Great Crested Newt Scoping Survey Report

Wingerworth, Chesterfield

February 2014

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(Natural England Licence Number: CLS00241

Contents

Notice to readers

This report has been prepared by Absolute Ecology LLP with all reasonable skill, care and diligence, within the terms of the contract with the client. The actions of the surveyor on site, and during the production of the report were undertaken in accordance with the Code of Professional Conduct for the Chartered Institute of Ecology and Environmental Management (www.cieem.org.uk).

1.0 Introduction

Background Information

1.1 Absolute Ecology was commissioned to undertake a Great Crested Newt scoping survey of a site known as land off Derby Road, Wingerworth Chesterfield, Derbyshire, and the surrounding area, in order to establish whether or not a full Great Crested newt presence/absence survey would be required.

1.2 The scope of this assessment has been determined in line with the proportional approach to ecological survey, assessment and subsequent recommendations for avoidance and mitigation of impacts, which is encouraged in the emerging 'BS 42020: Biodiversity – Code of practice for planning and development'. This report has been prepared with du consideration for various best-practice guidance and methodologies including those of the Chartered Institute of Ecology and Environmental Management (CIEEM (2012)1 and the emerging BS 42020, Natural England Great Crested Newt Mitigation guidance 2001.

1.3 The recently published NPPF replaces Planning Policy Statements (e.g. PPS9) and sets out current government policy on biodiversity and nature conservation. Planners are required to set criteria based policies against which proposals for development which may affect legally protected species will be judged. The NPPF promotes sustainable development by ensuring that developments take account of the role and value of biodiversity with emphasis on maintaining ecological networks at a landscape level

1.4 All water bodies on and within 500 m of the site were surveyed to produce current survey data in accordance with current survey guidelines (Oldham et al, 2000 & English Nature, 2001) to establish:

- which water bodies provide suitable conditions for Great Crested Newts
- whether further surveys are required
- impacts of the proposed development

Site Description

1.5 The site comprises a large arable field with species-poor gappy hedgerow and fencing boundaries. The residential estates of Wingerworth lie immediately to the north and the remaining landscape comprises mixed agricultural fields, woodland and ponds. Two ponds were located within 500m of the site, to the west.

2.0 Legislation

2.1 As Great Crested Newts are listed on Schedule 5 of The Wildlife and Countryside Act (1981), they receive protection under Section 9 of this Act. The Act has been amended several times, most recently by the Countryside and Rights of Way Act 2000 which added 'or recklessly' to Section 9(4)(a) and (b). Thus, it is an offence to:

- intentionally kill, injure or take a Great Crested Newt
- possess or control any live or dead specimen or anything derived from a Great Crested Newt
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a Great Crested Newt
- intentionally or recklessly disturb a Great Crested Newt while it is occupying a structure which it uses for that purpose
- transport for sale or exchange, or offer for sale or exchange a live or dead Great Crested Newt or any part of a Great Crested Newt.

2.2 They are also listed in Schedule 2 of the Conservation (Natural Habitats & c.) Regulations (known as the Habitats Regulations) and as such receive protection under Regulation 39 of these Regulations which make it an offence to:

- deliberately capture or kill a Great Crested Newt
- deliberately disturb a Great Crested Newt
- deliberately take or destroy the eggs of a Great Crested Newt
- damage or destroy a breeding site or resting place of a Great Crested Newt
- keep, transport, sell or exchange or offer for sale any Great Crested Newts or anything derived from this species.

2.3 This means that the habitat of this species is also protected.

2.4 The Conservation (Natural Habitats, &c.) (Amendment), 2010. The main changes brought about by this legislation include the removal of the 'incidental result defence'. In other words it is no longer a defence to show that the killing, capture or disturbance of a species covered by the Regulations or the destruction or damage of their breeding sites or resting places was the incidental and unavoidable result of a lawful activity.

2.5 The Great Crested Newt is a UK BAP Priority Species.

2.6 Smooth or Common Newts, Palmate Newts, Common Toad and Common Frog are listed under Schedule 5 of The Wildlife and Countryside Act (1981). However, only part of Section 9(5) applies to these species. As such it is an offence to transport for sale or exchange, or offer for sale or exchange a live or dead individual or any part of an individual of these species.

3.0 Methodology

Desk Study

3.1 A desk based study was undertaken to establish the number and location of water bodies within 500 m of the site using MAGIC and Multimap (Magic, 2010) (Promap, 2012).

3.2 A search was of the Derbyshire Wildlife Trust Biological Records was conducted to ascertain whether any records of Great Crested Newts exist for the area

Habitat Suitability Index Assessment

3.3 Two ponds were subject to the Habitat Suitability Index (HSI) Assessment. The assessments were undertaken on the 12th February 2014 by a Licensed Ecologist from Absolute Ecology, trained in the assessment of water bodies for their potential to support populations of Great Crested Newts.

