

60654

TACP



*FIVE MILE LANE IMPROVEMENTS –  
GREAT CRESTED NEWT SURVEY  
REPORT*

*PARSONS BRINKERHOFF*

*OCTOBER 2015*



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**CONTENTS**

	<b>Page</b>
<b>List of Abbreviations</b>	<b>iii</b>
<b>Executive Summary</b>	<b>v</b>
<b>1 Introduction</b>	<b>1</b>
<b>2 Great Crested newt legislation and ecology</b>	<b>1</b>
2.1 Legislation	1
2.2 Ecology	1
<b>3 Method</b>	<b>2</b>
3.1 Desk study	2
3.2 Field survey	2
<b>4 Results</b>	<b>3</b>
4.1 Desk study	3
4.2 Field survey	3
<b>5 Discussion</b>	<b>4</b>
<b>6 References</b>	<b>4</b>
<b>7 Figures</b>	<b>5</b>

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**LIST OF ABBREVIATIONS**

BAP	Biodiversity Action Plan
GCN	Great Crested Newt
NERC	Natural Environment and Rural Communities
NRW	Natural Resources Wales
SEWBRc	South East Wales Biodiversity Record Centre
VoG	Vale of Glamorgan



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**EXECUTIVE SUMMARY**

<p>This report presents the findings of Great Crested Newt (GCN) surveys undertaken as part of the Five Mile Lane Improvements (the Scheme).</p>	

There were no historical records of Great Crested Newts within the proposed alignment route but records of Great Crested Newts within a 2km radius of the Scheme were identified.

The survey was carried out along the banks of the ditches and within ponds. Great Crested Newts were searched for using several methods, including torch surveys, netting and egg searches.

Although some habitats with potential for Great Crested Newts were identified, the majority of the water bodies examined were unsuitable to support Great Crested Newts. The three water bodies identified within the Scheme boundary were assessed in relation to their condition and suitability to support Great Crested Newts during the first survey visit. Although there was minimal vegetation present within the watercourses during the survey, the water levels were suitable and access was sufficient in order to carry out the survey.

No Great Crested Newts were found within the study site. Smooth newts were present.

Due to the quality of the aquatic features surveyed, there are no apparent implications with regards to Great Crested Newts and these water bodies, and the development proposal at the site.



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## 1 INTRODUCTION

- 1.1.1 This report presents the findings of a Great Crested Newt survey undertaken as part of the A4226 Five Mile Lane Improvements, by TACP, on behalf of Parsons Brinkerhoff. The scheme is located in the Vale of Glamorgan, to the North West of Barry and North East of Cardiff Airport. The habitats present in the vicinity of the waterbodies include hedgerows, agricultural (arable) fields, semi-improved and marshy grassland.
- 1.1.2 During the scoping survey, undertaken in March and April 2014, it was noted that several water bodies such as ponds and agricultural ditches should be assessed for their potential to support Great Crested Newts, a protected species under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2010 (as amended). There are previous records of Great Crested Newts within a 2km radius of the scheme.
- 1.1.3 The main objective of the survey was to evaluate suitable water bodies and the adjacent terrestrial habitat within the development area, for the likelihood to support Great Crested Newt population (*Triturus cristatus*). There are a number of ponds and agricultural drainage ditches located within the study site. These were examined for evidence of Great Crested Newts during the surveys, and are described below in terms of their ability to support this species.
- 1.1.4 The report describes the methods used, surveys undertaken and the results, including an evaluation of the findings with recommendations.
- 1.1.5 For waterbody locations, refer to Figure 1.0.

## 2 GREAT CRESTED NEWT LEGISLATION AND ECOLOGY

### 2.1 Legislation

- 2.1.1 The Great Crested Newt receives legal protection through being included within Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). Therefore GCN are considered as a European Protected species and is subject to high level protection This legislation makes it an offence to kill, injure, take or sell GCN, and to damage, destroy or obstruct access to places of shelter or protection and to disturb GCN while they are occupying a structure or place of shelter.
- 2.1.2 The Great Crested Newt is also a UK Biodiversity Action Plan (BAP) Priority Species and is listed as a Species of Principal Importance for Conservation of Biological Diversity in Wales under Section 42 of Natural Environment and Rural Communities (NERC) Act 2006. This legislation has great importance upon construction and mitigation work to ensure that there are no adverse impacts towards GCN that could result in a breach of the legislation.

