



Persimmon Homes

Toddington Lane, North Littlehampton

**Great Crested Newt Presence / Likely
Absence Survey**

October 2014

The Pavilion, 1st Floor, Botleigh Grange Office Campus, Hedge End, Southampton, Hampshire, SO30 2AF





Document Control

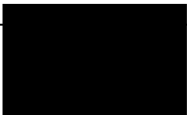
Project: Toddington Lane, North Littlehampton

Client: Persimmon Homes

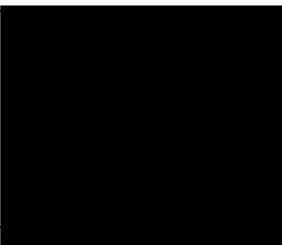
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Contents	Summary
Site Location	The site is located at the North Littlehampton Nursery complex, Littlehampton, West Sussex (TQ035039) and comprises four plant nursery complexes and associated land totalling approximately 75 hectares. The majority of the site is dominated by greenhouses and warehouses associated with the nursery complexes interspersed with amenity grassland, mature trees, scrub and areas of non-native trees and shrubs. An area of floodplain, dominated by unimproved grassland, is present within the north part of the site.
Previous Reports / Surveys	Extended Phase 1 habitat surveys were completed at the site in 2006 and 2008. An update extended Phase 1 habitat survey was completed by WYG in April 2014 which highlighted the need for great crested newt presence / likely absence surveys due to the presence of ponds on and within 500 metres of the site and the presence of potentially suitable terrestrial habitat for great crested newts on site.
WYG Survey	The surveys set out to confirm presence or likely absence of great crested newts at Toddington Lane, North Littlehampton, and surrounding waterbodies. Four survey visits were completed between May and June 2014, using netting, torching, egg searching and bottle trapping. These surveys were conducted in accordance with the recognised guidelines set down in the <i>Great Crested Newt Mitigation Guidelines</i> (English Nature, 2001).
Results	No great crested newts were found during the survey.
Constraints and Recommendations	Following the completion of the presence / likely absence survey, it is considered that great crested newts are unlikely to be present on the site. However, as a precautionary approach, the following points should be followed by all staff throughout the duration of works on site in the unlikely event of a great crested newt being found: ✦ Stop all work activities immediately. ✦ Do not attempt to handle the great crested newt. ✦ Contact the project ecologist ✦ Wait for further instruction from the ecologist before proceeding with any further works. Should a great crested newt be discovered it is possible that works will be delayed, but it is imperative these procedures are followed to avoid an offence occurring under the <i>Wildlife and Countryside Act 1981</i> (as amended) and / or the <i>Conservation of Habitats and Species Regulations 2010</i> (as amended).



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1.0 Introduction

1.1 Background

WYG was commissioned by Persimmon Homes in May 2014 to complete a great crested newt (*Triturus cristatus*) presence / likely absence survey at Toddington Lane, North Littlehampton (hereafter referred to as 'the site') with the aim of identifying potential ecological constraints to development. This follows recommendations made in the update extended Phase 1 habitat survey and HSI assessment completed at the site on 28th April 2014. A previous extended Phase 1 habitat survey was completed at the site in 2006 which was updated in 2008; however no great crested newt presence / likely absence surveys had been completed for the site in the past.

1.2 Site Location and Description

The site is located at the North Littlehampton Nursery complex, Littlehampton, West Sussex (TQ035039) and comprises four plant nursery complexes and associated land totalling approximately 75 hectares. The majority of the site is dominated by greenhouses and warehouses associated with the nursery complexes interspersed with amenity grassland, mature trees, scrub and areas of non-native trees and shrubs. An area of floodplain, dominated by unimproved grassland, is present within the north part of the site.

The site is bordered by hedgerows to the north, east and west and by Toddington Lane and the railway line to the south. Surrounding land to the north and east comprises further floodplain areas dominated by unimproved grassland, while surrounding land to the south and west of the site is dominated by residential development.

The grassland, scrub and waterbodies within the site boundary provide potentially suitable habitat for great crested newts.

1.3 Proposed Work

The proposed masterplan includes:

- ✧ A total of 1,260 dwellings;



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- » A local centre which will provide local convenience shopping together with other retail and food and drink uses and a health club;
- » Commercial uses comprising 10,000 sq m of employment floor space (including an Enterprise Centre) and a hotel;
- » Community facilities including a primary school, a community centre, a youth facility with associated all-weather multi-use games area, sports pitches, a fitness trail, allotments and land for an extension to the household waste recycling centre;
- » Highway improvements – most importantly, delivery of the southern section of the Lyminster Bypass from the site southwards to the A259 Worthing Road (which must bridge both Toddington Lane and the railway line) together with all other elements of the site access strategy including closure of the Toddington Lane level crossing to vehicular traffic;
- » Transport – a new bus route to serve the site, linking it with the Wick shopping centre, Littlehampton town centre and the Academy;
- » An extensive network of open space, providing for both formal sports and informal recreation, including a biodiversity area in the northern and eastern parts of the site.

