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ECOLOGY • FORESTRY • LAND USE

PRELIMINARY ECOLOGICAL ASSESSMENT

LAND NORTH OF GLANMYDDYFI

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Project name: **Land north of Glanmyddyfi, Pentrefelin**

Grid Reference: SN59852403

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Requested by: Roger Parry and Partners

Contents

1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Arbor Vitae were commissioned to carry out a Preliminary Ecological Assessment of land to the north of Glanmyddyfi, Pentrefelin. This land will be the subject of a planning application for the erection of a poultry production unit and associated works.

Such operations have the potential to disturb protected species, if present, and therefore Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal.

This report presents the results of a field survey carried out on 16 July 2020.

A previous assessment was carried out in 2018 by Baker Consultants but the data from this survey is now considered to be out of date.

1.2 DETAILS OF PROPOSED WORKS

The proposals include the construction of a new free-range laying unit for 16,000 birds, along with associated feed bins and other infrastructure. The nearby road junction where a minor road joins the A40 will be modified to improve visibility.

1.3 SCOPE OF SURVEY

The survey is primarily designed to:

- Identify and record habitats and important ecological features on site;
- Evaluate the potential of the proposed development site to provide opportunities for protected species;
- Determine any likely impact which the development and landscape proposals may have on these.

1.4 KEY PRINCIPLES

All ecological surveys conducted by Arbor Vitae Environment Ltd are underpinned by the following key principles, as outlined by CIEEM (2018):

Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).

Mitigation - Adverse effects should be avoided or minimized through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.

Compensation - Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.

Enhancements - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

2 SITE DESCRIPTION

2.1 LOCATION, LANDSCAPE AND BACKGROUND

The poultry unit is located in a grass field in a remote rural location approximately 350m north of the A40 road at Pentrefelin (Figure 1), approximately 3kms north west of Llandeilo. The site lies at 60 metres AOD on gently rising south-facing slopes within the valley of the Afon Myddyfi which flows near to the west of the site boundary.

The site itself is located within a rolling landscape of mainly pastoral farming with generally small agricultural fields bounded by hedgerows. The area is incised with stream valleys leading south to the valley of the Afon Tywi. Small woodlands are scattered throughout the area with one larger area to the west following the valley of the Afon Myddyfi.

3 SURVEY METHODOLOGY

3.1 DESK STUDY

An initial desk study was carried out to gain background information regarding protected species or designations within the area. The main sources of information were MagicMap and NBN Atlas.

3.2 SITE SURVEY

A site visit was made on 16th July 2020. The survey was carried out in accordance with CIEEM (2017) best practice guidelines. The objective of the survey was to find and record any signs of use by protected species and to note the habitat features present.

An assessment of the available habitats both on and adjacent to the site led to consideration of the potential of the site for the following protected species:

- Badgers
- Bats
- Breeding birds
- Dormice
- Otters

The survey methodology was tailored to evaluate the area for these species in the following ways:

Badger

An area within 50 meters of the site was closely searched for the following signs of badger activity:

- Setts
- tracks and footprints
- latrines
- snuffle holes

Bats

Potential roosting features on site were noted and the site was assessed in terms of nearby connecting habitat and other features which could be of value to bats.

Breeding birds

The site was assessed in terms of its suitability to support breeding bird populations. Hedgerow habitat and nearby potential habitat were assessed and recorded.

Dormice

The habitats on site were assessed in terms of suitability for dormice including connectivity, food sources and nesting habitat.

Otters

A search was made of the nearby watercourse and its banks for evidence of otters including spraints, feeding signs and holts.

3.3 PERSONNEL

The survey was carried out by Will Prestwood BSc, an experienced ecologist.

3.4 CONSTRAINTS

There were no constraints on the survey being carried out according to accepted guidelines and standards.

4 SURVEY RESULTS

4.1 DESK STUDY

The desk study found that within 2km of the site there were three nationally designated sites:

- Dinefwr Estate (SSSI) 1.5 km
- Afon Tywi (SSSI) 1.7 kms at its nearest point
- Birdshill Quarry (Geological SSSI) 0.9 km

The search included Ramsar, SSSI, SAC, SPA, LWS and LNR. [1]

Results from the desk study revealed that within a 1km radius of the proposed development site the following protected and key species have been recorded:

- Hedgehog
- Otter
- A small range of amber and red-listed birds species including:
    - Bullfinch
    - House sparrow

[1] **SSSI**: Site of Special Scientific Interest, **SAC**: Special Area of Conservation, **SPA**: Special Protection Area, **LWS:** Local Wildlife Site **LNR**: Local Nature Reserve.

