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Great Crested Newt Survey and Assessment

**Land at Horndean Road,
Emsworth,**

13th June 2013

Summary

- A total of four Great Crested Newt surveys were conducted at a large pond situated within farmland where it is proposed to build a new residential development.
- Following four surveys forming a viable 'presence/absence' survey according to Natural England guidelines, no great crested newts were identified.
- No further surveys will be necessary at this pond assuming that the development process commences within the next 3 years. Some recommendations for enhancing the health and ecological value of this pond have been made in section 6.

This report has been prepared by Azure Ecology, with all reasonable skill, care and diligence within the terms of the Contract with the client.

We disclaim responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

1 Introduction

- 1.1 This assessment comprised a great crested newt presence/absence survey and was carried out by Paul Whitby, a member of CIEEM and licensed great crested newt surveyor (class license WML – CL08).
- 1.2 This survey has been carried out in support of an application to develop an area of arable farmland situated on the western edge of Horndean Road and south of Southleigh Road in Emsworth. The grid reference for the site is SU 743 070.
- 1.3 This survey and report was carried out and produced at the request of Bidwells.

2 Background

- 2.1 A large pond was identified within a parcel of land proposed for development during a phase 1 habitat survey and protected species assessment undertaken by Azure Ecology on the 14th of May 2013. A search of background mapping and aerial imagery did not reveal the presence of any other known ponds within 500 metres of the site, however a single old record for great crested newts was identified on the National Biodiversity Network website within Emsworth. A biodiversity records search later requested from the Hampshire Biodiversity Records Centre (Hbic) later showed no known records of this species within 2km of the site centre.
- 2.2 With the pond identified as being suitable to support breeding amphibians and historical records for great crested newts within the 10km grid square upon which the site is situated, it was decided to undertake a presence/absence survey for great crested newts according to best practice guidelines outlined by Natural England.
- 2.3 A wet ditch running along the western boundary of the site has been deemed unsuitable for breeding newts as it does not have a still water body and supports a population of small fish.

3 Ecological overview

- 3.1 The pond surveyed is situated on the edge of an area of arable farmland backing onto a row of residential gardens to properties on Horndean Road. The site is situated on the western outskirts of Emsworth.
- 3.2 The pond is estimated to be 20 metres long, 15 metres wide, with an irregular shape and is no deeper than 40cm at any point. Tall mature trees border the pond on the northern, southern and western banks, creating permanent shade across much of the pond, however extending from the eastern banks dense growth of yellow iris (*Iris pseudacorus*), with some small amounts of water mint (*Mentha aquatica*), gypsywort (*Lycopus europaeus*) and redshank (*Persicaria maculosa*).
- 3.3 Although the majority of the site and surrounding area is made up of cultivated arable land, some wide grassy buffer strips border the pond and the wet ditch running along the western boundary.
- 3.4 The pond appears to receive water from a land drain in the northeastern corner, thought to flow from drain water near Horndean Road. The clarity of the water in

- the pond near to the drain is notably poorer than elsewhere in the pond. It also appears that water may leave the pond somewhere at the western end and flow towards the wet ditch underground to the west. A dense growth of Yellow flag stretching across the width of the pond appears to significantly reduce suspended sediments from the drain affecting the majority of the pond, with a clear difference in water clarity observed either side of this growth.
- 3.5 Some dumping of garden waste and signs of past bonfire burning on the eastern banks of the pond suggest that it is likely the pond receives high nitrogen input.
- Context for Great Crested Newts**
- 3.6 The large pond has been identified as suitable to support breeding amphibians, due to an apparent lack of fish, large numbers of wildfowl or serious pollution problems.
- 3.7 The terrestrial habitat across the site includes suitable areas for foraging, including the grassy buffer strips, small wooded area bordering the pond and there is the possibility of both suitable habitat and hibernacula in the gardens of properties bordering the site along the eastern boundary.
- 3.8 It is possible that the drain feeding the pond could be polluting the pond to some degree if it does indeed originate from Horndean Road.



Picture 1 – the location of the pond surveyed as shown in the Phase 1 habitat map produced by Azure Ecology.



Picture 2 – A mixture of heavy shaded parts of the pond and areas receiving light that are well vegetated leading from the eastern bank.



Picture 3 – Bottle traps positioned on the edge of some of the yellow flag and other marginal aquatic vegetation.

Legal protection

- 3.9 This section briefly describes the legal protection afforded to protected species. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation, but summarises the salient points.

Great Crested Newt

- 3.10 Great Crested Newt (*Triturus cristatus*) are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and receive full protection under Section 9. This species is also all listed as European Protected Species on Schedule 2 of the Conservation (Natural Habitats, etc.) Regulations 1994 which gives them full protection under Regulation 39. Protection was extended by the Countryside and Rights of Way Act 2000 (the CRow Act). Under the above legislation it is an offence to:
- kill, injure or take an individual;
 - possess any part of an individual either alive or dead;
 - intentionally or recklessly damage, destroy or obstruct access to any place or structure used by these species for shelter, rest, protection or breeding;
 - intentionally or recklessly disturb these species whilst using any place of shelter or protection; or
 - sell or attempt to sell any individual.
- 3.11 Great Crested Newt are included as priority species in the UK Biodiversity Action Plan and as species of principal importance for the conservation of biological diversity in England under Section 74 of the Countryside and Rights of Way (CRow) Act 2000.

