



Chetwynd Grove Cross Lanes

Outline Great Crested Newt Mitigation Plan

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1 Introduction

1.1 Background

This document provides an outline great crested newt mitigation plan for the redevelopment of two outbuildings located at Chetwynd Grove, Marchwiel, Wrexham, LL13 0TF (National Grid Reference SJ371472). Proposals are to convert the two outbuildings to provide dwellings and to provide a small garden area.

Great crested newt has been historically recorded as breeding within a pond (Pond 1) located approximately 50m to the west of the site (National grid reference SJ 370 471). A further Pond (Pond 2) is located approximately 180m to the west of the site (National grid references 369 471).

Pond 1 and Pond 2 were visited during field surveys completed in September 2016 and May 2017. Both ponds were assessed as to their suitability to support great crested newt. Pond 1 was found to be completely dry during the initial site visit completed in September 2016 and was found to be almost dry (approximately 5cm deep at its maximum) when revisited in May 2017.

Nevertheless, it is considered likely that great crested newt would be present within terrestrial habitats around the proposed development area.

Great crested newt receive full protection under the Wildlife and Countryside Act 1981 (as amended); through their inclusion in Schedule II of the Habitats Regulations 2010 and are considered to be a European Protected Species. Therefore, works to redevelop the site would be undertaken under a European Protected Species License (EPSL).

An outline mitigation strategy has been devised. The mitigation strategy has been designed to limit the negative impacts of the development on great crested newt within the immediate construction zone and to enhance the surrounding landscape for great crested newt.

1.2 Great Crested Newt Assessment

1.2.1 Methods

Field survey, comprising of an ecological walkover of the study site, was undertaken in September 2016 and May 2017. Survey was carried out by Richard Roe (BSc, MSc, MIEEM, CEnv). Richard has extensive experience of undertaking habitat and protected species surveys as a professional ecological consultant with over fifteen years' experience. Richard holds a great crested newt license.

Two ponds were identified from ordnance survey maps and aerial photography as being within 250m of the site. The pond locations are shown on Figure 1 in the Appendix.

The ponds were assessed as to their suitability to support great crested newt by assessing habitats present. This assessment followed the Habitat Suitability Index (HSI) Guidelines as produced by the National Amphibian and Reptile Recording Scheme (NARRS 2008¹) which in turn are based on a paper produced by Oldham et al. (2000²). The HSI examines ten key habitat features of a site in order to produce a numerical score of between 0 and 1. This score signifies the suitability of a pond as defined in Table 1.

The habitat features evaluated/measured to obtain the habitat suitability index are as follows: -

- Geographic location,
- Pond area,
- Pond permanence,
- Water quality,
- Pond shading,
- Number of waterfowl,
- Occurrence of fish,
- Pond density,
- Terrestrial habitat,
- Macrophyte cover.

¹ NARRS (2008) 'Great Crested Newt Habitat Suitability Index'

² Oldham R.S et al (2000) 'Evaluating the suitability of habitat of the Great Crested Newt (*Triturus cristatus*)'. Herpetological Journal 10 (4), 142-155

Table 1- HSI Score Categories

<i>HSI</i>	<i>Pond Suitability</i>
<0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Above Average
>0.8	Excellent

1.3 Survey Results

1.3.1 Overview

There are two ponds located within 250m of the site. Pond 1 is located approximately 50m to the west of the site (National grid reference SJ 370 471). Pond 2 is located approximately 180m to the west of the site (National grid references 369 471).

Pond 1 is known to have historically supported great crested newt and was surveyed as part of Ecological Surveys associated with Wrexham Industrial Estate Southern Access Road- Cross Lanes to Five Fords. The status of great crested newt within Pond 2 is unknown.

The surrounding landscape supports a high density of farm ponds and is likely to support good numbers of great crested newt.

Proposed works at the Chetwynd Grove Site are principally located within areas of hardstanding and associated with the barn conversions however, it is also proposed that a small section of existing improved grassland (approximately 120m² in area) located to the west of Barn 1 is re-landscaped to provide a new garden. This area is located within 50m of Pond 1.