- Song thrush
- Mistle thrush
- Lesser spotted woodpecker

There are no records for amphibians or reptiles.

4.2 HABITATS ON SITE

All habitats are classified using JNCC's Phase 1 Habitat Survey Handbook (JNCC, 2010). The survey included the field which will house the poultry unit and also the adjacent Fields 2 and 3 which will form part of the ranging area (see Figure 2).

Improved grassland

The proposed area for the new poultry unit is situated on improved grassland. The sward has a very limited range of species and is dominated by perennial rye grass with white clover, dandelion, creeping buttercup and daisy.

Small areas beneath hedgerows around the edge of the site retain certain species more indicative of unimproved grassland although these areas are very limited in extent. Species here include meadow vetchling, cat's ear, bird's foot trefoil, black knapweed, tufted vetch and meadowsweet.

All other fields within the ranging area comprise improved grassland with the exception of the lower (western) section of Field 2 (see below).

Semi-improved grassland

Field 2 forms part of the ranging area. This is largely improved but includes a section at its western end which has been less improved as a result of impeded drainage. The sward here is more diverse and includes patched of soft rush, particularly near a spring line at the top of the sloping field. Other species include meadow buttercup, red clover, cat's-ear, large bird's foot trefoil, square stalked St John's wort, meadowsweet, selfheal and lesser spearwort.

Hedgerow

Mature, native species-rich hedgerows surround each of the fields. All the hedgerows are in excellent condition, being up to 4 metres width, dense and free of gaps. They are all maintained by annual flailing and are all fenced against stock. Hawthorn is generally the dominant species with blackthorn, dog rose and hazel

being frequent. Other occasional species include elder, oak, ash, sycamore and holly.

Ground flora species are diverse and include several ancient woodland indicators such as dog's mercury, common violet, wood anemone, bluebell and male fern.

A short length of hedgerow will be removed alongside a garden at the nearby road junction with the A44. This hedgerow is an ornamental hedge mainly comprising privet.

4.3 ADJACENT HABITATS

Semi-natural woodland

A small area of woodland exists just outside the north western extremity of the site. This consists largely of ash, with oak, silver birch and goat willow with hazel understorey. A small stream passes through the woodland.

Improved grassland

Adjacent fields are also down to improved grassland.

Running water

The Afon Myddyfi runs in a deeply incised channel close to the western boundary of the site although separated from it by a minor road. The river is lined with trees along its length. This tree line extends in a large wooded valley to the north west.

4.4 PROTECTED AND PRIORITY SPECIES

Badgers

There were very few field signs to suggest that badgers use the field and there are no historic records of badger within 1km of the site. No badger setts were found within the site and only one minor excavation/snuffle hole which is probably associated with badgers was seen in Field 3.

Bats

The mature hedgerows around the fringes of the site offer commuting and foraging opportunities for bat species in the landscape. There are no mature trees within Field 1 but several mature oaks mark the line of a former hedgerow across Field 2. These include features such as loose bark which may provide bat roosts for small numbers of bats. No bat species have been recorded within 1km of the

site but they are nevertheless likely to use tree and hedge features locally for foraging.

Breeding birds

The site itself is highly likely to be used by breeding birds. Few species were recorded on the survey but the dense hedgerows do provide good potential nesting habitat. Species recorded included dunnock, wren, blackbird and chaffinch.

Dormice

The dense hedgerows offer potential habitat to dormice. Bramble, hazel and hawthorn provide good food sources and honeysuckle is present, providing nesting material.

Otters

No evidence of otters was recorded along the banks of the adjacent river. However, the banks are very steep and access to and from the river is difficult on this stretch. It is very likely that otters use this stretch of watercourse regularly but their activity is almost certainly restricted to the watercourse and its channel, particularly due to the high, steep embankments.

5 EVALUATION OF RESULTS AND POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

Improved grassland

The construction of the unit and associated access track and yard will result in the loss of approximately 0.25 hectares of improved grassland. This is of negligible ecological significance.

