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Gwyn Humphreys Roger Parry and Partners 9 Darwin Court Oxon Business Park Shrewsbury SY35AL

Proposed poultry unit at Upper Bryn

Dear Gwyn,

We undertook a Preliminary Ecological Appraisal and subsequent Amphibian Conservation Plan for this site in 2021/2022. The PEA was based on survey work at the site carried out in June 2020.

I understand that the application is to be re-submitted. The site has been re-assessed by us and the situation on the ground remains the same. This is to confirm therefore that the findings and recommendations of the PEA and Amphibian Conservation Plan remain the same.

I note that the latter Plan has already been accepted by the Council on condition that Reasonable Avoidance Measures were adhered to and that the Amphibian Conservation Area is created as outlined in the Plan.

Kind regards,

Briony Horton Office Manager

p.p William Prestwood



ARBOR VITAE ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL

UPPER BRYN

Arbor Vitae Environment Ltd, Lower Betton Farm, Cross Houses, Shrewsbury, Shropshire, SY5 6JD

Project name:	UPPER BRYN, ABERMULE, POWYS	
Grid Reference:	SO17099394	
Date:	28/06/2021	
Prepared by:	William Prestwood BSc Director	
Reviewed by:	Phillipa Stirling MSc ACIEEM	
Requested by:	Roger Parry and Partners	

Arbor Vitae Environment Ltd, Lower Betton Farm, Cross Houses, Shrewsbury, Shropshire, SY5

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the construction of a new poultry unit at Upper Bryn. The new building will extend the facility constructed on adjacent land two years ago.

Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal in order to assess the impact of the development on habitats and protected species.

1.2 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.
- Identify opportunities for the enhancement of habitats and biodiversity features on site.

1.3 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 proposed site for the second phase of buildings for the poultry unit lies within remote agricultural fields approximately 500 m south east of the main farm buildings at Upper Bryn. The farmstead at Upper Bryn is around 1 km to the south-east of the village of Abermule in Powys. The site is at an elevation of around 175 m, with the River Severn Valley to the north-west and the land rising towards hills and mountains to the south-east. The surrounding land use is predominantly pasture.

The second poultry house will be constructed on a green-field site approximately 50 m to the west of the existing poultry house. The new poultry house would provide accommodation for up to 32,000 egg-laying chickens. The chickens would have daytime access to outdoor ranging areas.

3 SURVEY METHODOLOGY

3.1 DESK STUDY

An initial desk study was carried out to gain background information regarding any 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 11/06/2020. 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
- Great Crested Newts
- Reptiles

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

Badger

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

- Setts,
- Tracks and footprints,
- Latrines,
- Snuffle holes.

Bats

The site was assessed in terms of its suitability to support bat species. Hedgerow habitat and nearby potential habitat were assessed and recorded and potential impacts from the proposals considered.

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.

Great crested newts

A desk study and a ground search were conducted to search for any areas of open water within 250 metres. Waterbodies were then assessed based on the Habitat Suitability Index for great crested newts (Oldham et al., 2000 and ARG UK, 2010).

Reptiles

The site was assessed based on its suitability to support reptile populations including connections to terrestrial land from water and suitable resting habitat nearby.

3.3 PERSONNEL

The survey was carried out by William Prestwood BSc: Ecologist.

3.4 CONSTRAINTS

There were no constraints to the survey being carried out in accordance with guidelines.

4 SURVEY RESULTS

4.1 DESK STUDY

The desk study found that within 1km of the site there were the following designations:

Name	Designation	Distance from site		
MONTGOMERY CANAL	SCA/SSSI	1.6 KMS		
HOLLYBUSH PASTURES	SSSI	2 KMS		
DOLFORWYN WOODS	COUNTY WILDLIFE SITE	2 KMS		
The search included Ramsar, SSSI, SAC, SPA, LWS, NNR and LNR. ¹				

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

Species	Distance
Badger	0.8km
Dormouse	0.7km
Pipistrelle bat	450 m
Brown long-eared bat	450 m
Whiskered bat	1.4 kms
Common lizard	750m
Grass snake	750m
Great crested newt	190m

4.2 HABITATS ON SITE

All habitats are classified using JNCC's Phase 1 Habitat Survey Handbook (JNCC, 2010).