Pond 1 and Pond 2 were visited during field surveys completed in September 2016 and May 2017. Both ponds were assessed as to their suitability to support great crested newt.

Pond 1

This pond was found to be completely dry during the initial site visit completed in September 2016 and was found to be almost dry (approximately 5cm deep at its maximum) when revisited in May 2017. The resident at Chetwynd Grove reported that the pond had remained almost dry over the winter period despite significant rainfall.

Aerial photography from June 2016 also shows the pond to be dry. Aerial photography from 2010 and earlier show the pond as holding water. The overall hydrology of the surrounding countryside may have recently altered causing the pond to dry up.

The pond still supports some wetland vegetation including branched burr-reed, water plantain, soft rush, great willowherb and water lily with encroaching willow scrub.

As Pond 1 has been dry when visited it has not been possible to complete a full habitat suitability index assessment. However, the pond is currently considered to be unsuitable for breeding great crested newt as newt larvae would not have sufficient time to develop before the pond dries up. If the pond was to retain water, the pond would be likely to offer highly suitable breeding habitat.

Pond 2

Pond 2 is located within a small copse at the corner of four fields. The pond is approximately 20m in diameter and is shaded on all sides by oak trees and hawthorn, blackthorn and willow scrub. The water within the pond was observed to be very turbid. The pond water supports no aquatic vegetation. The pond achieved a habitat suitability index assessment score of 0.58 indicating the pond to be of 'below average' suitability for great crested newt.

Habitat suitability scores are shown in Table 2 below.

Table 2- Habitat Suitability Index Scores

HSI Feature	Pond 2
Location	1
Pond area	0.6
Pond drying	0.9
Water quality	0.33
Shade	0.2
Fowl	0.67
Fish	0.67
Ponds	1
Terrestrial habitat	0.67
Macrophytes	0.4
HSI Score	0.58

1.3.2 Great Crested Newt Terrestrial Habitat

Terrestrial habitats within the proposed development site are largely considered to be unsuitable for great crested newt (comprising of buildings with intact concrete floors and intact tarmacked farm yard). However, works will also include the re-landscaping of an area of improved pasture to create a garden area to the west of Building 1.

The proposed garden area currently comprises of closely grazed improved pastureland and so is not considered to offer high value newt terrestrial habitat. More suitable newt terrestrial habitat is present within the wider landscape (areas of woodland, hedgerows etc). The proposed garden area is also very small in size (garden area will measure approximately 20m x 6m in area i.e. 120m²).

Nevertheless, given the proximity of the nearby historic breeding pond, there is considered to be a risk that individual or low numbers of great crested newt could be present within habitats in the proposed garden area or could use the structure of the barns as hibernation sites or terrestrial habitat.

Consequently, the site should be redeveloped under a European Protected Species derogation license.

2 Recommendations

2.1 Summary and Evaluation

Habitats within the proposed development site are considered to offer some limited suitable terrestrial habitats for great crested newt.

Great crested newt has been confirmed as historically breeding within Pond 1 which is located approximately 50m to the west of the proposed development site.

Given the presence of some suitable terrestrial habitats within the development area and the likely presence of great crested newt in the wider landscape, it is considered possible that great crested newt could be present within the proposed development area.

2.2 Recommendations

2.2.1 Outline Mitigation Plan

It is considered possible that great crested newt could be present within the proposed development area (specifically the proposed garden area).

Works proposals will result in the loss of potential great crested newt terrestrial habitat. Great crested newt are a European Protected Species. Therefore, works to redevelop the site would need to be undertaken under a European Protected Species License (EPSL).

Natural Resources Wales (NRW) is the EPS licensing authority. In order to issue an EPSL to allow a development to disturb GCN or to destroy or damage their resting sites, NRW would require evidence that 3 statutory tests have been met. The 3 test are:

1. *Demonstration of **the Need** for the development- this includes preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance to the environment.*
2. *Demonstration that there is **no satisfactory alternative**.*
3. *Demonstration that **the action will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.***

Consideration of Test 1, 'The Need'

It is likely that the proposed development will satisfy the need in terms of a social and economic basis by providing further high-quality housing within the Marchwiel area. The development will use existing developed land (garden). This need is in line with various local and national housing and planning policies.

