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**Preliminary Ecological Assessment
for a proposed development
on land adjacent to
Meifod Roundabout,
Bontnewydd
Caernarfon
Gwynedd
LL55 2TY**

Client: Mr Malcolm Brymer

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Contents

Section		Page number
1.	Introduction	3
2.	Methodology	4
2.1	Desk Exercise	4
2.2	Extended Phase I Survey	4
2.3	Constraints	4
3.	Results	6
3.1	Vegetation and Habitat Survey	6
3.2	Protected Species	10
3.3	Invasive Species	11
4.	Discussion	11
4.1	Scheme Details	11
4.2	Recommendations	11
4.3	Promotion of Biodiversity at the Site	11
5.	Summary and Conclusions	12
6.	References	12
Appendix 1	Plant Species Recorded	13
Appendix 2	Schedule 9 Invasive Plant Species	13

1. Introduction

Wyndrush Wild was contracted to carry out a preliminary ecological appraisal in support of an application to Gwynedd Council for a new proposed Roadside Services on agricultural land to the north of Bontnewydd. The grid reference is SH484606 (see Figure 1 below).

The aim of the survey is to provide baseline data on habitat and species, both on and adjacent to the site, and to investigate potential impacts that may occur during construction and post-construction stages. An assessment is made of any potential impact on protected species in the area.



Figure 1. Surveyed Site

Site Description

The proposed site comprises two sheep-grazed agriculturally-improved fields totalling circa 2 hectares. There is a slight gradient with a westerly aspect. These lie alongside a main road near a recently-constructed roundabout on a new bypass scheme. The surrounding landscape is predominantly improved grassland.



Figure 2. Part of Proposed Development Site

2. Methodology

2.1 Desk Exercise

A full desk exercise was carried out. A Cofnod Search (reference E11787) revealed no biodiversity records on or immediately adjoining the site. Probable brown long-eared bat droppings were recorded in a nearby outbuilding, 68m to the south-west, in 2007. Droppings of an unidentified bat species were also recorded in a building 159m to the south-east in 2023. A hare was recorded 107m to the north in 2020. An otter was recorded 498m to the east in 2018. These mobile species could potentially use the site at times whilst commuting or foraging. CCW Phase I survey mapped the fields as improved grassland in the 1990s. The nearest protected site is Afon Gwyrfai a Llyn Cwellyn SSSI which lies 800m away to the south at its nearest point. There is no hydrological connection to this site.

2.2 Extended Phase I Survey

A thorough site inspection was made on 1st November 2023. The survey followed the methodology set out by the Handbook for Phase 1 Habitat Survey (JNCC, 1993) and then subsequently by the Institute of Environmental Assessment (1995). The methods provide quick and accurate classification of habitats.

In addition, the survey looked for field signs of protected species and assessed the habitat for their potential presence. Measures taken included:-

- A search for signs of badgers on the site.
- Consideration of the potential impact of the development on bats and other protected species.
- Recording birds and identifying the suitability of the habitat for nesting birds especially those listed as species of conservation concern.
- Recording a list of plants found on the site, shown in Appendix 1.

2.3 Constraints

There were no significant constraints to the survey. Breeding birds could not be recorded due to the time of year, but an assessment could be made of their likely presence. Identification of grassland plants could be made on vegetative characters.

3. Results

3.1 Vegetation and habitat survey

The habitats at and adjoining the site location were recorded in detail. The application area comprises one main habitat type: improved grassland (B4), some with soft rush (B4 + Ju). The site is bounded by hedgerows: defunct species-poor (J2.2.2) and hedge with trees (J2.3.2), as well as seasonal ditches (J2.6) and a wall (J2.5).