### 2.2 Ecology

- 2.2.1 The Great Crested Newt (*Triturus cristatus*) is the largest species of newt in Britain and inhabits ponds, ditches and other wetland areas from February to July. They use terrestrial habitats such as rough grassland and scrub, and hibernate during the winter in secure places such as log piles, tree roots and piles of stone. GCN require open small to medium size ponds with partial shading and aquatic vegetation as a substrate for egg laying. Great Crested Newts have suffered a major decline within

the last century due to lack of suitable ponds, habitat fragmentation and inappropriate land management, as well as the introduction of predatory fish species.

### **3 METHOD**

#### **3.1 Desk study**

3.1.1 A desktop study was carried out as part of the ecological appraisal work to determine the presence of any historical protected species records or designated statutory or non-statutory sites of nature conservation value within a 5km radius of the study site.

3.1.2 Local record centre (SEWBRc) was contacted to supply this information. In addition to contacting SEWBRc there was also consultation with the Vale of Glamorgan County Ecologist and NRW.

#### **3.2 Field survey**

3.2.1 Four surveys of the potentially suitable water bodies, located within the survey area were completed on 22 April, 30 April, 14 May and 12 June 2014 at an optimal time of year to undertake such a survey.

3.2.2 Surveys were undertaken during suitable weather conditions, with temperatures  $>5^{\circ}\text{C}$ . The four visits fell within the optimal survey times as stated within the *Great Crested Newt Mitigation Guidelines* (English Nature 2001) and GCN conservation handbook (Langton *et al.* 2001). Surveys were conducted with two surveyors, due to health and safety protocol, this included one licenced ecologist due to GCN being a European Protected Species.

3.2.3 The presence of Great Crested Newts was determined by undertaking several survey methods, including torch surveys, netting and egg searches. A full description of these can be found below. Searches were also undertaken for any habitat features likely to either support or discourage Great Crested Newts from using the site, including the structure and composition of vegetation and the substrate of the banks. The surveys were carried out along the ditch banks and within the ponds and agricultural ditches.

3.2.4 The following field survey methods were utilised during the four survey visits, according to the methodology described within the *Great Crested Newt Mitigation Guidelines* (English Nature 2001).

- **Torch Survey**

A high powered torch (1,000,000) candle power was used to survey the margins and accessible areas of the water bodies, once it was dark, in order to confirm presence of GCN and amphibians.

- **Netting**

Searches of the pond/ditch margins were undertaken with a suitable long handled dip/pond net in an attempt to catch and adult or juvenile GCN and other species of newts or larvae. This was undertaken at night when it is more likely newts would be present in open water, however it was undertaken when other methods had failed to detect Great Crested Newts due to the greater disturbance that this causes, in comparison with other survey methods.

- **Egg Searches**

Searches of suitable pond vegetation were conducted for newt eggs within surveyed water bodies during daylight hours in order to be able to identify presence of different species of newts. Newts predominantly prefer to lay their eggs on the following suitable vegetation: Sweet or flote grasses (*Glyceria* spp), Water mint (*Mentha aquatica*) or water forget-me-not (*Myosotis scorpioides*). Eggs can be found during the egg laying season which spans from mid-April to mid-June and once one egg is found, egg searches should be stopped in order to minimise disturbance and damage to the population.

3.2.5 All suitable areas of each water body were inspected for newts using the methods described above. Although there was minimal vegetation present within the watercourses during the survey, the water levels were suitable and access was sufficient in order to carry out the survey.

3.2.6 There were several constraints. Bottle trapping was not undertaken as a fourth survey method, due to the low water levels present within all three water bodies, during the survey visits, and the restricted access to areas of the of the aquatic features. Restricted access occurred due to dense vegetation coverage at Water Body 1, and agricultural waste located adjacent to Water Body 3. In order to conduct a thorough survey, three other survey methods were used.