1.4 Survey Objectives

The aims of the survey work and the subsequent report presented herein were to:

- » Determine the presence or likely absence of great crested newts at the site;
- » Determine the population size class of great crested newts if confirmed to be present;
- » Provide an appraisal of the implications created by the potential presence of great crested newts at the site;
- » Establish if any potential effects on great crested newts caused by the development are permissible;
- » Ensure that the required level of survey work is conducted to apply for a licence, should one be necessary; and

- ## 1.5 Legislation



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2.2.2 Habitat Suitability Index

The Habitat Suitability Index (HSI) provides an objective method for assessing the suitability of a pond as habitat for great crested newts (Oldham et al., 2000; Herpetological Conservation Trust, 2008). The system provides an index between 0 and 1, with 0 indicating unsuitable habitat and 1 optimal habitat.

Ten suitability indices are used to calculate the index score, each representing a factor considered to affect great crested newts. These factors are listed and briefly explained below:

1. *Location*: i.e. where the pond is located in the British Isles. It accommodates large scale habitat features, which affect the distribution of great crested newts within the British Isles, including climate, substrate and altitude. The British Isles is divided into "optimal", "marginal" and "unsuitable" i.e. a low probability of occurrence;
2. *Pond area*: i.e., the water surface area of a pond. Suitability peaks at approximately 800m²;
3. *Pond drying*: how often a particular pond dries out. Ponds which dry out more frequently are less suitable;
4. *Water quality*: an indication of water quality based on the invertebrate diversity present. High invertebrate diversity indicates high water quality and suitability;
5. *Shade*: an estimate of the total shaded perimeter of a pond. Shoreline shade below 60% is optimal;
6. *Fowl*: indication of impact by waterfowl. High waterfowl numbers are generally considered detrimental;
7. *Fish*: indication of fish abundance. High fish numbers are generally considered detrimental;
8. *Pond count*: based on the density of ponds occurring within 1 km of a particular pond. Suitability is positively correlated with pond density;
9. *Terrestrial habitat*: based on the availability of suitable habitat in the pond vicinity, e.g. rough grassland, scrub and woodland. For this assessment, the categories provided in the NARRS Survey Pack (Herpetological Conservation Trust, 2008) were used. This differs from the assessment criteria by Oldham et al. (2000), and is based on work by Lee Brady (unpublished).

The results are also compared against a categorical scale developed by Lee Brady (unpublished). Results from individual water bodies are categorised as follows:

- The habitat suitability index was applied to all ponds during April and May 2014.

The aim of the initial surveys was to determine the presence or likely absence of great crested newts at identified water bodies.

Water bodies were visited four times, in accordance with the *Great Crested Newt Mitigation Guidelines* (English Nature, 2001) requirements for presence / likely absence survey. Three survey methods were performed on each survey in accordance with guidelines given in the *Great Crested Newt Mitigation Guidelines* (English Nature, 2001) as described below.

2.3.1 Bottle Trapping

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removed the following morning between 06:00 and 10:00. All surveys were conducted when the predicted air temperature exceeded 5°C, when great crested newts are most active.

2.3.2 Torchlight Survey

This technique involves a visual search for individual newts inhabiting the perimeter of the particular water body after dark. Torches rated at 1,000,000 candle-power were shone into the water during a search and the perimeter of the water body is walked once; care is taken to count individuals once only. To maximise the reliability of this technique, all torch surveys were conducted in the evening while air temperature exceeded 5°C, when newts are generally considered being most active.

2.3.3 Egg Search

Great crested newt eggs were searched for among submerged, floating and other aquatic vegetation, where present within the waterbodies. When laying their eggs, this species folds leaves of aquatic plants around the egg, although dead leaves and a variety of artificial materials are also known to be used. This behaviour is exploited as evidence indicative of the presence of great crested newts in a particular water body; eggs of great crested and smooth newts (*Lissotriton vulgaris*) are easily discerned. However, egg numbers cannot be used to estimate population size due to predation and high mortality rates. Therefore, to limit disturbance, this method is ceased as soon as the first egg has been positively identified.

2.3.4 Netting

A long handled dip net was used to sample the area around the pond edge. The netting is conducted during the evening as better results are obtained at night when adult newts are more likely to be in open water. The perimeter of the pond was walked and 15 minutes of netting was undertaken per 50 metres of shoreline as recommended in the *Great Crested Newt Mitigation Guidelines* (English Nature, 2001). Netting is a good technique for augmenting other surveys and gauging presence/absence; however it is also useful for finding great crested newt larvae during the late summer.