4 Method

Great Crested Newts

- 4.1 All presence/absence surveys for Great Crested Newts carried out by Azure Ecology follow best practice guidelines as described by Natural England's 'Great Crested Newt Mitigation Guidelines'.
- 4.2 In accordance with these guidelines, four surveys were carried out on evenings when the ambient temperature was not less than 5°C between mid March and mid June, with three surveys being carried out between mid April and mid May. This timing ensures that surveys are carried out when newts are most likely to be breeding, thus maximising the potential to identify newt presence.
- 4.3 A total of four survey techniques can be used to identify newt presence. These are as follows:
- Bottle trapping – Plastic bottles are converted into funnel traps and placed in a water body at two metre intervals along the bank. The traps sit on the bottom and newts enter into the trap during the night.
 - Egg searching – Where available, newts will lay their eggs on the leaves of aquatic vegetation and fold the leaf over to protect the egg from predation. Leaves which have been folded over are often easily spotted (particularly in ponds where only little vegetation is present). Although Palmate (*Triturus helveticus*) and Smooth newts (*Triturus vulgaris*) also lay their eggs on vegetation, Great Crested Newt eggs are identified through their larger size and paler colour.
 - Torching – Torch surveying is carried out by shining a torch onto the bottom of

the water body and counting any newts present. This method is most effective in ponds with good water quality and little pond weed, so that visibility into the water is not hampered.

- Netting – using a long-handled dipping net, newts can be captured by sampling the area around the pond edge. A perimeter walk is carried out (where accessible) and at least 15 minutes of netting per 50 metres of shoreline is conducted. This technique is least favoured where other survey methods can be successfully employed, due to the disturbance that is caused creating suspended sediments and potentially damaging aquatic vegetation.

4.4 Visibility in the majority of the pond was adequate for torch surveying, however approximately 25% of the pond at the northern end near to where the drain enters the pond has very poor visibility.

5 Results

Great Crested Newt Surveys

Note – A total of 40 bottle traps were used on the second and third surveys, but were discontinued after a dead water shrew (*Neomys fodiens*) was found in one of the bottle traps on the third survey.

<u>Date</u>	<u>Survey Method Employed</u>	<u>Results</u>	<u>Weather Notes</u>	<u>Other Notes/Constraints</u>
14/05/2013	Egg searching and torching	No GCN recorded. Two smooth newts seen and some tadpoles.	9°C, 100% cloud cover and 25mph wind.	Torch surveying commenced at 10:15pm and was completed by 10:40pm.
16/05/2013	Bottle trapping and torching	No GCN recorded	8°C, dry 0% cloud cover, 0-5mph wind.	40 Bottle traps were set at 7:20 pm and retrieved at 6:45 am. Torch surveying commenced at 9:20 and was completed by 9:45.
05/06/2013	Bottle trapping, torching and egg searching	No GCN recorded and a dead water shrew found.	16°C, 0% cloud cover, dry and 0-5mph wind.	Traps were set at 8:30pm and retrieved at 7:20am. Torch surveys commenced at 9:15pm and was completed by 9:40pm
11/06/2013	Torching and egg searching	No GCN recorded. Some tadpoles seen.	14°C, dry 90% cloud cover, wet weather during the day and 0-5mph	Torch survey commenced at 9:30pm and was completed by 9:55pm

			wind.	
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GCN = Great Crested Newt, M = Male, F = Female, Juv = Juvenile.

6 Constraints/Limitations

- 6.1 The survey effort was hampered by three main factors. These were:
1. Poor water clarity in approximately 25% of the pond near where a land drain flows into the pond.
 2. Bottle trapping was only possible on two survey visits after a dead water shrew was found in one of the traps. Further trapping would have risked killing or injuring more individuals.

7 Conclusions

- 7.1 Following four surveys at the ponds, no great crested newts were identified. Other amphibians are known to be breeding within the pond, with two female smooth newts identified and a small number of tadpoles, which does suggest that the pond is not overly polluted, despite the presence of the drain and the dumping of garden waste on the pond banks.
- 7.2 The survey effort was hampered to some degree as bottle trapping was only possible on two of the survey visits, however egg searching and torching for evidence of great crested newts was possible across the majority of the pond.
- 7.3 Whilst it is possible to prove presence, it is almost impossible to prove the absence of great crested newts. The survey effort undertaken in this instance has been able to demonstrate the strong probability that this species is not present within this geographical area and that any development of this area of land is highly to kill or injure any individuals.
- 7.4 A number of negative factors are affecting the health of the pond surveyed, that if possible should be addressed as part of any future positive contribution to biodiversity in mitigation development of a greenfield site. This should include:
1. The deepening of the main body of the pond and reducing the area dominated by yellow flag, as well as some dredging of detritus and settled sediments from the land drain at the north western end (note such sensitive work is best timed between 1st August and 31st September).
 2. Creating a sediment trap and natural biological filter around the area where the land drain enters the pond by establishing a channel 4 metres long and at least 1.5 metres wide with common reed (*Phragmites australis*) growing in it which the drain would pass through before reaching the pond.
 3. Preventing future dumping of garden waste on the pond banks through positive negotiation with neighbouring residents.
 4. Thinning of some bank side trees and scrub to improve light levels, particularly at the western end of the pond.
 5. Introduction of some native oxygenating plants, such as hornwort (*Ceraphyllum demersum*) and water crowfoot (*Ranunculus aquatilis*) to help improve oxygen levels in the pond.