APPENDIX 9.7

Great Crested Newt Survey 2009

Appendix 9.7 Great Crested Newt Survey 2009

Notice to Readers

The advice contained in this report is based on the information available and/or collected during the period of study and within the resources available for the project. We cannot completely eliminate the possibility of important ecological features being found through further investigation and/or by survey at different times of the year or in different years. Reference to sections or particular paragraphs of this document taken out of context may lead to misrepresentation. JUST ECOLOGY takes care to ensure that balanced advice is provided based on the information available at the time. May 2009

JUST ECOLOGY Limited
Brookend House
Old Brookend
Berkeley
Gloucestershire
GL13 9SQ
www.justecology.com

1.1 Executive Summary

1.1.1 Surveys for Great Crested Newts were carried out at land known as Island Farm, Bridgend.

1.1.2 The ponds at this site are of poor quality and are unlikely to be favourable for Great Crested Newts. No Great Crested Newts were recorded on site, only a small number of Palmate and Smooth Newts.

1.1.3 The development is not likely to impact negatively on the favourable conservation status of Great Crested Newts, and there should be no constraints placed on the proposed development by this species.

1.1.4 The two ponds on site should be retained if possible and restored and managed for amphibians. If this proves to be not possible, new ponds should be provided as part of the scheme.

1.2 Introduction

1.2.1 Island Farm is located on the A48 by-pass road, on the outskirts of Bridgend, South Wales. The site includes both a brownfield area in the northern half of the site, owned by Bridgend County Borough Council (BCBC), and adjacent agricultural land which occupies the southern half of the site. The site is bordered to the north by the A48, to the south by New Inn Road, to the west by Merthyr Mawr Road, and to the east by housing and a railway line.

1.2.2 HD Limited are the proponents of a large-scale multi-use sports development at Island Farm, which will include rugby league, rugby union, football, tennis and boxing facilities within a landscaped parkland environment. The development will also include a Phase II extension to a science park, providing low density, high technology office use; a heritage centre based around a grade II listed hut from a Prisoner of War camp; and a wildlife conservation area.

1.2.3 Two ponds occur on the Island Farm site (see Figure 1), and as part of a series of ecology surveys, these ponds were identified as potential habitat for Great crested newts *Triturus cristatus* and were subject to best practice survey. Great crested newts are a European protected species and extensively protected by law.

Figure 1: Ponds surveyed for Great Crested Newts at Island Farm

1.3 Methods

1.3.1 The field surveys were undertaken by a licensed Great Crested Newt surveyor with more than eight years of survey experience for this species (CCW licence number – OTH:SA:95:2009). Notification of survey was issued to CCW in advance.

1.3.2 Each of the two ponds identified in Figure 1 were first visited and pond assessment was undertaken, with recording of attributes that provide optimal conditions for Great Crested Newts (from Langton *et al.* 2001), including details of:

- Context/terrestrial habitat
- Accessibility
- Pond size
- Water depth
- Water quality
- Shade/cover
- Marginal vegetation

- Foods
- Aquatic vegetation
- Predators

1.3.3 From this initial survey, the potential of each pond to support Great Crested Newts was summarised as either negligible, poor, moderate or good.

1.3.4 Also during the initial survey, the most suitable survey methods were determined. At the two ponds, bottle trapping was not possible as each were concrete lined and therefore bottles could not be secured. Night-time torch survey was not possible either (though was trialled) because of blanket cover of floating grass and/or duckweed *Lemna* spp., meaning that any view into the water was totally obscured.

1.3.5 The methods adopted for the two ponds were egg search and sweep netting and, after the initial survey on 16th April 2009, these methods were adopted on four survey visits, i.e. the 16th, 21st and 29th April and on the 7th May 2009.

1.3.6 Egg searching involved a search of suitable vegetation for the distinctive eggs of the Great Crested Newt, often to be found on submerged aquatic or marginal vegetation.

1.3.7 Sweep netting involved taking repeated sweeps with a pond net though open water, pond litter and aquatic vegetation. Opportunistic searching of potential refugia for newts within the vicinity of each pond (e.g. fallen timber, rocks, debris etc.) was also undertaken. The number of surveys and all methods used were consistent with current best practice (Langton *et al.* 2001) in order for the survey to be reliable.

1.3.8 All surveys were carried out in good weather conditions (i.e. when it was relatively warm, calm and dry), and during the optimum survey months for this species (Langton *et al.* 2001).

1.4 Results

Ponds included

1.4.1 The two ponds surveyed can be located from Figure 1, and are illustrated in Plates 1 and 2.

Plate 1: Pond A

Plate 2: Pond B

Pond evaluations

1.4.2 The characteristics of two ponds were evaluated against attributes that would be regarded as favourable for Great Crested Newts. This is summarised in Table 1.

1.4.3 Pond A lies at the intersection between four arable fields. It is broadly rectangular in shape, with containing walls, but with approximately three-quarters of former pond covered by a floating mat of grassy vegetation. The remaining quarter is shaded by scrub, covered by duckweed and is stagnant. The pond receives spray drift from the agricultural fields and some of the grass within it is dead.