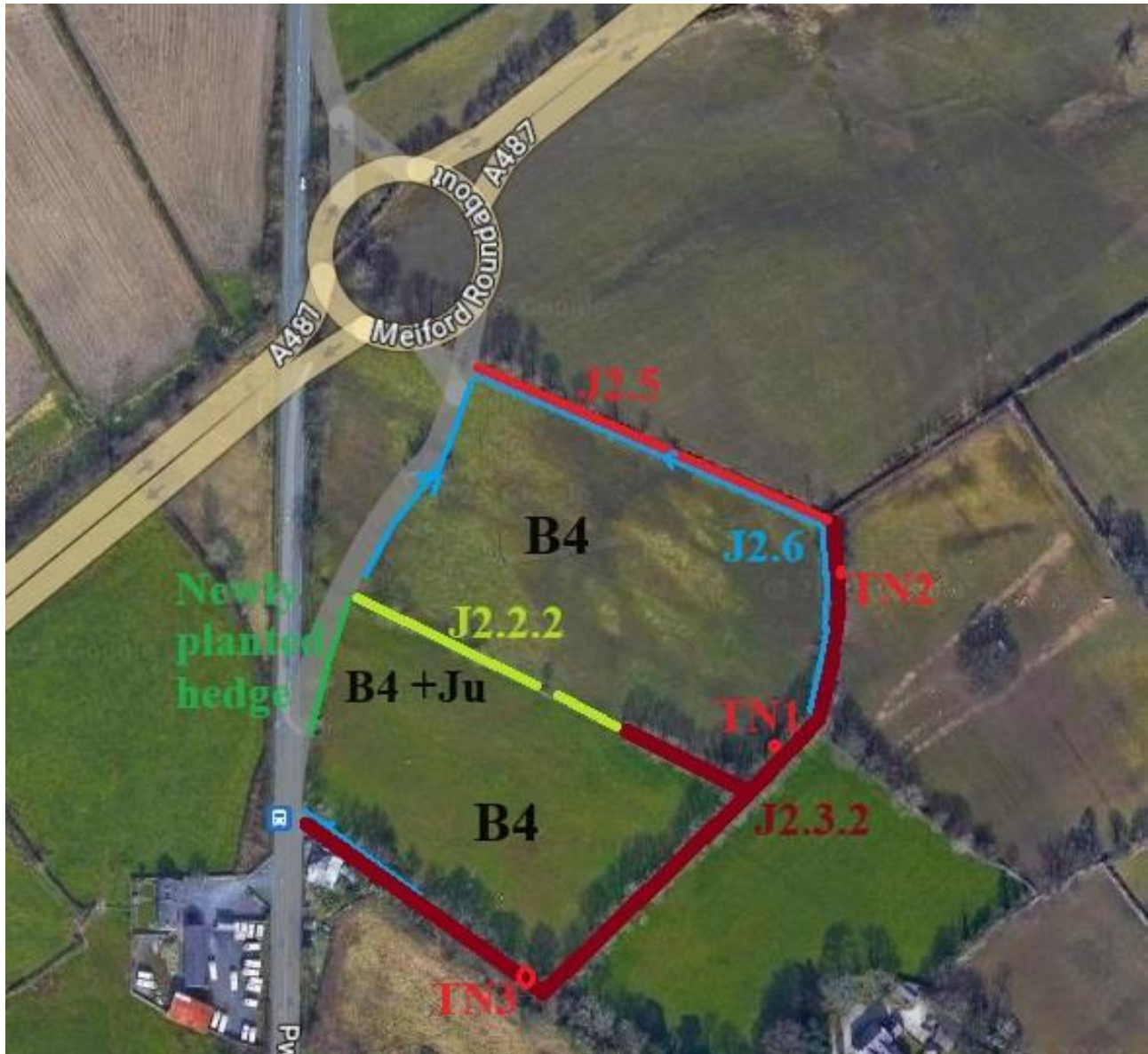


Figure 3. Phase I habitat map

TN1: Ash with moderate bat roost potential and possible buzzard nest

TN2: Ash with high bat roost potential

TN3: Beech with moderate bat roost potential

Improved Grassland (B4)



The application area comprises this improved sward dominated by common bent grass.

The grassland across the field comprises an intensively managed pasture, sheep grazed at the time of survey. This is dominated by common bent and with frequent to abundant perennial rye-grass and Yorkshire fog. Crested dog's-tail, red fescue and narrow-leaved meadow grass were also noted. The few associates in drier parts of the field are all agriculturally-favoured species, such as white clover, dandelion and common mouse-ear. A handful of common mosses such as *Calliergon cuspidatum* and *Brachythecium rutabulum* were also noted. No grassland fungi were fruiting.

The lower part of the southern field has a wetter area where soft rush is frequent. This is accompanied by frequent greater bird's-foot trefoil and occasional cuckoo flower, but stronger indicators of marshy grassland such as marsh bedstraw appear to be lacking, precluding referral to that habitat. Marsh bedstraw was only noted on the ditch edge on the north-eastern boundary of the site, disturbed by recent fencing.

This grassland habitat is species-poor and of no ecological significance.

Boundaries: Intact / Defunct Species-Poor Hedge; Hedge with Trees



The eastern hedge comprises ash, sycamore and hawthorn; no longer stock-proof

The internal boundary between the two fields comprises a defunct, species-poor hawthorn hedge with a couple of young ash trees left as standard. The hedge is gappy and regularly flailed; it is only single-fenced so sheep grazing is heavily impacting growth. The eastern end of this hedge is a line of relatively young ash trees with a few sycamores. The hedges on the eastern sides of both fields are also dominated by ash and sycamore; they have little in the way of shrub growth or ground flora and that alongside the southern field (pictured above) is

no longer stock-proof. The southern boundary of the site is stock-proof, and there are mature beech and oak here in addition to ash and holly. There is a newly planted hazel and blackthorn hedge along the western boundary of this field. The hedges are of some minor or local ecological significance. None would class as a significant hedge as defined by the Hedgerow Regulations.

