

PROTECTED SPECIES ASSESSMENT

PENRHOS FARM

SY22 6TF

FOR

ROGER PARRY AND PARTNERS

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ARBOR VITAE
ECOLOGY • FORESTRY • LAND USE

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Retrospective planning permission is being sought for the demolition of agricultural buildings and the erection of new industrial buildings. The adjacent haulage yard is included within the site and will be retained in haulage yard use.

These have now been completed and have extended the footprint of built structures on the land onto a small area of grassland.

Consultations with NRW have drawn the response that great crested newts (GCN) have been recorded within 500 metres of the site in the past and that terrestrial habitat may have been lost. They identified two ponds within 250 metres of the development which could provide habitat for GCN. One of these ponds is partially within the haulage yard part of the site.

NRW also point out that bats (unknown species) have been recorded from an area of woodland adjacent to the farmstead. They also speculate that the demolished buildings may have provided suitable roost sites for bats.

1.2 SCOPE OF SURVEY

This survey was designed to assess the likelihood of GCN being present on or near the site. Given that work is already complete, no avoidance measures can be adopted. However, consideration can be given to habitat improvement for GCN. The report also considers mitigation and habitat enhancement for bat species.

2 SITE DESCRIPTION

2.1 LOCATION and LANDSCAPE

The development site is located at Penrhos Farm which lies in a remote rural location on the edge of the hamlet of Penrhos, near Ardlleen. The farmstead sits adjacent to a large area of woodland to the west and is otherwise surrounded by improved, permanent grassland.

The adjacent woodland has been felled in the last three years and has been replanted. Two ponds are identifiable on OS maps, one being 60 metres to the north west of the site on the edge of an agricultural field and partially within the haulage yard area of the site, and one 110 metres to the south west within adjacent woodland.

3 SURVEY METHODOLOGY

3.1 GREAT CRESTED NEWTS

A field survey was conducted on 19th March 2019 in order to check the existence of mapped ponds and to assess their suitability for GCN. The Habitat Suitability Index (Oldham *et al.*, 2000) was used to assign a numerical value to each pond.

Pond 1 lies 60 metres to the north west at the lower edge of a grass field. Part of the pond basin (as marked on the ordnance survey map) lies within the haulage yard. Almost no open water now exists due to infilling of the pond in the past. A field drain empties into a small hollow but was barely running even after heavy recent rain. It appears likely that the pond dries in the spring.

Pond 2 lies 110 metres to the south west. It sits in a valley site within the adjacent woodland. No access to the site is available and an HSI score was calculated from a distant viewing which has been enabled by the fact of the woodland having been felled within the last 3 years.

3.2 PERSONNEL

The survey was carried out by Will Prestwood BSc, ecologist, and Phillipa Stirling MSc: assistant ecologist.

4 SURVEY RESULTS

4.1 HABITAT SUITABILITY INDEX SCORES

The two ponds surveyed were assigned a numerical value which indicates the ponds' suitability to provide habitat to GCN (Table 1.) The individual values for each pond can be seen in Table 2.

Pond Number	Distance from development (m)	HSI Score (see below for details)
1	60	0.424
2	110	0.576

5 EVALUATION OF RESULTS AND IMPACT

5.1 GREAT CRESTED NEWTS

The HSI scores indicate that Pond 1 has 'poor' suitability for GCN and Pond 2 has 'below average' suitability. This assumed that, prior to the recent felling of the woodland, the pond was in at least 90% shade (this is verifiable from aerial photographs). The pond may now be ranked slightly differently given the increase in light reaching the pond but, nevertheless, the HSI score would remain as 'average' suitability.

Reference to the Natural England Risk Assessment Tool indicates, given that less than 0.5 ha of land has been disturbed at a distance of more than 100 metres from a potential breeding pond, that the development is 'highly unlikely' to have caused an offence.

5.2 BATS

Aerial and other photographs indicate that the agricultural buildings which have been demolished to make way for the development were of a 'modern' construction with steel frames and asbestos roofs. This has been confirmed by the continued existence of some of the steel work on the site, awaiting removal. This

style of building does not provide suitable roost sites for bats, being open, light and exposed to the elements, without suitable crevices for roosting.

However, the felling of the mature woodland adjacent to the site has probably reduced roost opportunities locally.

6 MITIGATION

6.1 GREAT CRESTED NEWTS

Given that work is complete, there is now no opportunity to instigate risk avoidance measures. However, some habitat improvement works can be put in place to enhance the terrestrial habitat for GCN. The site owners do not have access to neighbouring land and any works will need to be restricted to the area immediately within the site boundary.

Land to the west of the new buildings is currently improved grassland used for sheep grazing. It is proposed to excavate a small pond in the south west of the area. This will be filled using drainage water from the roof of the sheds. The new pond may require lining with an impermeable membrane such as butyl in order to retain water.

Two purpose-built refuges for GCN will be built adjacent to the pond. These will be formed from loose rubble and covered with soil, leaving access for amphibians to spaces within the structure.

6.2 BATS

In order to enhance roosting habitat for bats, it is proposed to erect three artificial bat boxes including a Schwegler 1FQ and two Schwegler 1FF.

External lighting will be avoided or restricted on the west elevation of the building. This will avoid illumination of the adjacent field and woodland edge which may provide bat foraging habitat.

7 SUMMARY AND CONCLUSION

Retrospective planning permission is being sought for the demolition of farm buildings and replacement with industrial storage units.

NRW, in their response to a planning consultation, have pointed out that great crested newts have been previously recorded within 500 metres of the site and that two ponds lie within 150 metres. Pond 1 is partially within the haulage yard area boundary. It is possible, therefore, that the construction works may have impinged on terrestrial habitat used by GCN. They have also indicated that bats have been recorded from the adjacent woodland in the past. NRW are also concerned that the two agricultural buildings which have been demolished could have provided bat roosting sites.