The cessation of intensive cattle grazing, along with a cessation of artificial fertiliser application on the grassland, are likely to benefit biodiversity in allowing the spread of grassland species into the sward. This is likely to happen in time from

the reservoir of unimproved grassland species which survive on the fringes of the fields and beneath hedgerows.

Hedgerows

Hedgerows are considered to be Habitats of Principal Importance (NERC Act). The construction of the unit will not affect hedgerows on the site itself or adjacent habitats. The new shed will be situated several metres away from the nearest hedge in order to protect the Root Protection Zone. Hedgerows will be allowed to extend in height in order to reduce the visibility of the site. This will, in turn, benefit this habitat in relation to bats, birds and dormice.

The garden hedge to be removed at the junction comprises non-native species and is of limited ecological significance.

Semi-natural woodland

This is of high ecological value but is outside the site boundary and will be unaffected by the proposals.

Running water

The nearby Afon Myddyfi is a Habitat of Principal Importance. This will be unaffected by the proposals.

5.2 PROTECTED SPECIES ASSESSMENT

Badger

The survey revealed very limited signs of use by badger and there are no historic records of badger at the site. No impact on this species is predicted.

Bats

Any increase in external illumination may have an impact on nocturnal wildlife including bats. These may use the hedgerow network for foraging and the value of these habitats may be reduced if external lighting increases.

Breeding birds

There may be some limited disturbance to birds during the construction period but this will be limited and no significant long-term impact is predicted.

Dormice

The retention of hedgerows will ensure that potential dormouse habitat is retained.

Otters

It is considered very unlikely that the proposals will have any impact on otters. There will be a small increase in heavy traffic but, given the nature of the road, this is unlikely to constitute a risk to otters. Any increase in general site illumination is unlikely to extend to the river corridor and will in any case be designed to avoid collateral light spillage.

5.3 IMPACT ON DESIGNATED SITES

Ammonia modelling has demonstrated that concentrations of ammonia will be below thresholds which may impact the closest SSSIs.

No other impact on designated sites is anticipated.

6 MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

No habitat of ecological significance will be lost and no specific mitigation is required.

6.2 PROTECTED SPECIES MITIGATION

Bats

Hedgerows on the fringes of the site will be encouraged to grow in height in order to improve visual screening of the site. This will benefit bats in providing richer foraging routes.

External lighting will be avoided or be guided by a wildlife friendly lighting design plan. This will avoid any impact on bat foraging behaviour.

Breeding birds

Hedgerow management will again benefit a range of bird species, notably winter visitors benefitting from an increased source of food.

6.3 ECOLOGICAL ENHANCEMENT

Habitats - Woodland planting

A new area of native woodland will be planted to the south of the main site in Field 3 in order to improve screening and also create additional wildlife habitat. This will comprise locally native species including sessile oak, silver birch, rowan, wild cherry and hazel.

The reduction of intense cattle grazing and avoidance of inorganic fertiliser use in Field 1 will allow an increase in floristic diversity to occur.

Species – Bats

The opportunity should also be taken to improve roosting opportunities for bats by erecting three bat boxes in mature oak trees in Field 2. These should be Schwegler Type 2FN boxes.

Species – Birds

The opportunity should also be taken to improve nesting opportunities for birds by erecting six bird nest boxes in mature oak trees in Field 2. These should include six Seville Woodstone nest boxes.

7 SUMMARY AND CONCLUSION

A planning application will be submitted to construct a new free range poultry unit unit on land to the north of Pentrefelin.

The site surveyed includes a small field in which the unit will be constructed and two further fields to be used as part of the ranging area. The scheme will involve the re-alignment of a nearby minor road junction with the A44 to facilitate safe access.

The proposals have implications for local ecology and protected species, Arbor Vitae were commissioned to carry out a Preliminary Ecological Assessment to evaluate the ecological interest on the site and to assess potential impacts to habitats and protected species. This report serves also to update a survey carried out by Baker Consultants in 2018.

The poultry unit will occupy an area of improved grassland, a habitat of low ecological interest, and the ecological impact is regarded as minimal. Field 2 includes one section of semi-improved grassland with a moderately rich flora, including soft rush.

The site and ranging area are divided by species-rich hedgerows (a Habitat of Principal Importance) with a rich ground flora including ancient woodland indicator species. All hedgerows will be retained and allowed to extend in height to improve screening.

There will be no impact on adjacent habitats of ecological value. These include a small semi-natural woodland and the Afon Myddyfi which flows near to the western boundary of the site.