Consideration of Test 2, 'No Satisfactory Alternative'

There is 'no satisfactory alternative' as the construction of the new dwellings in an alternative location would require the use of undeveloped, green field land.

Consideration of Test 3, Maintenance of a Favourable Conservation Status

Initial survey has identified a historic great crested newt breeding pond within proximity to the development site. It is therefore likely that great crested newt are present within the wider landscape and potentially present within the proposed works area.

An outline mitigation strategy has been devised. The mitigation strategy has been designed to limit the negative impacts of the development on GCN within the immediate construction zone.

As the development will replace an area of closely grazed improved pasture with garden habitat, there is not considered any need to provide additional great crested newt terrestrial habitat as compensation (Garden habitats have been found to offer more suitable terrestrial habitat for great crested newt as compared to improved pasture (Latham et al. 1996³)).

2.2.2 Site Clearance

Works would follow a strict method statement which would form part of the EPSL. The site would be initially cleared of great crested newt through the installation of temporary, one-way amphibian fencing. Given the very small size of the proposed garden area (approximately 120m² in area) it is not considered appropriate or proportionate to carry out a pitfall trapping exercise using upright fencing and bucket traps.

The one-way fencing will allow newts to move out of the proposed garden area and will also prevent newts from entering the development site.

The fencing would be erected around the proposed garden area and the western edge of the proposed development area as shown on Figure 2 in the Appendix.

Fencing will be maintained throughout the construction phase to prevent newts from entering the construction zone.

³ Latham, DM, Oldham, RS, Stevenson, MJ, Duff, R, Franklin, P & Head, SM (1996). Woodland management and the conservation of the great crested newt (*Triturus cristatus*). Aspects of Applied Biology **44**: 451-459.

The fencing would remain in place for a minimum of 60 days during suitable weather conditions (average night time temperatures above 5°C) and during the active newt season (March-October inclusive).

Prior to the start of barn conversion works, a hand search of the barn interiors would be carried out by the licensed newt worker. The barns are well sealed internally, with solid concrete floors, and so it is considered unlikely that newts could take refuge within the internal structure of the barns. However, newts could take refuge beneath stored materials within the barns. Such features would be actively searched.

Once conversion of the barns has been completed and in advance of works to landscape the new gardens, the trapping area would also undergo a hand search for great crested newt.

Any captured newts will be moved to existing areas of GCN habitat (herb and marsh habitat) located around Pond 1 (location shown on Figure 2).

All newt fencing would be removed when construction and landscaping works is complete. Removal of fencing would be supervised by the named ecologist on the license as great crested newt can take refuge between the exterior of the fencing sheets and the surrounding soil.

2.2.3 Site Enhancement

It is recommended that Pond 1 is monitored prior to the start of works. If the pond continues to remain dry for much of the year, it is recommended that works to restore the pond are carried out.

Restoration works would include removal of encroaching scrub and would include the deepening of the pond to allow it to permanently hold water.

These works would be done using a mechanical excavator with care taken to avoid breaching the clay lining of the pond. The excavation would be carried out in such a way so as to provide a series of shelves at various depths plus some carefully graded sides to provide suitable draw-down zones.

These works would be completed under the supervision of the licensed ecologist or other suitably qualified bodies such as the Amphibian and Reptile Conservation Trust's North Wales Team.