3.4 The HSI is a measure of habitat quality using a numerical index between 0 and 1 derived from an assessment of variables known to influence the presence of Great Crested Newts (Oldham et al. 2000). It is used to assess whether a water body warrants detailed surveys to establish presence or absence of newts and aids in the assessment of impacts and the design of mitigation measures. Since January 2008 it has been a requirement to include the results of HSI assessments in European Protected Species (EPS) licence applications.

3.5 To calculate the HSI of the water body ecologists first record the following variables before applying the HSI calculation to these: pond size; surface area; water depth; water quality; % shade, % macrophyte cover; presence of fish and waterfowl; number of water bodies within 1 km of survey water body; quality of terrestrial habitat surrounding ponds; and type of marginal/aquatic vegetation (Oldham et al. 2000).

3.6 Once the HSI score is obtained it can be used to define water body suitability for Great Crested Newts in the following way (National Amphibian Recording Scheme, 2008):

Table 1: HSI Scores

<0.5	Poor
0.5 – 0.59	Below Average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

3.7 Water bodies scoring less than 0.5, those over 500 m away from the intended works or with significant barriers to dispersal between these and the intended works were deemed as not requiring further surveys.

4.0 Survey Results

Desk Study

4.1 A total of two water bodies were identified within 500 m of the site (see Map 1). Pond 2 is accessible from the site. Pond 1 is located on private property, and the owners could not be contacted. A HSI for Pond 1 was still possible however, as there was clear visibility from public areas.

4.2 DBRC provided records of amphibian species, including great crested newts, within 2 km of the site.

Constraints

4.3 Access was unattainable due to the residents not being available through assessment was able to take place from the boundary's

Habitat Suitability Index Assessment

4.4 Full details of the Habitat Suitability Index scores for each pond are provided in Appendix 2 but have been summarised below.

Table 2: HSI Assessment of Waterbodies

Pond	Description	HSI	Rating
1	Large pond, 422 meters from application site. Optimal habitat for newts around the pond and leading to application site.	0.79	Good
2	Small ornamental fountain, with sheer stone sides providing no access for amphibians. Set within a well-tended lawn.	0.43	Poor

4.5 Pond 1 received a HSI rating of 0.79 and should therefore be subject to a four-day presence/absence survey.

4.6 Pond 2 received a HSI rating of 0.43 and therefore no further effort is required.

4.7 The site contains terrestrial habitat that may be used by great crested newts if they are present in the area. Newts may use hedgerows, field margins and scrub for foraging and shelter during their terrestrial phase. The surrounding habitat provides excellent habitat for newts with extensive areas of woodland, some scrub, tree lines, and tall ruderal vegetation all present and providing a wildlife corridor.

5.0 Evaluation

5.1 Pond 1 was subject to an HSI assessment and received a HSI rating above 0.71 and so achieving a rating of good.

5.2 Although limited in size, some of the habitat on the development site is suitable for newts in the terrestrial phase of their life cycle. The hedgerows, field margins and scrub all provide foraging opportunities.

5.3 The Derby road acts as a dispersal barrier to the east of the site for amphibians.

5.4 Pond 1 is well connected to the site via woodland, hedgerow and tall ruderal vegetation. If Great Crested Newts or other amphibians are present in the pond then there is a good chance that they may be found on site.

6.0 Impacts and Recommendations

Impacts

6.1 The presence or likely absence of Great Crested Newts has not been established to date. The HSI assessment was undertaken to provide an indication of which water bodies within a 500 m radius were suitable to support Great Crested Newts and to rate the likelihood of them doing so. Consequently, insufficient information is available at present to determine the impacts of the proposed re-development of the site.

Further Surveys

6.2 It is recommended that Pond 1 is subject to Great Crested Newt presence/absence surveys for Great Crested Newts and where Great Crested Newts are found these should be extended to gain population data. These surveys must be timed between mid-March and mid-June with 50% of the survey timed between mid-April and mid-May where weather conditions allow. In the event Great Crested Newts are found a European Protected Species (EPS) licence may need to be obtained to permit the proposed activity.

Legal Compliance

6.3 European Protected Species (EPS) Licenses to permit activities that would otherwise constitute an offence under The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2010 (the 2010 Regulations) which updated The Conservation Regulations 1994 & 2007 for the purpose of development must be obtained from the relevant licensing authority.

6.4 At present, pending the outcome of further surveys, it is unclear whether a licence will be required. Further surveys are needed to establish this.