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

Improved grassland

The site will occupy approximately 0.4ha of improved grassland. This is dominated by perennial rye grass and clover and is of very little ecological interest. The ranging area too consists of intensively managed improved grassland.

Native hedgerow

Mixed native hedgerows form the boundaries of the five fields which provide the ranging area for the chickens.

4.3 ADJACENT HABITATS

Semi-natural ancient woodland

An extensive area of ancient woodland site (known as Rock Wood), some of it seminatural and some plantation, lies 260 metres to the south west of the proposed sheds.

4.4 **PROTECTED SPECIES**

Badgers

There are no historical records of badger at the site and no field signs were found within the search area.

Bats

There are no potential roosting features for bats on the site. The hedgerows may provide foraging sites and flight lines for bats although they are all very well-maintained at a low height and are probably of minimal value in their current state. The woodland boundary along the south western edge of the ranging area is almost certainly used by bats for foraging

Breeding birds

The intensively managed grassland is of minimal value as nesting habitat for groundnesting birds. Hedgerows on site almost certainly provide nest sites for common farmland birds although their management has involved keeping them well-trimmed and low in stature which reduces their current value as potential nesting sites.

Great Crested Newt

One pond exists approximately 190 metres to the north of the proposed site. This pond was shown to support approximately 13 individual GCN in 2017 but no breeding appeared to be taking place. The land which will be occupied by the proposed poultry unit is of

negligible value as a terrestrial habitat for GCN being under intensive grazing management. A minor road between the pond and the site also represents a barrier to dispersal for GCN.

Reptiles

The site is unsuitable for reptile species being heavily grazed and occasionally mown for silage.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The loss of approximately 0.4 hectares of improved grassland is of negligible ecological impact.

A small length of hedgerow will be removed to create access but a much longer length will be replanted elsewhere (see Section 6) and there will be a net gain in this priority habitat.

5.2 PROTECTED SPECIES ASSESSMENT

Badger

The survey revealed no signs of use by badger and there are no historic records of badger at the site. The proposals will have no impact on this species.

Bats

Any increase in external lighting levels might have a negative impact on bat foraging behaviour. This will be addressed in a Wildlife Sensitive Lighting Plan (see Section 6).

Breeding birds

The removal of a short length of hedge may have implications for breeding birds and should be carried out outside the nesting season OR following a site check by an ecologist.

Great crested newts

The breeding pond for GCN, located 190 metres to the north, has a range of good terrestrial habitat surrounding it including rough grassland, scrub and hedgerows. A study by Jehle (2000) demonstrated that 95% of all GCN summer refuges fell within 63m of the breeding pond and it is reasonable to assume in this case that GCN are using the habitats found immediately adjacent to the pond given the poor suitability of the terrestrial habitat at the poultry unit site. The terrestrial habitat represented at the poultry site is of

negligible value to GCN and the intervening minor road forms a barrier to dispersal for GCN.

The ecology report prepared for the construction of the first phase (Churton Ecology 2017) concluded that 'there would be no deterioration, damage or destruction of a breeding or resting place and no newts will be disturbed, injured or killed as a result of the development'.

This report agrees with this conclusion but also recommends that Reasonable Avoidance Measures are adopted to guide the construction phase and remove any residual, small risk to GCN.

Reptiles

The proposals will have no impact on these species.

5.3 IMPACT OF AMMONIA

The ammonia report accompanying the planning application (A S Modelling and Data Ltd) concluded that:

Detailed modelling

The detailed modelling predicts that:

- For The Unsound and The Pessimistic Scenarios, at the closest AW to the south there would be a small exceedance of 100% of the precautionary Critical Level of 1.0 μg/m³. This exceedance is predicted to impact upon a small area of the AW, approximately 0.6 ha in the Unsound Scenario and approximately 0.2 ha in the Pessimistic Scenario.
- For The Realistic Scenario, there is no exceedance of the Natural Resources Wales lower threshold percentage of the precautionary Critical Level of 1.0 μg/m³ by process contributions to ground level ammonia concentrations.

The area of ancient woodland impacted by the exceedance, at worse 0.6ha, is an area of predominantly ash woodland occupying a valley site to the south of the ranging area. This woodland type, on damp, rich soils, is unlikely to show any significant change in its floristic composition as a result of the slightly increased ammonia levels. However, in order to mitigate this, extensive planting of new woodland will take place as part of the scheme (see Section 6).