Wall; Ditch



(top and bottom-right) Clawdd wall on northern boundary; (bottom-left) ditch on western boundary of northern field

The northern site boundary comprises a clawdd wall with scattered European gorse, sycamore and oak standards. There is a seasonal ditch at the foot of this; this and other ditches around the boundaries lack wetland plants, having instead a few disturbed ground species such as broad-leaved dock, nettle and spear thistle on the edges. The more recently dug ditch on the western boundary has coltsfoot and creeping cinquefoil, together with common mosses and liverworts such as *Tortula truncata* and *Fossombronia pusilla*. These habitats are of minor ecological significance.

3.2 Protected species



Ash trees on the eastern boundary with moderate (left) and high (right) potential for roosting bats

No badger setts, latrines or signs of foraging were found on the site. The development will not affect badgers.

The field is generally unsuitable for reptiles and amphibians; there are no standing water features for the latter, but there could conceivably be common lizards in association with the clawdd wall on the northern boundary. Provided this is not impacted during works, no further survey should be required.

The site is of little value to birds. Skylarks are very unlikely to be present in this relatively small roadside field. The defunct hedges provide very little potential nesting habitat. A possible buzzard nest was noted in the fork of one ivy tree on the eastern boundary. Wren was the only Bird of Conservation Concern (Stanbury et al, 2020) seen.

No bat survey was carried out. Three of the boundary trees, target noted on Figure 3, were classed as having moderate or high potential for roosting bats. The mature beech tree has a probable cavity which could be exploited by roosting bats. The ash tree classed as moderate potential had dense ivy cover, whilst that classed as high potential had numerous cracks and crevices in the mid-upper parts of the trunk. The grassland is unlikely to be of significance to foraging bats but the hedgerows may provide feeding and commuting corridors.

The hedges have no significant potential for hazel dormouse, and there are no records of this species from the surrounding area. No further survey should be required.

The ditches were lacking significant water even after an extended period of wet weather; they have little potential to be used by commuting otters.

3.3 Invasive Species

No invasive non-native species are present.

4. Discussion

4.1 Scheme Details

The development proposal is for a new proposed Roadside Services including Drive-thru Restaurant and Coffee Shop, Petrol Fuel Station and Associated Retail, Car Parking and Electric Vehicle Charging Points, Park and Rest/Ride, Picnic Area and Biodiversity Enhancement and associated works.

4.2 Recommendations

Landscaping associated with the development should avoid invasive or potentially-invasive non-native species such as cotoneaster and buddleia. A list of Schedule 9 invasive species which should not be planted is given in Appendix 2. Those classed as potentially invasive by [Thomas \(2010\)](#) are also best avoided. Carefully sourced locally-native species should be favoured.

The external boundary hedges should be protected wherever possible; stock exclusion as part of the development will assist in their regeneration. Lighting associated with the scheme should be directed away from the hedges, to ensure a dark corridor is maintained for the benefit of any roosting or commuting bats here.

Best practice will be required in terms of management of potentially polluting discharges from the site both during and post-construction.

4.3 Promotion of Biodiversity at the Site

Gwynedd Council requires that biodiversity enhancements are included in all developments to meet the Authority's Duty of Care under Section 6 of the Environment Act 2016. Planning Policy Wales (PPW) 10 sets out that "*planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means 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”.

The external boundary hedges will be protected and allowed to grow taller / bushier. A small number of sessile oaks could be introduced here and promoted as standards to replace ash which are likely to succumb to ash dieback.

The area proposed for ecological enhancements in the southern part of the site could combine planting of widely spaced native oaks with wildlife-friendly grassland management. This would require avoidance of all fertiliser and herbicide inputs, coupled to traditional hay-meadow management or similar, i.e. avoiding grazing or mowing between early April and mid-July, followed by mowing and removal of vegetation and/or some late summer/autumn grazing. Subsoil derived from groundworks on site could be used to form banks within or around this area, ideally with a south-facing aspect. These could be left to revegetate naturally or sown with a locally-appropriate mixture of native wildflowers.



Open-grown oaks such as this one in an adjoining field serve as an example of the potential value of low-density planting within the proposed ecological enhancement area

5. Summary and Conclusions

The proposed development does not present a significant risk to habitats in the area, and, provided mature hedgerow trees are protected, no protected species would be affected. Opportunities exist to achieve biodiversity net gain.

6. References

Handbook for Phase I habitat survey Nature Conservancy Council 1990

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747.

