Great Crested Newt Survey

Site Location: Land at Westfields, Endon

Author: James Porter

Natural England Class 1 Licence: CLS00241

Date: 23/06/2014

Notice to Readers

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1. Introduction

1.1. Site Description

Absolute Ecology was commissioned to undertake a great crested newt survey of a site known as land at Westfields, Endon, Staffordshire, and the surrounding area, in order to obtain sufficient information to ascertain if great crested newts are present or absent.

This report is a follow-up from a habitat suitability report conducted in February 2014, which identified three ponds with potential for GCN within 500m of the proposed development. The pond HSI ratings were as follows: Pond 1 0.78 (Good), Pond 2 0.65 (Average) and Pond 3 0.66 (Average). Therefore, presence / absence surveys were recommended for all three ponds.

During the site survey no access constraints were identified and all surveys were done at the appropriate time of year according to the Natural England Mitigation Guidelines 2001. Pond 3 had dried and shrunk significantly, and no longer comprised an area of standing water. This pond was therefore removed from the survey.

1.2. Proposed Works

The site will be subjected to housing development.

1.3. Best Practice Guidance

The scope of this appraisal 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.

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1.4. Aims of the Survey

The aims of the Habitat Suitability Index and presence/absence surveys is to provide an ecological evaluation of the following species within the proposed application area.

Table 1. Aims of survey in relation to great crested newts

Great Crested Newts Habitat Suitability Index

• To establish which water bodies provide suitable conditions for great crested newts.
• Whether further surveys are required.
• Impacts of the proposed development.
Great Crested Newts Presence or Absence
• To establish presence/absence of great crested newts.
• If great crested newt presence is confirmed, to determine population size and distribution.
• Provide sufficient information for the evaluation of the perceived impacts of potential development and for the development of a detailed mitigation strategy to ensure legal compliance.

Assessment also considers the potential effects on valued ecological receptors (VERs) and zones of influence (ZoI) during pre and post development, both on site and off site. The term Zone of Influence is used to describe the geographic extent of the potential impacts of a proposed development. Should a likely significance of negative impacts be identified, further surveys and mitigation and enhancement measures will then be determined accordingly to prevent, offset or reduce the degree of impact that may occur should development commence.

Should great crested newts be present on site or within 500 m, then a European Protected Species (EPS) development licence issued by Natural England (NE) may be required prior to any works taking place. If required, further presence/absence surveys should be undertaken and a mitigation strategy be implemented with Natural England and the Local Planning Authority. Should no further surveying effort be considered, then the PEA report will include full justification and evaluation.

2. Methods

2.1. Summary of Survey Methods

Habitat Suitability Index Assessment

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

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.

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).

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

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 are deemed as not requiring further surveys.

Great Crested Newt Presence or Absence

Great crested newt surveys took place on 8th May, 15th May, 22nd May and 29th May 2014.

The surveys were undertaken by James Porter, a Natural England Class 1 Licensed Consultant Ecologist, Registration Number CLS00241.

The weather conditions encountered during the surveys were considered to be optimal for great crested newts; this is shown in *Appendix 2* along with the full survey results.

The survey visits were carried out during the optimum breeding season for great crested newts (all the surveys were undertaken between April and May) in good weather and suitable temperatures.

The following methodologies were used:

Bottle Trapping: tops were cut off empty 2 litre plastic bottles and the nozzle end inverted upon itself, thus creating a funnel-trap system. These were then pierced at a vertical angle of around 30 degrees and canes were placed through the holes, creating a standard bottle trap design as stipulated within the best practice guidelines for great crested newt surveys (English Nature, 2001). These were then placed within the pond at 2 m centres, where possible, ensuring that an air pocket formed in the trapping compartment. The traps were set as close to dusk as possible and checked in the morning; the traps were not left in situ for more than 17 hours.

Sweep Netting: surveyors used a dip net specifically designed for amphibians (soft mesh) to sweep through the water's edge, particularly through vegetation, to catch any newts that were sheltering during the day.

Egg Search: the pond was swept across from the perimeter to gather any great crested newt eggs within reach. Newt eggs were then searched for on submerged or floating aquatic vegetation growing within the pond on site. Any vegetation folded over was checked for newt eggs. If great crested newt eggs had been recorded the search would have ceased so as to not destroy or uncover further great crested newt eggs.

Torching: this entailed using high-powered (1,000,000 candle power) torches during the hours of nightfall to search the ponds. The pond was subject to 20 minutes of torching per 50 m of circumference, where access was possible.