1.4.4 Pond A has only **poor** potential for Great Crested Newts, with only its accessibility, size and mix of shallow and deep water being considered as favourable attributes (Table 1).

1.4.5 Pond B lies at the intersection between three arable field and if of irregular shape. It is covered by duckweed and is stagnant. This pond is also likely to receive spray drift and run-off from the surrounding arable land.

1.4.6 Akin to Pond A, Pond B has only **poor** potential for Great Crested Newts, with only its accessibility, size and mix of shallow and deep water being considered as favourable attributes (Table 1).

1.4.7 Although both ponds are viable and appear unlikely to dry out, both lie within a relatively hostile environment for Great Crested Newts, are impacted by agricultural activities and are in dire need of conservation management.

Table 1: *Habitat evaluation of ponds at Island Farm for Great Crested Newts*

Attribute	Optimal characteristics	Pond A	Pond B
Terrestrial habitat	Close proximity to grassland, scrub, woodland, hedgerows, other ponds *etc.*, for cover and feeding.	- Within arable fields but with arable and scrub nearby	- Within arable fields but with arable and scrub nearby
Accessibility/ barriers	Easily accessible margins; few/no barriers to movement.	+ Easily accessible	+ 60% easily accessible; remainder has steep stone walls
Pond size	Small to medium sized (50-250m^2)	+ c.50m^2	+ c.72m^2
Water depth	Mix of deep and shallow water.	+ 75% with 0.4-0.5m of water; 25% is deeper	+ 0.2m to 0.5m in centre
Water quality	Good water quality preferred.	- Poor: algae and *Lemna* present	- Poor: algae and *Lemna* present
Shade/cover	Mix of shaded and open areas: 30-40% shade is good.	- 25% shaded with hedge and scrub	- 10% shaded by bramble
Marginal vegetation	Emergent vegetation present: 25-50% cover is good.	- 75% invaded with grasses and mosses; no true marginal plants	- 20% invaded with grasses; no true marginal plants
Foods	Healthy invertebrate fauna/ amphibian spawn.	- Poor but with water beetles, snails and tadpoles evident	- Poor but with water beetles, pond skater, snails and tadpoles evident
Aquatic vegetation	Submerged vegetation present: 60% cover is good.	- None, only leaf litter	- None
Predators	Absence of fish and waterfowl	+ None likely, although heron prints noted	+ None likely
Overall evaluation (negligible, poor, moderate or good).		**Poor**	**Poor**

Amphibians recorded

1.4.8 No newt eggs were recorded from either of the ponds, and no newts or other amphibians were found under searched refugia.

1.4.9 Sweep netting results are provided in Table 2, with tadpoles in both ponds, and especially Pond A, as well as small numbers of both Palmate *Lissotriton helveticus* and Smooth *Triturus vulgaris* Newts.

1.4.10 There was evidence of breeding by Palmate Newts within Pond A.

Table 2: *Amphibian survey results*

Pond	Coverage	Date	Great crested newt	Palmate newt	Smooth newt	Other
A	50%	16/04/09	0	**6 + 1 imm**	**2**	**-**
		21/04/09	0	**3 + 1 imm**	**3**	**15 tadpoles**
		29/04/09	0	**4**	**1**	**30 tadpoles**
		07/05/09	0	**5**	0	**100+ tadpoles**
B	100%	16/04/09	0	**2**	0	-
		21/04/09	0	**4**	0	**2 tadpoles**
		29/04/09	0	**2**	0	**2 tadpoles**
		07/05/09	0	**3**	**1**	**5 tadpoles**

Imm = immature/juvenile newt

Plate 3: *Male smooth newt*

Plate 4: *Male palmate newt*

1.5 Conclusions

1.5.1 The ponds at this site are of poor quality and are unlikely to be favourable for Great Crested Newts. No great crested newts were recorded during the survey and there are no Great Crested Newt records within 500m from the Island Farm site (see Desk Study results).

1.5.2 The development is not likely to impact negatively on the favourable conservation status of Great Crested Newts, and there should be no constraints placed on the proposed development by this species.

1.6 Recommendations

1.6.1 Pond A lies in an area proposed as an Outdoor Amphitheatre and very close to an area of green landscaping. Consideration should be given to retaining and restoring this pond, and managing the pond with amphibian species in mind.

1.6.2 Pond B lies on the southern edge of the proposed Science Park, which will contain green landscaped areas, but also lies on or close to one of the main proposed access roads through the site. As with Pond A, consideration should be given to retaining and restoring Pond B, and managing the pond with amphibian species in mind.

1.6.3 If either of the ponds is to be destroyed during the development, replacement ponds should be created within the site layout, to allow the site to continue to support amphibian species.

1.6.4 New ponds should have a good variety of depths, and both open and weeded areas. Marginal and aquatic plants should be planted, using only native species, and no fish or waterfowl stocked. These general measures will greatly increase a pond's wildlife value for amphibians, dragonflies, damselflies and other aquatic species.

1.7 References

Langton, T.E.S., Beckett, C.L. & Foster, J.P. 2001. *Great Crested Newt Conservation Handbook*. Froglife, Halesworth