Access improvements will result in the loss of approximately 30 metres of ornamental, non-native species garden hedgerow.

The report considered the potential impact on badgers, bats, breeding birds dormice and otters. There is very little evidence of badgers using the site and there are no local records. Several mature oaks in Field 2 may provide roost sites for bats and the hedgerows are likely to be used for commuting and foraging.

The hedgerows provide good nesting habitat for breeding birds and potential habitat for dormice, although there are no local records for this species.

No evidence of otters was found along the banks of the nearby river although it is highly likely that this watercourse is used by otters and they have been recorded within 1km of the site.

No specific habitat mitigation is required. However, habitat enhancement will be achieved through proposed reduced hedgerow management, allowing taller hedgerows to develop. Further enhancement will be achieved through the planting of new native woodland for screening purposes. The reduction of intense cattle grazing and avoidance of inorganic fertiliser use in Field 1 will allow an increase in floristic diversity to occur.

Mitigation for protected species will involve avoidance of external illumination or design of a wildlife-friendly lighting scheme. Further biodiversity gain will be achieved through erection of bat and bird boxes.

REFERENCES

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FIGURE 1 LOCATION. 1:50,000

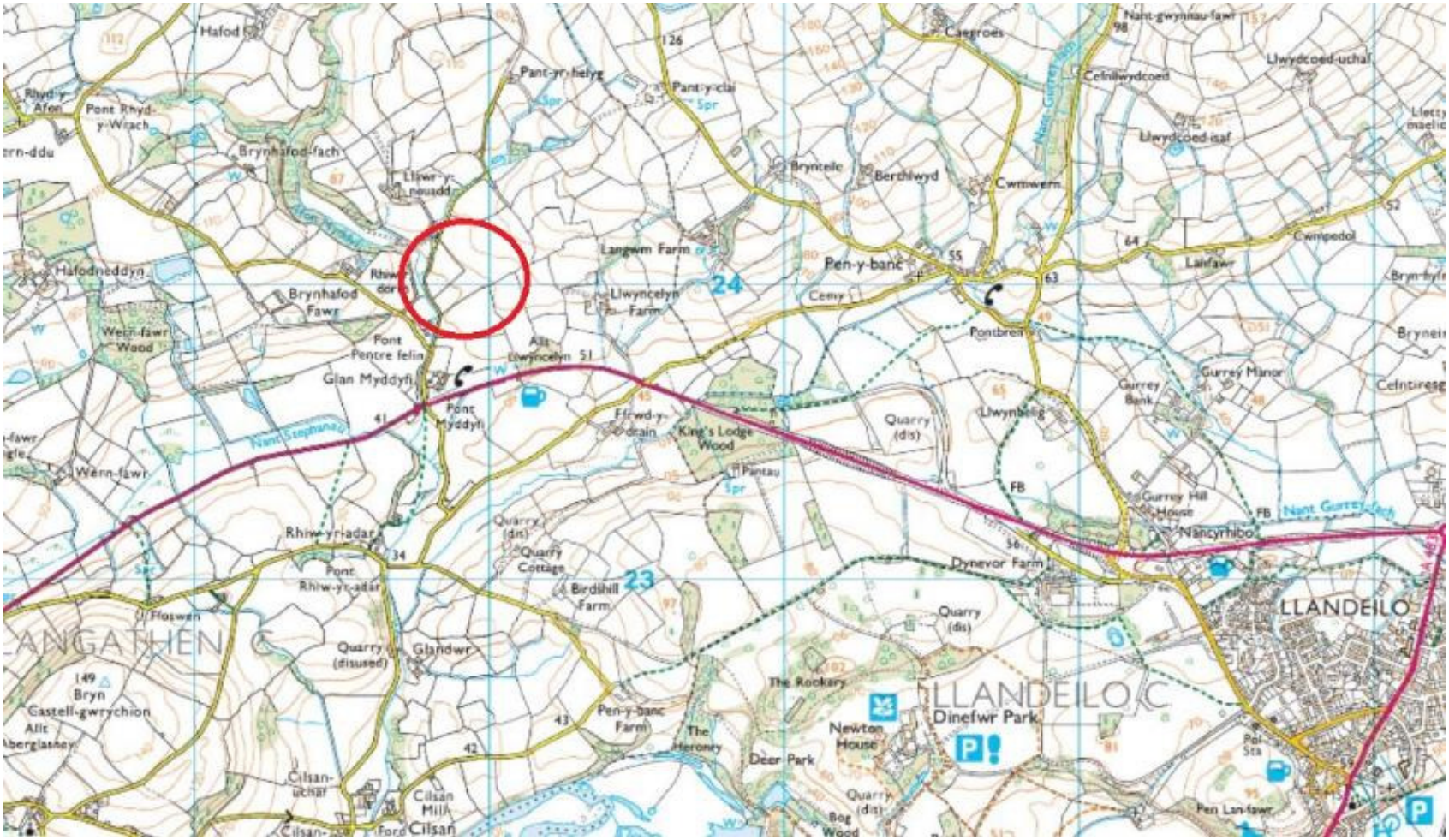

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FIGURE 2 AERIAL PHOTOGRAPH

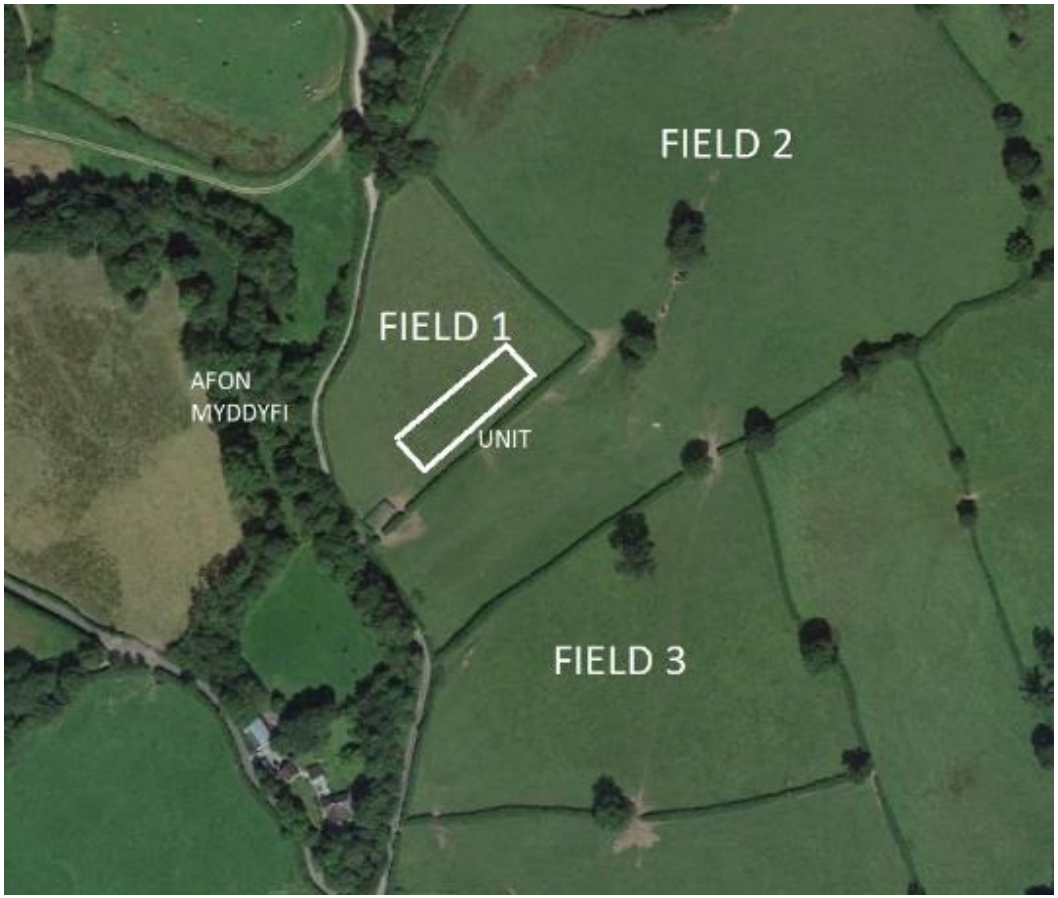

FIGURE 3 SITE PLAN

APPENDIX 1 PHOTOGRAPHS

	Field 1 Site of new unit
	General view over Field 1 from north
	Small area of semi-natural woodland outside northern boundary of Field 1

	Dense hedgerows surrounding all fields
	Field 2 Western section with semi-improved grassland and rushes
	Mature oaks mark former hedge line in upper part of Field 2