2.2. Pre-Survey Data Search

Ecological data searches supplied by Staffordshire Ecological Record Centre (SERC) were acquired to establish whether any great crested newts have been recorded within a 2 km radius of the proposed development area. Furthermore, a desktop study of the area using online

resources was undertaken independently to corroborate the current overview of the site and its importance in the landscape. A number of electronic sources were consulted, including www.magic.gov.uk, www.naturalengland.org.uk and Google Earth.

2.3. Surveyor Information

Surveyor 1

James Porter – BSc(Hons), MSc, MCIEEM, Natural England Class 1 Licence: CLS00241. Matthew is an ecologist with three years' experience of environmental consultancy work. He holds a BSc(Hons) in Ecology and MSc in Behavioural Ecology. James is an experienced great crested newt surveyor with competency in great crested newt surveys, habitat suitability assessments and the production of reports providing advice on best practice, mitigation and compensation works relating to great crested newts as may be required. James holds Natural England and Countryside Council for Wales licences for Great Crested Newts.

2.4 Field Surveys

2.4.1. Habitat Survey

No previous ecological surveys of the site are known of.

3. Results

3.1. Pre-Survey Data Search

3.1.1. Designated Sites

The vicinity is designated as a Less Favoured Area. These are (mainly upland) areas where the natural characteristics (geology, altitude, climate, etc.) make it difficult for farmers to compete.

The vicinity is designated as part of the Catchment Sensitive Farming Delivery Initiative 2011-2014. This is a designation aimed at reducing diffuse water pollution from agriculture, in order to protect water bodies and the environment.

The proposed development, being residential, does not affect either the area's status as a 'Less Favoured Area', or the Catchment Sensitive Farming Delivery Initiative 2011-2014.

3.1.2. Protected Species

Great crested newts are currently given UK BAP (2007) Priority Species Status. Staffordshire Ecological Records show that great crested newts have been recorded within 2 km of the proposed application area.

UKBAP	Common name	Species	Recorded within the county
☑	Great crested newt	*Triturus cristatus*	☑

3.2. Field Surveys

3.2.1. Habitat Description

1.1 The site is a small building plot and lawn, situated within a residential area. The site comprises of three distinct areas; access road, lawn and scrub. These are divided by two well-tended conifer hedges.

Residential properties lie to the north, east and south. To the immediate west is a small area of deciduous woodland, containing a stream and three ponds. Endon Brook lies approx. 275m to the east, with fields beyond in that direction. Fields are also present to the northwest (220m approx.), south (200m approx.) and southwest (160m approx.). To the southwest also lies Stoney Wood, approx. 170m away from site.

3.2.2. Habitat Suitability Index

A total of three water bodies were identified within 500 m of the site (*see appendix 3*). All three are accessible from the site, located within the neighbouring woodland.

Full details of the Habitat Suitability Index scores for each pond have been summarised below.

Table 2: HSI Assessment

Pond	Description	HSI	Rating
1	Large pond, 50 meters from application site. Optimal habitat for newts around the pond and leading to application site.	0.78	Good
2	Mid-sized pond, 50 meters from application site. Optimal habitat for newts around the pond and leading to application site.	0.65	Average
3	Small pond, 50 meters from application site. Optimal habitat for newts around the pond and leading to application site.	0.66	Average

All three ponds received HSI ratings of more than 0.5 and should therefore be subject to a four-day presence/absence survey.

In terms of terrestrial habitat, the development site primarily consists of scrub and young trees. The scrub, rubble piles and exposed areas, although limited in size, provide optimal conditions for amphibian species in the terrestrial phase of their life cycle. The surrounding habitat provides excellent habitat for newts, with areas of woodland, scrub, tree lines and tall ruderal vegetation providing a wildlife corridor.

3.2.3. Presence or Absence Surveys

Staffordshire Ecological Records show that great crested newts occurred within a 2 km radius of the application area.

Pond 3 had dried and shrunk significantly, and no longer comprised an area of standing water. This pond was therefore removed from the survey. No great crested newts were present in the ponds surveyed. A summary of the results is shown in the table below. The full survey results can be found in *Appendix 2.*

Pond 1

METHOD	DATE						HIGHEST COUNT
	08/05	15/05	22/05	29/05	-	-	
Torching	0	0	0	0	-	-	**0**
Bottle Trap	0	0	0	0	-	-	**0**
Net Search	0	0	0	0	-	-	0

Pond 2

METHOD	DATE						HIGHEST COUNT
	08/05	15/05	22/05	29/05	-	-	
Torching	0	0	0	0	-	-	**0**
Bottle Trap	0	0	0	0	-	-	**0**
Net Search	0	0	0	0	-	-	0

Photograph 1. Pond 1.