2.4 Population Size Class Assessment

In accordance with guidance from Natural England, a further two targeted visits would be made where positive results were obtained during the presence / likely absence survey to gather information regarding the size class of the great crested newt population. Size classes are based on maximum count of great

- ⌘ 'small' is for maximum counts of up to 10 adult great crested newts;
- ⌘ 'medium' for maximum counts of between 11 and 100 adults;
- ⌘ 'large' for maximum counts of over 100 adults.

2.5 Limitations

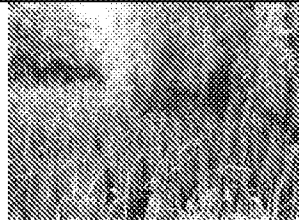
Three survey methods were used during each survey visit; however, the consistency of their use was variable due to the specific conditions of individual water bodies such as covering of dense vegetation limiting the effectiveness of the torch survey, or where water was too shallow for trapping with bottles to be possible. During all of the surveys Pond 5 was too shallow to place bottle traps so netting, egg searching and torchlight surveys were used instead. This waterbody dried before the end of the surveys so was only surveyed on one survey occasion.

Despite the limitations highlighted above, the survey effort applied is considered sufficient to meet the aims of the survey and this report, in accordance with the aforementioned guidelines.

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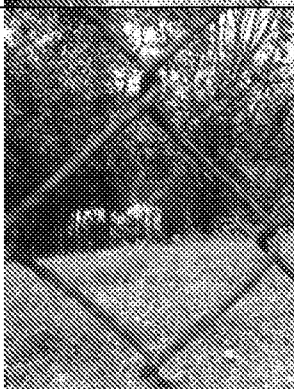


Table 1: Pond descriptions

Pond reference	OS grid reference	Approximate distance (m) and direction	Approximate size (m ²)	Description	Photos
P1	TQ036039	On site	450	Pond located within amenity grassland in nursery grounds. Shaded by weeping willow. Dense aquatic vegetation present.	
P2	TQ041040	On site	3890	Large lined reservoir, green in colour, no vegetation present.	
P3	TQ040038	On site	9380	Large lined pond with fishing platforms around the outside and an island in the middle.	
P4	TQ043039	On site	90	Shaded ditch within sheep grazed field. Very shallow pools of water present.	
P5	TQ044039	On site	125	Ditch within sheep field, quite a lot of algae present. Little water present.	

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P6	TQ036044	On site	50	Heavily vegetated ditch with little water present.	
P7	TQ037043	On site	65	Heavily shaded ditch, overgrown with bramble, very little water present.	
P8	TQ034042	On site	90	Ditch with dense aquatic vegetation present.	
P9	TQ034041	On site	3520	Lined reservoir with hole in lining so water slowly draining out. Surrounded by trees.	
P10	TQ034036	100 m south	190	Balancing pond situated within new housing development. Dense vegetation present within pond. Surveyed from the road side. Access not possible for emergence / return surveys.	



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P11	TQ037034	350 m south	150	Pond located within the grounds of the Body Shop, surrounded by amenity grassland and ornamental planting. Some aquatic vegetation present.	
P12	TQ037033	370 m south	40	Pond located within the grounds of the Body Shop, surrounded by amenity grassland and ornamental planting.	
P13	TQ040036	50 m south	4900	Large fishing lake with very little aquatic vegetation present. Access was not possible to survey.	
P14	TQ035846	15 m west	650	Pond within residential garden. Access was not possible to survey.	

The Black Ditch is a flowing channel which is present along the northern boundary of the site. Due to the flow within this waterbody it is not considered suitable to support great crested newts. Additional waterbodies are present beyond the Black Ditch but the flow of this waterbody is considered to be a barrier for this species.

A large lake is present to the south east of the site within Brookfield Park beyond the A259 dual carriageway. From a review of aerial maps and online information it is considered unlikely this waterbody would be suitable for great crested newts due to the presence of fish and waterfowl.

3.2.2 Habitat suitability index

Results for the Habitat Suitability Index revealed five waterbodies in the 'poor' category, three in the 'below average' category, two in the 'average' category and three in the 'good' category. Suitability indices for each pond surveyed are given in Table 2. Figure 1 presents the location of each waterbody in relation to the proposed development site.