Habitat Creation, Restoration and/or Enhancement

6.5 Habitat creation, restoration and enhancement are dependent on the outcome of further surveys.

Timing of Works

6.6 Restrictions to the timing of works are dependent on the outcome of further surveys.

Exclusion and Pre-works Survey

6.7 Exclusion or pre-works surveys are dependent on the outcome of further surveys.

Care and Vigilance during Works

6.8 Any contractors on site should be advised to carry out all work with care and vigilance for this species. Should any Great Crested Newts be found during works, then works must cease and a licensed Ecologist must be consulted before works can continue.

Post-development Management and Monitoring

6.9 Post-development management or monitoring is dependent on the outcome of further surveys.

7.0 References

The Conservation (Natural Habitats, &c.) Regulations 1994. HMSO amended 2010

Countryside and Rights of Way Act (2000)

Multi-Agency Geographical Information for the Countryside (2010). MAGIC. [Online]. Available at: www.magic.gov.uk/ [accessed on 18th May 2010].

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National Amphibian and Reptile Recording Scheme (2008). *Great Crested Newt Habitat Suitability Index*. [Online]. Available at: http://www.narrs.org.uk/documents/nasdocuments/HSI_guidance.pdf [accessed on 18th May 2010]

National Biodiversity Network (2010). Joint Nature Conservation Committee. [Online]. Available at: www.searchnbn.net/index_homepage/index.jsp [accessed on 18th May 2010].

Natural England (2001) *Great Crested Newt Mitigation Guidelines*. Natural England

Oldham, R. S., Keeble, J., Swan, M. J. S. & Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal*, 10, p143-155.

Wildlife and Countryside Act (1981)

8.0 Maps

Map 1: Pond Location Plan with 500 m radius

Appendix 1 - Habitat Suitability Index (HSI) Data

HSI Calculator	Pond 1	Pond 2
SI1 - Location	1	1
SI2 - Pond area	1	0.05
SI3 - Pond drying	0.9	0.1
SI4 - Water quality	0.67	0.33
SI5 - Shade	1	1
SI6 - Fowl	0.67	0.67
SI7 - Fish	0.67	1
SI8 - Ponds	1	1
SI9 - Terr'l habitat	1	0.67
SI10 - Macrophytes	0.35	0.3
HSI Score	0.79	0.43

Appendix 2 - Habitat Suitability Index Score Sheet

Categorisation of HSI Scores

Lee Brady has developed a system for using HSI scores to define pond suitability for great crested newts on a categorical scale:

HSI Pond suitability
<0.5 = poor
0.5 – 0.59 = below average
0.6 – 0.69 = average
0.7 – 0.79 = good
> 0.8 = excellent

Summary of scoring system

SI_1 Location

Field score	SI
A (optimal)	1
B (marginal)	0.5
C (unsuitable)	0.01

SI_2 Pond area

Field score	SI
Measure pond surface area (m^2) and round to nearest 50 m^2	Read off graph.

SI_3 Pond drying

Field score	SI	Criteria
Never	0.9	Never dries
Rarely	1.0	Dries no more than two years in ten or only in drought
Sometimes	0.5	Dries between three years in ten to most years
Annually	0.1	Dries annually

SI_4 Water quality

Field score	SI	Criteria
Good	1.0	Abundant and diverse invertebrate community
Moderate	0.67	Moderate invertebrate diversity
Poor	0.33	Low invertebrate diversity, few submerged plants
Bad	0.01	Clearly polluted, only pollution-tolerant invertebrates, no submerged plants

SI_5 Shade

Field score	SI
Estimate percentage perimeter shaded to a least 1 m from shore	Read off graph.

SI_6 Fowl

Field score	SI	Criteria
Absent	1	No evidence of water fowl (although moorhen may be present)
Minor	0.67	Waterfowl present, but little sign of impacts
Major	0.01	Severe impact of waterfowl

SI_7 Fish

Category	SI	Criteria
Absent	1	No records of fish stocking and no fish revealed during survey
Possible	0.67	No evidence of fish, but local conditions suggest that they may be present.
Minor	0.33	Small numbers of crucian carp, goldfish or stickleback known to be present.
Major	0.01	Dense populations of fish known to be present.

SI_8 Ponds

Field score	SI
Count the number of ponds within 1 km of survey pond, not separated by major barriers, and divide by 3.14. This can be done from maps rather than in the field.	Read off graph.

SI_9 Terrestrial habitat

Field score	SI
Good	1
Moderate	0.67
Poor	0.33
None	0.01

SI_{10} Macrophytes

Field score	SI
Estimate the percentage of the pond surface area occupied by macrophyte cover (between May and the end of September)	Read off graph.