## 4 RESULTS

### 4.1 Desk study

4.1.1 Several records of GCN presence were provided by SEWBRc. There were no historical signs of GCN within the proposed alignment route but there were five records of Great Crested Newts within 2km radius of the site. The most recent record was from 2009.

### 4.2 Field survey

4.2.1 Weather conditions prior to the survey were dry and suitable temperatures were recorded as follows:

22<sup>nd</sup> April 2014 – Overcast (8/8th's) with a light breeze, 13°C

30<sup>th</sup> April 2014 – Overcast (8/8th's), with a light breeze and occasional light rain, 12°C

14<sup>th</sup> May 2014 – Light cloud (1/8th), 10°C

12<sup>th</sup> June 2014 – Clear skies, no wind, 13°C

#### 4.2.1.1 Water body 1

A drain ditch, approximately 3m<sup>2</sup>, and approximately 6m in circumference, located to the north of the scheme, adjacent to Blackland Farm located beneath the hedgerow, along the field/road verge boundary. This was identified as a potential suitable habitat for GCN but the ditch was overgrown (100% shaded) with extremely dense vegetation, such as Bramble (*Rubus fruticosus*) and Hawthorn (*Crataegus monogyna*), at the time of the survey and has a small brick surround. To the east of the drain, an agricultural field was present where the use of pesticides and fertilisers was likely. Despite the fact that the ditch was overgrown, it was searched using a

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high powered torch for signs of GCN as no other survey method was possible. However, no evidence of Great Crested Newt presence was found.

#### 4.2.1.2 Water body 2

A pond that has an approximate area of 20m<sup>2</sup>, with a depth of 0.5m. The approximate circumference of the pond is 16m. It is located within an area of trees at the boundary of a field and is 90% shaded by overhanging trees on the eastern fringes. The pond is located in the south-western corner of the field predominantly dominated by pasture, with patches of bare ground. The area within which the pond is situated is adjacent to a separate field boundary, to the east of the existing A4226, whilst established Hawthorn was present to the western boundary along the hedgerow edge. No aquatic vegetation was present within the water body at the time of the survey, and the water quality was identified as poor. No signs of Great Crested Newts were observed in or around this pond.

#### 4.2.1.3 Water body 3

A drainage ditch located alongside an agricultural field. The ditch had an approx. 32m circumference, and was located to the eastern end of "Dyffryn Road", opposite the field in which Water body 1 was located. The drainage ditch was only partly accessible during surveys 3 and 4, due to presence of agricultural waste adjacent to the ditch. The ditch was only accessible to one side due to the presence of a hedgerow, along the field edge. There was 10% macrophyte cover in this ditch. The water quality within this ditch was classified as poor during the first survey visit. No signs of Great Crested Newts were observed in or around this ditch, but one smooth newt was seen during the torch survey.

## 5 **DISCUSSION**

- 5.1.1 The desktop study found several historical records of Great Crested Newt within 2km radius of the site.
- 5.1.2 Although some habitats with potential for Great Crested Newt were identified, the majority of the water bodies examined were unsuitable to support Great Crested Newts.
- 5.1.3 No signs of Great Crested Newts were found during the survey with only one smooth newt recorded. If Great Crested Newts are present in the area, they are likely to be at low population density.
- 5.1.4 No special measures are required during construction other than normal precautionary searches during vegetation clearance.

## 6 **REFERENCES**

English Nature (2001) Great Crested Newt Mitigation Guidelines (Version: August 2001.) ISBN 1 85716568 3.