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

New native hedgerow will be planted along the site entrance to mitigate for the loss of hedgerow needed to create access to the site. The new hedgerow length will be approximately 150 metres. Species composition will be hawthorn (60%), blackthorn (10%), field maple (10%), hazel (10%), holly (5%) and guelder rose (5%).

6.2 PROTECTED SPECIES MITIGATION

Bats

All lighting for the accommodation pods will be kept to a minimum and used only where necessary. Any artificial lighting will be designed with nocturnal wildlife in mind. The following measures will be incorporated into lighting plans for the site:

- Hedgerows and key habitat features including mature trees on the site will not be illuminated in order to retain dark movement corridors for nocturnal wildlife. Illuminance along these features should be below 0.2 lux on the horizontal plane, and 0.4 lux on the vertical plane.
- Security lighting will be set on motion sensors with short timers (<1 minute) and should be LED lighting.
- External lights will be hooded and directed toward the ground to reduce upward light spill.
- A warm white spectrum will be adopted throughout the scheme to reduce blue light component (<2700Kelvin).
- Luminaires will always be mounted horizontally with an upward light ratio of 0%.
- Where lighting is needed to illuminate paths/walkways, low level LED bollard lighting, set on motion sensors should be used to avoid light pollution about 1m from the ground.

Breeding birds

Any hedgerow removal should take place outside the nesting season or after a site check by an ecologist.

Great crested newts

Reasonable Avoidance Measures will be adopted to ensure that no individual newts are accidentally harmed (see Appendix 1).

6.3 AMMONIA MITIGATION

The main means of ammonia mitigation will be through the planting of approximately 1 ha of new woodland in the south of the ranging area. This will be adjacent to the ancient woodland and form a belt approximately 25-30 depth. The online calculator provided by the centre of Ecology and Hydrology estimates a 15% reduction in ammonia levels within 20 years and 25% reduction within 50 years:



Further planting of native species (sessile oak, silver birch, rowan, wild cherry) will be carried out in the ranging area within 50 metres of the unit and a further small area of native woodland and shrubs will be planted near the site entrance.

6.4 ECOLOGICAL ENHANCEMENT

Hedgerow management across the ranging area will be changed to a regime of bi-ennial cutting with half of the hedgerows being cut each alternate year. Hedgerow heights will be allowed to increase to a minimum of 2 metres.

All hedgerows will be fenced to prevent access by chickens, thus improving the value of hedgerow to other wildlife.

Native tree planting, amounting to approximately 2 hectares, will significantly enhance opportunities for a range of wildlife, in addition to assisting with ammonia mitigation.

In order to provide shelter, breeding and hibernating opportunities for a variety of wildlife, we recommend that a nest box scheme is adopted as follows:

- Six Woodcrete general purpose bat boxes, suitable for crevice-dwelling species should be installed into mature trees within the boundary hedgerows. They should be at least 3m from the ground and face south or south west.
- Six Woodcrete cavity nesting bird boxes with 28mm or 32mm access holes. These should be positioned within mature trees within boundary hedgerows.

• Two hedgehog domes should be installed into the base of hedgerows with their entrances facing into the centre of the hedgerow.

7 SUMMARY

Planning consent is being sought for the construction of a second poultry unit at Upper Bryn. This will be located in a field approximately 500 metres from the farmstead and 50 metres from the existing unit, on the other side of a minor road.

The site will occupy an area of improved grassland, including the five fields making up the ranging area. The loss of a small area of this habitat will be a negligible ecological impact. The reduction in the intensity of management of grassland in the ranging area will represent an improvement in the ecological value of the site. The current sward, which is periodically mown for silage or heavily grazed, will develop an improved structure beneficial to invertebrates and will receive no artificial fertiliser or pesticides.

The loss of a short length of hedgerow will be mitigated for by the planting of approximately 150metres of new native hedgerow.

The site has little potential to support protected species, although bats probably utilise the woodland fringe on the boundary of the ranging area along which to hunt. Hedgerows are well-maintained but probably support common farmland bird species. The proposals will have no impact on bats given that a wildlife-friendly lighting scheme will be adopted. Hedgerow removal may have an impact on bird species but disturbance to nesting birds will be avoided through timing of the works. Overall, nesting habitat will be increased and improved.