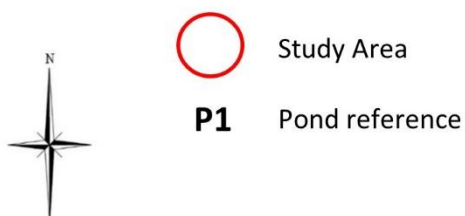
3 Appendix

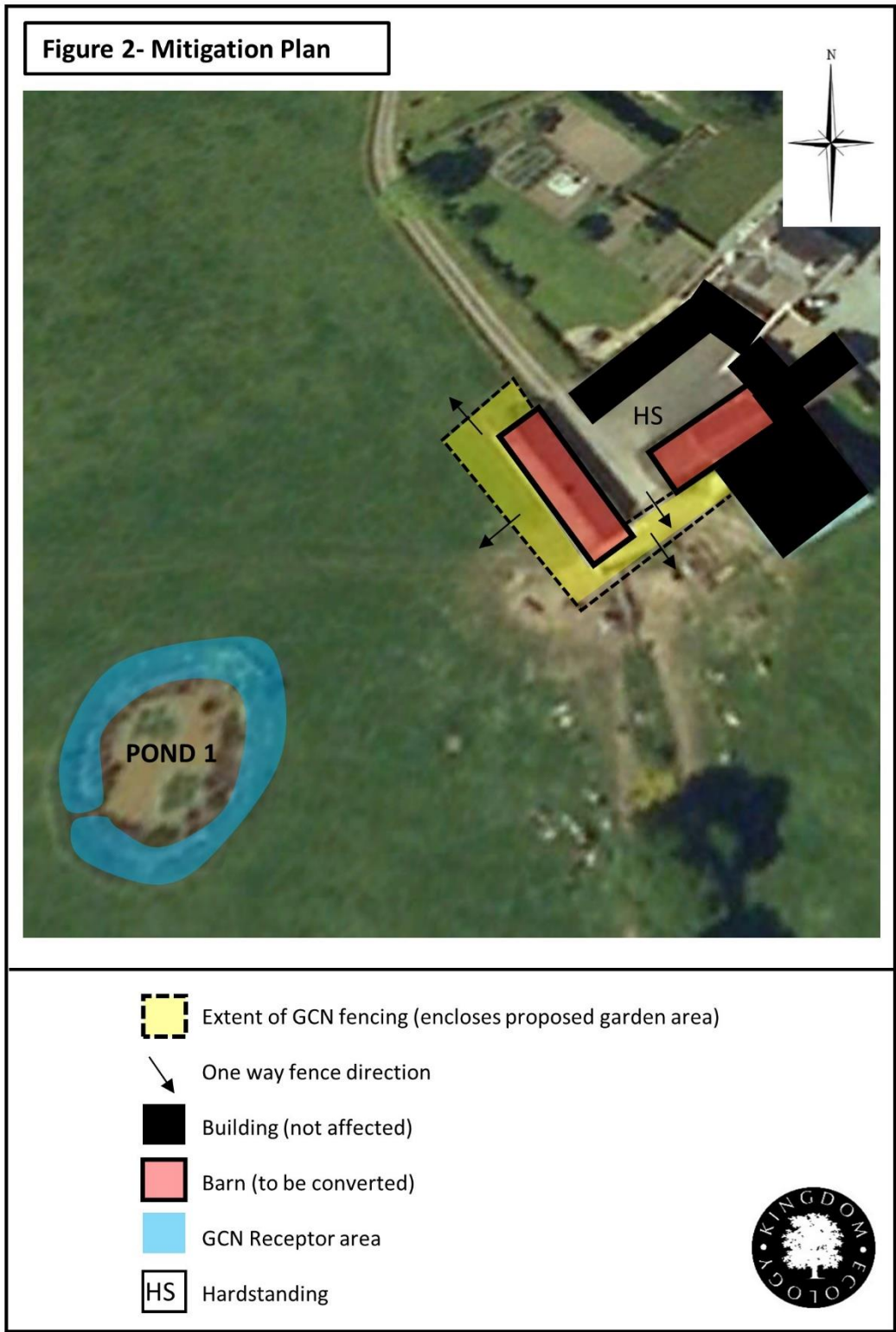
FIGURE 1- Site Location



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Ordnance Survey 100054686





Photograph 1- Pond 1 (May 2017)



Photograph 2- Habitats at Proposed garden area