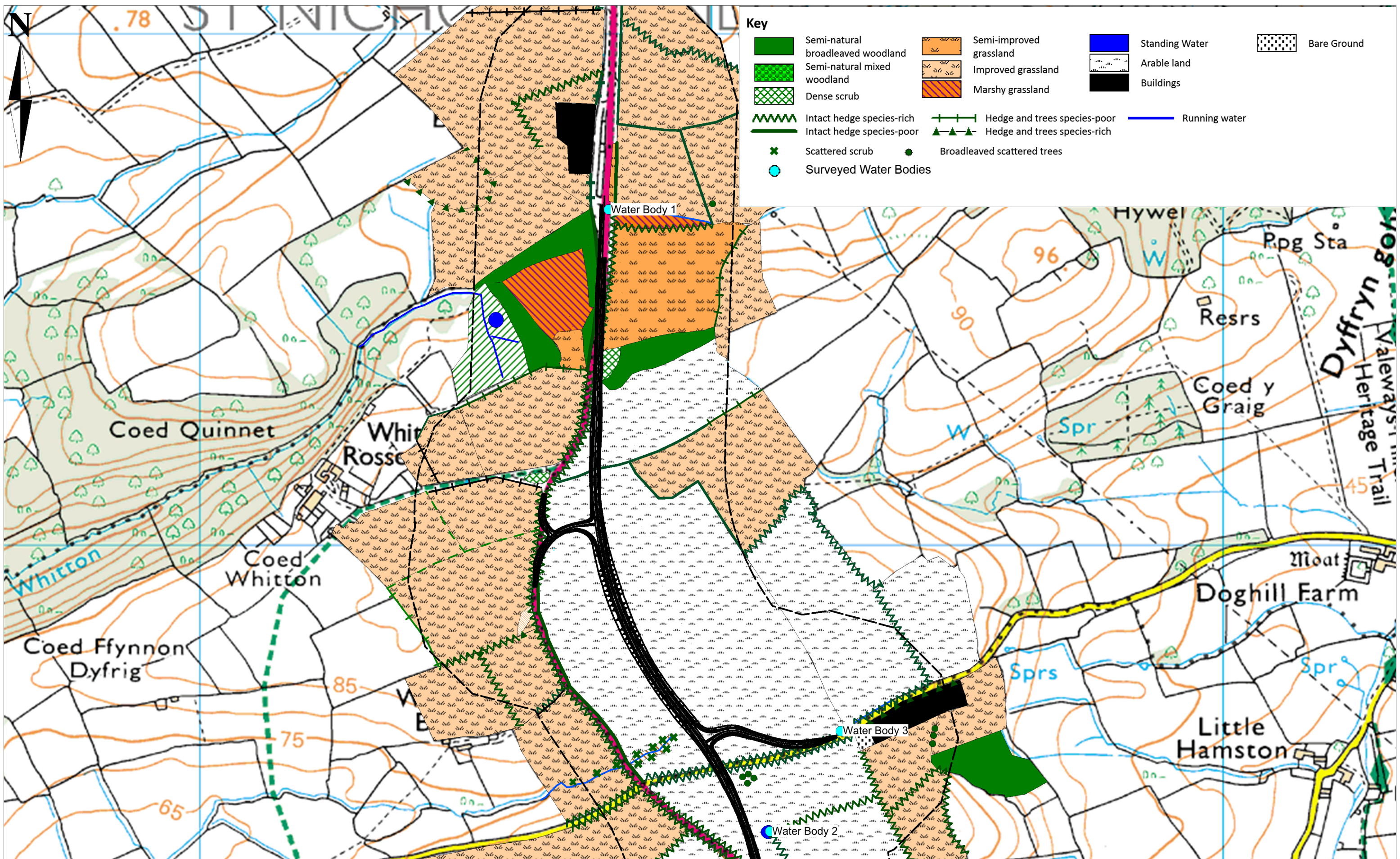
Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great Crested Newt Conservation Handbook, Froglife, Halesworth.

**7**

**FIGURES**

Figure 1.0

Habitats and the Water Bodies



• Environmental Consultants    • Landscape Architects    • Urban Designers  
 • Planners    • Landscape Managers    • Ecologists  
 • 10 Park Grove Cardiff CF10 3BN 029 2022 8966    TACP  
**Welsh Government**  
**5 Mile Lane**  
**Water Body Locations**  
 • Drawn JB    • Checked TR    • Scale nts    • Date May 2015    • Office Cardiff    • Dwg No Fig 001