Appendix 1 Plant species recorded at the site during the walkover visit 1/11/2023

Sycamore	<i>Acer pseudoplatanus</i>
Common Bent	<i>Agrostis capillaris</i>
Meadow Foxtail	<i>Alopecurus pratensis</i>
Cuckoo Flower	<i>Cardamine pratensis</i>
Common Mouse-ear	<i>Cerastium fontanum</i>
Creeping Thistle	<i>Cirsium arvense</i>
Hazel	<i>Coryllus avellana</i>
Hawthorn	<i>Crataegus monogyna</i>
Crested Dog's-tail	<i>Cynosurus cristatus</i>
Foxglove	<i>Digitalis purpurea</i>
American Willowherb	<i>Epilobium ciliatum</i>
Beech	<i>Fagus sylvatica</i>
Red Fescue	<i>Festuca rubra</i>
Ash	<i>Fraxinus excelsior</i>
Marsh Bedstraw	<i>Galium palustre</i>
Atlantic Ivy	<i>Hedera helix hibernica</i>
Yorkshire Fog	<i>Holcus lanatus</i>
Holly	<i>Ilex aquifolium</i>
Common Ragwort	<i>Jacobaea vulgaris</i>
Jointed Rush	<i>Juncus articulatus</i>
Soft Rush	<i>Juncus effusus</i>
Perennial Rye-grass	<i>Lolium perenne</i>
Greater Bird's-foot Trefoil	<i>Lotus pedunculatus</i>
Ribwort Plantain	<i>Plantago lanceolata</i>
Narrow-leaved Meadow-grass	<i>Poa humilis</i>
Silverweed	<i>Potentilla anserina</i>

Creeping Cinquefoil	<i>Potentilla reptans</i>
Blackthorn	<i>Prunus spinosa</i>
Sessile Oak	<i>Quercus petraea</i>
Creeping Buttercup	<i>Ranunculus repens</i>
Common Sorrel	<i>Rumex acetosa</i>
Broad-leaved Dock	<i>Rumex obtusifolius</i>
Dandelion	<i>Taraxacum officinale</i>
Coltsfoot	<i>Tussilago farfara</i>
European Gorse	<i>Ulex europaeus</i>

Appendix 2:

Plants listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended)

Alexanders, Perfoliate	<i>Smyrniium perfoliatum</i>
Archangel, Variegated Yellow	<i>Lamiastrum galeobdolon subsp. argentatum</i>
Azalea, Yellow	<i>Rhododendron luteum</i>
Balsam, Himalayan	<i>Impatiens glandulifera</i>
Cotoneaster	<i>Cotoneaster horizontalis</i>
Cotoneaster, Entire-leaved	<i>Cotoneaster integrifolius</i>
Cotoneaster, Himalayan	<i>Cotoneaster simonsii</i>
Cotoneaster, Hollyberry	<i>Cotoneaster bullatus</i>
Cotoneaster, Small-leaved	<i>Cotoneaster microphyllus</i>
Creeper, False Virginia	<i>Parthenocissus inserta</i>
Creeper, Virginia	<i>Parthenocissus quinquefolia</i>
Dewplant, Purple	<i>Disphyma crassifolium</i>
Fanwort	<i>Cabomba caroliniana</i>
Fern, Water	<i>Azolla filiculoides</i>
Fig, Hottentot	<i>Carpobrotus edulis</i>
Garlic, Three-cornered	<i>Allium triquetrum</i>
Hogweed, Giant	<i>Heracleum mantegazzianum</i>
Hyacinth, water	<i>Eichhornia crassipes</i>
Knotweed, Giant	<i>Fallopia sachalinensis</i>
Knotweed, Hybrid	<i>Fallopia japonica x Fallopia sachalinensis</i>
Knotweed, Japanese	<i>Fallopia japonica</i>
Knotweed, Japanese	<i>Polygonum cuspidatum</i>

Leek, Few-flowered	<i>Allium paradoxum</i>
Lettuce, water	<i>Pistia stratiotes</i>
Montbretia	<i>Crococsmia x crocosmiiflora</i>
Parrot's-feather	<i>Myriophyllum aquaticum</i>
Pennywort, Floating	<i>Hydrocotyle ranunculoides</i>
Potato, Duck	<i>Sagittaria latifolia</i>
Primrose, Floating Water	<i>Ludwigia peploides</i>
Primrose, Water	<i>Ludwigia grandiflora</i>
Primrose, Water	<i>Ludwigia uruguayensis</i>
Rhododendron	<i>Rhododendron ponticum</i>
Rhododendron	<i>Rhododendron ponticum x Rhododendron maximum</i>
Rhubarb, Giant	<i>Gunnera tinctoria</i>
Rose, Japanese	<i>Rosa rugosa</i>
Salvinia, Giant	<i>Salvinia molesta</i>