate.



Fig. 5: The layout of the proposed development with each dwelling labelled to facilitate the biodiversity enhancement plan given below.

House Sparrow Colony Boxes

It is recommended that a total of five house sparrow colony boxes are erected as high as possible on the north facing elevations of buildings 1-5 (see Figure 5). This elevation is chosen in order to prevent overheating in the summer and to protect the boxes from prevailing weather. It is recommended that 'Woodcrete' or 'Woodstone' products such as the 1SP Schwegler Sparrow Terrace are used due to these materials favourable longevity and insulative properties.



Fig. 6: An example of an appropriate house sparrow terrace box

Swift Bricks

It is recommended that a total of eight swift bricks are included in the fabric of the works. These should be installed as high as possible with two on each of the west facing gable ends of houses 1 and 6 and two on each of the east facing gable ends of houses 5 and 10 (see Figure 5). These locations have been chosen due the necessity of such features to be as high as possible off the ground and have at least 5m clearance in front of their entrances. It is recommended that integrated products such as the Pro UK Visible Build-In Swift Box are used as these products are discrete and are unlikely to be removed by feature residents.



Fig. 7: An example of an appropriate swift brick product

Bee Brick

It is recommended that a total of 20 bee bricks are installed in the fabric of the new building. These bricks should be installed as high as possible with two on the southern elevation of each dwelling. As with the swift bricks, these features should be integrated into the building to prevent future interference.

These products only attract solitary bees and do not therefore cause any problems to the householder. Solitary bees have no queen or honey to protect and as a result are non-aggressive and won't sting.



Fig. 8: Examples of appropriate bee brick products.

4.2 Green Infrastructure Statement

Details regarding how each biodiversity enhancement measure improves ecosystem resilience and green infrastructure are given below-

- **Bird Boxes/Bricks** – The swift bricks and house sparrow boxes will provide new high quality nesting opportunities for these species and potentially other nesting birds that may use these features. An increase in nesting opportunities will hopefully help to bolster populations of these species within the local area. By strengthening populations of these species, the site will hopefully act as a ‘stepping-stone’ and allow radiation into other surrounding areas. Both the house sparrow and the swift are on the RSPB ‘Red List’ and a loss of nesting opportunities is often cited as a contributing factor to their decline.
- **Bee Bricks** – As with the swift bricks and house sparrow boxes, bee bricks will provide additional nesting opportunities for the target taxon; solitary bees. By increasing nesting opportunities for these species, hopefully their populations will be bolstered with in area surrounding the site, again allowing for the site to ask as a ‘stepping-stone’ and facilitating the radiation of these species into the wider landscape.

The table below shows how the ‘step-wise’ approach has been implemented in order to achieve the goals of Chapter 6 of the Planning Policy Wales (Updated 2023). To find details of RAMs and mitigation measures, please refer to the initial PEA report carried out by Cambrian Ecology Ltd (2020, updated 2022).

Table 2- How the stepwise approach will be implemented on this development.

Step-Wise Step-	How the step has been implemented
1 - Avoid	<p>Any harm to ground fauna such as hedgehogs; (<i>Erinaceous europaeus</i>) will be avoided through the implementation of basic excavation RAMs.</p> <p>Any harm to bats was avoided as no roosts were present. Bat activity during the emergence surveys was very low so it is anticipated that any negative</p>

	<p>impact on bats as a result of habitat fragmentation will be avoided.</p> <p>Any negative impact on nesting birds as a result of direct disturbance was avoided through the timing restrictions placed on the removal of the birch tree.</p> <p>Due to the limited scale of the proposed works and the lack of any potential pathways of influence, any negative impact on protected sites was avoided.</p>
2 – Minimise	The vast majority of the habitat on site was of no significant ecological value and so any negative impact as a result of habitat loss was minimised.
3 – Mitigate	Any negative impact on nesting birds as a result of a loss of nesting opportunities was mitigated for through new planting on the site.
4 – Onsite compensate	The minor negative impact caused by the loss of a single mature birch tree was compensated for onsite through an extensive planting scheme which has been included in the plans for the development.
5 – Offsite compensate	N/A

5 References

Environment (Wales) Act (2016)

Ysgol Coed Mawr Ecology Report, Cambrian Ecology Ltd (2020, updated 2022)

6 Legal Implications

6.1 Nesting Birds

Under the Wildlife and Countryside Act 1981, all nesting birds and their nests are protected. Once a bird places a single piece of material then it constitutes a nest. It is then an offence to cause damage to the bird, nest, eggs or chicks and immediate habitat which is likely to result in damage by causing the bird to desert its nest. This covers all bird species, with the exception of a small number of ‘pest species’ which can be controlled by special license.

In 2000, the Countryside and Rights of Way Act (CROW Act) was made law, strengthening the legal protection for many species and introducing a ‘reckless disturbance’ offence. Planning Authorities are also obliged to take nesting birds into account in relation to planning decisions following guidance from the Welsh Government detailed in Technical Advice Note (TAN) 6.

7 Appendices

7.1 Site Photographs

The site in its current state







7.2 Review Table

Name	Task	Date
Ben Box	Author	21.02.2024
Chris Hall	Review	22.02.2024
Ben Box	Final Proofreading	22.02.2024