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Table 2: Habitat Suitability Index Results

Pond Reference	P1	P2	P3	P4	P5	P6
SI1 Field location	1.00	1.00	1.00	1.00	1.00	1.00
SI2 Pond area	0.40	0.49	0.01	0.18	0.25	0.10
SI3 Pond drying	0.90	0.90	0.90	0.10	0.10	0.10
SI4 Water quality	0.67	0.33	0.33	0.67	0.67	0.67
SI5 Shade	0.80	1.00	1.00	0.40	1.00	1.00
SI6 Fowl	1.00	0.67	0.67	1.00	1.00	1.00
SI7 Fish	0.67	0.01	0.67	1.00	1.00	1.00
SI8 Ponds	1.00	1.00	1.00	1.00	1.00	1.00
SI9 Terrestrial habitat	0.33	0.67	0.67	0.67	0.67	0.67
SI10 Macrophytes	1.00	0.31	0.41	0.31	0.81	0.85
HSI SCORE :	0.73	0.43	0.45	0.50	0.62	0.57
Pond Suitability :	Good	Poor	Poor	Below average	Average	Below average

Pond Reference	P7	P8	P9	P10	P11	P12	P13
SI1 Field location	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SI2 Pond area	0.13	0.18	0.55	0.33	0.30	0.08	0.33
SI3 Pond drying	0.10	1.00	0.50	0.90	1.00	0.90	0.90
SI4 Water quality	0.67	1.00	0.33	0.67	0.67	0.67	0.67
SI5 Shade	0.24	0.30	1.00	1.00	1.00	1.00	1.00
SI6 Fowl	1.00	1.00	0.67	1.00	1.00	1.00	0.67
SI7 Fish	1.00	1.00	0.67	0.67	1.00	0.67	0.01
SI8 Ponds	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SI9 Terrestrial habitat	0.67	0.67	0.67	0.33	0.33	0.33	0.67
SI10 Macrophytes	0.36	0.85	0.36	1.00	0.80	0.36	0.32
HSI SCORE :	0.47	0.71	0.63	0.73	0.75	0.57	0.44
Pond Suitability :	Poor	Good	Average	Good	Good	Below average	Poor



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3.2.3 Presence / Likely Absence Survey Results

Weather Conditions

An overview of the weather conditions during surveys is given in Table 3. Bottle traps were set on the evening before sunset, whilst torchlight surveys were conducted after sunset. Bottle traps were then checked the following morning, when egg searches were also conducted.

Table 3: Weather conditions

Survey	Date	PM Air temp (°C)	Water temp (°C)	Rain (Yes / No)
1	08/05/2014	13.4	12.6	No
2	13/05/2014	12.0	11.6	No
3	15/05/2014	13.5	11.0	No
4	03/06/2014	13.6	18.6	No

Bottle Trapping and Torchlight Surveys

Table 4 shows the results from the bottle trapping and torchlight surveys obtained during the first four visits, which were aimed at determining the presence of great crested newts. Where a particular survey method was not used, this is indicated as 'not available' (N/A). The waterbodies surveyed are those which were considered to be of 'good' or 'average' suitability for great crested newts. Waterbodies which were 'below average' or 'poor' were not subject to presence / likely absence surveys.

Table 4: Bottle trap and torchlight survey results

Water Body	08/05/2014		13/05/2014		15/05/2014		03/06/2014	
	Bottle	Torch	Bottle	Torch	Bottle	Torch	Bottle	Torch
P1	0	0	0	0	0	0	0	0
P5	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A
P8	0	0	0	0	0	0	0	0

P9	N/A	0	N/A	0	N/A	0	N/A	0
P11	Access not possible		0	0	0	Tadpoles	0	0
P12	Access not possible		0	0	0	0	0	Common frogs

Egg Search

Egg searching was completed for the above waterbodies during the surveys where access was possible and no eggs were identified within these waterbodies.

Netting

Netting was completed for the above waterbodies surveyed where access was possible. Tadpoles were netted in P12 only.

English Nature (2001) *Great Crested Newt Mitigation Guidelines*, Peterborough.

Gent, T. & Gibson, S. (2003) *Herpetofauna Workers' Manual*. JNCC, Peterborough.

Oldham, R.S.; Keeble, J.; Swan, M.J.S. & Jeffcote M. (2000) *Evaluating the suitability of habitat for the great crested newt (Triturus cristatus)*, The Herpetological Journal 10 (4), 143-155.

WYG, (2014). Toddington Lane, North Littlehampton - Update Extended Phase 1 Habitat Survey



N

Pond

Wet ditch

Dry ditch

Site boundary

500 metre buffer

0125250500 Metres

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creative minds safe hands

WYG Planning & Environment

Toddington Lane, North Littlehampton

Waterbody locations

	Drawn by: Date:	Checked By: Date:	Approved By: Date:
	EH 07/10/14	VC 07/10/14	TC 13/10/14
Project No:	Office	Type	Drawing No.
A086068	45	94	Figure 1

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