Arbor Vitae have carried out a survey to confirm whether nearby mapped ponds still exist and whether they hold suitability for GCN. The survey confirmed that Pond 1 (60 metres to the north west and partially within the haulage yard area)) has been almost completely infilled but retains a small amount of water. Pond 2 lies within adjacent woodland and is 110 metres from the site. HSI scores indicate that both ponds exhibit 'poor' or 'below average' (respectively) suitability as breeding sites for GCN. The felling of the woodland around Pond 2 will possibly improve its suitability for GCN in the longer term.

The terrestrial habitat occupied by the new building is improved grassland and is sub-optimal for GCN. The Natural England Risk Assessment indicates that the building construction is 'highly unlikely' to have caused an offence.

The completion of the works means that it is too late to instigate Risk Avoidance Measures. However, habitat enhancement for GCN is proposed. This will involve construction of a small pond in the field to the west of the building, fed by rain water from the roof. In addition, two GCN refuges will be built by the pond.

The agricultural buildings which have been demolished to make way for the development were of a 'modern' construction with steel frames and asbestos roofs. This style of building does not provide suitable roost sites for bats, and bat roosting habitat has not therefore been impacted by the development. However, the recent felling of adjacent woodland has probably reduced roost opportunities. In order to enhance bat roosting opportunities, it is proposed to erect three

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artificial bat roosting boxes. In addition, external lighting to the rear (west) of the buildings which overlook the adjacent woodland will be restricted.

REFERENCES

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155.



FIGURE 1 LOCATION. 1:50,000

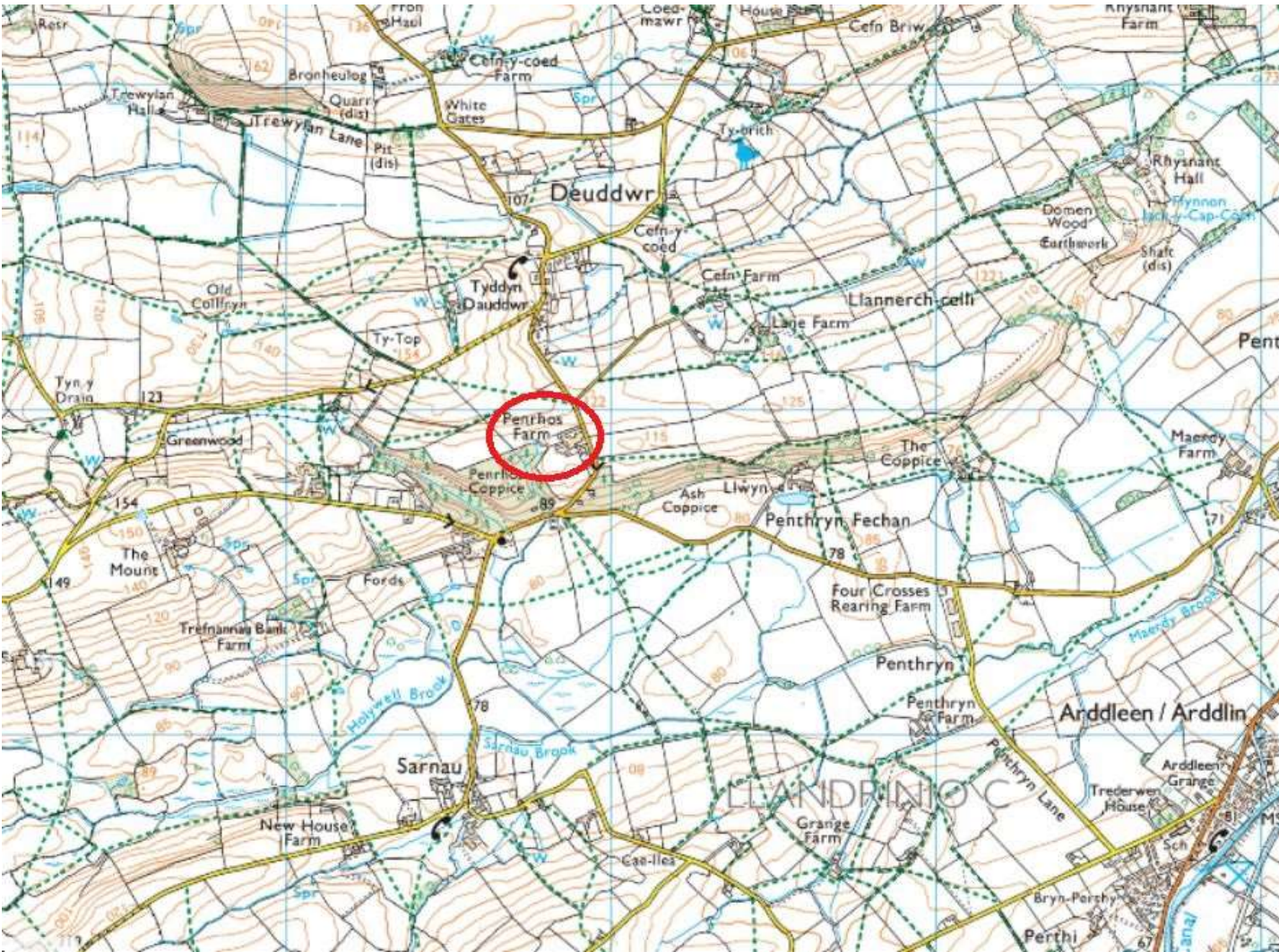


FIGURE 2 AERIAL PHOTOGRAPH



FIGURE 3 POND LOCATIONS



APPENDIX 1 PHOTOGRAPHS



POND 1



POND 1



POND 2