A non-breeding population of great crested newts was recorded in a pond 190 metres from the site in 2021. It is concluded that, in line with the ecology report carried out for the first phase of the poultry units, the proposals are not a risk to GCN due to the distance from the pool, the unsuitability of the terrestrial habitat and the presence of high-quality amphibian habitat near to the pond. It is recommended however that Reasonable Avoidance Measures are adopted to ensure that there is no residual risk to GCN.

The Ammonia Report concluded that up to 0.6 ha of ancient woodland habitat could be impacted by an exceedance in ammonia levels. Although this is unlikely to have a significant effect on the woodland due the particular woodland community involved, mitigation will be put in place by way of a large area of new woodland planting, amounting to approximately 2 hectares. The CEH calculator suggests a reduction of ammonia levels as a result of the new planting of 15% within 20 years.

Biodiversity enhancements will result from:

- Planting of 150 metres new hedgerow
- Planting of 2 ha of new native woodland
- Improved hedgerow management in ranging area
- Fencing of all hedgerows to prevent access by chickens
- Installation of bat, bird and hedgehog boxes.

8 **REFERENCES**

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FIGURE 1 LOCATION. 1:50,000





FIGURE 2 AERIAL PHOTOGRAPH







APPENDIX 1 GCN REASONABLE AVOIDANCE MEASURES

Legislation

Great Crested Newts (GCN) are a European Protected Species (EPS) and they and their habitats are fully protected under national (Wildlife & Countryside Act 1981 (as amended)) and European law (The Habitats and Species Regulations 2017 (as amended)). The combined legislation makes it illegal to:

- deliberately capture, kill or injure a great crested newt;
- damage or destroy a breeding site or resting place
- intentionally or recklessly obstruct access to any place used for shelter and protection including resting and breeding places, whether occupied or not;
- deliberately, intentionally or recklessly disturb a great crested newt when in a place of shelter;
- possess a great crested newt, or any part of it, unless acquired lawfully;
- sell, barter, exchange or transport or offer for sale great crested newts or parts of them.

Induction of contractors

- A toolbox talk will be given to all site personnel in order to make them aware of the possible presence of GCN, how to identify this species and the avoidance measures to be used on site.
- A paper copy of the avoidance measures will be retained on site together with the contact details of the GCN licensed ecologist.

Timing & duration

- Any ground works/excavations will only be undertaken between March and October when night time temperatures are above 5°C in order to avoid disturbing hibernating amphibians.
- Any work which will <u>not</u> disturb potential hibernation habitat (e.g. hedgerow base, tree roots, mammal burrows, rubble piles) may be carried out during the winter period, when GCN are rarely active above ground.
- All works should take place during daylight hours when GCN are unlikely to be moving around the area.



Site clearance

- Any improved grassland to be disturbed on site should be cut to, and maintained at, a height of 10cm before March (in any given year) in order to reduce the number of potential resting/feeding opportunities on site.
- Any stored materials will be removed from site during the GCN active season- this is from March until October or when nighttime temperatures are 5°C or above. This will aim to remove any materials which could act as a refuge for GCN.

Site compound

- The site compound should be situated on an area of existing hard-standing to avoid creating GCN resting places beneath stored materials etc.
- All site materials should be stored on pallets or other raised objects to avoid creating resting places/refuges for GCN.
- Any toxic or poisonous materials should be safely stored within a locked container.

Construction methods and special precautions

- All excavations on site will be covered at night or ramps will be provided to allow amphibians to exit excavations. All excavations will be checked for amphibians each morning prior to the re-commencement of works.
- All exposed new pipework and drains will be capped at night so as to avoid trapping amphibians.
- All excavated materials/waste will be stored in skips or similar and not on the ground where it could be used as a refuge/resting area by amphibians. Alternatively, all waste will be removed from site daily.
- All stored building materials that might be used as temporary resting places by amphibians will be stored off the ground on pallets or similar.

If GCN are found at any point during the development or activities outlined above, works must stop and an appropriately qualified ecologist should be contacted for advice, as well as Natural Resources Wales.

Contractors are prohibited from handling GCN.