Photograph 2. Pond 2



Photograph 2. Pond 3 (now no longer a pond)



4. Assessment

4.1. Constraints on Survey Information

The survey visits were carried out during the optimum breeding season for great crested newts (all the surveys were undertaken between April and May) in good weather and suitable temperatures; therefore, no constraints were identified.

4.2. Constraints on Equipment Used

No constraints on survey equipment were identified.

4.3. Potential Impacts of Development

4.3.1. Designated Sites

There is one designated statutory site within 1 km of the site, and one non-statutory site within 2 km of the site.

- The vicinity is designated as a Less Favoured Area

- The vicinity is designated as part of the Catchment Sensitive Farming Delivery Initiative 2011-2014.

Less Favoured Area is not an ecological designation. These are (mainly upland) areas where the natural characteristics (geology, altitude, climate, etc.) make it difficult for farmers to compete. This designation therefore has no bearing on this ecological appraisal.

The Catchment Sensitive Farming Delivery Initiative 2011-2014 is a designation aimed at reducing diffuse water pollution from agriculture, in order to protect water bodies and the environment. As the proposed development is not agricultural, it will have no impact on this designation.

4.3.2. Great Crested Newt Habitat

Although ponds 1 & 2 show suitability to support breeding great crested newts, the survey found no great crested newts to be present. Although, the desk study did identify the presence of great crested newts within 2km of the site, no breeding ponds have been found within 500m. Populations of GCN outside of this radius will be separated from the site by significant boundaries such as roads and buildings. Given the physical distance it is therefore considered that the likely impact of the development on great crested newts is low.

4.4. Legislation and Policy Guidance

PAS 2010	The published 'PAS 2010' 'Planning to halt the loss of biodiversity' is the government's new policy aimed at all authorities and developers involved in the planning process in the UK to halt biodiversity decline by 2010 and deliver net biodiversity gains as part of the green infrastructure provisions.
National Planning Policy Framework, Section 11:	The recently published framework in 2012 replaces the previous Planning Policy Statement 9. Section 11: Conserving and enhancing the natural environment, reaffirms the government's commitment to maintaining green belt protection and preventing urban sprawl, retains the protection of designated sites and preserves wildlife, aims to improve the quality of the natural environment and halt declines in species and habitats, protects and enhances biodiversity and promotes wildlife corridors.
Article 10 of the EC Habitats Directive:	The published Article requires government to develop features such as 'stepping stones' in the landscape, such as clusters of ponds, tracts of rough grassland or scrubland and vegetated railway line embankments.
Wildlife and Countryside Act 1981:	Great crested newts are fully protected under the Wildlife and Countryside Act 1981, the European Conservation (Natural Habitats etc.) Regulations 1994, and the Countryside and Rights of Way Act 2000. This legislation makes it illegal to possess or control any live or dead specimens, to damage, destroy or obstruct access to any structure or place used for shelter, protection or breeding, and to intentionally disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.
Conservation of Habitats and Species Regulations (2010)	The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994, in respect of England and Wales. It is an offence to possess, sell or offer, or transport for sale any great crested newt or any part derived from such a species. These Regulations also remove 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. Natural England can grant European Protected Species (EPS) licences in respect of development to permit activities that would otherwise be unlawful.
Natural Environment and Rural Communities Act (2006)	Under Section 40 of the Natural Environment and Rural Communities Act (2006), public bodies, including Local and Regional Planning Authorities, have a duty to 'have regard' to the conservation of biodiversity in England when carrying out their normal functions, which includes consideration of planning applications. In compliance with Section 41 of the Act, the Secretary of State has published a list of species considered to be of principal importance for conserving biodiversity in England. This is known as The England Biodiversity List, all of which make up the UK BAP Priority Species. Regional Planning Bodies and Local Planning Authorities will use it to identify the species that should be afforded priority to maintain, restore and enhance species and habitats.

Please note: If great crested newts are present at the site, the purpose of this report will only summarize the potential requirements for a great crested newt mitigation package or project. A separate mitigation report or project will include the necessary compensation measures to maintain the conservation status of a European Protected Species.

5. Recommendations and Mitigation

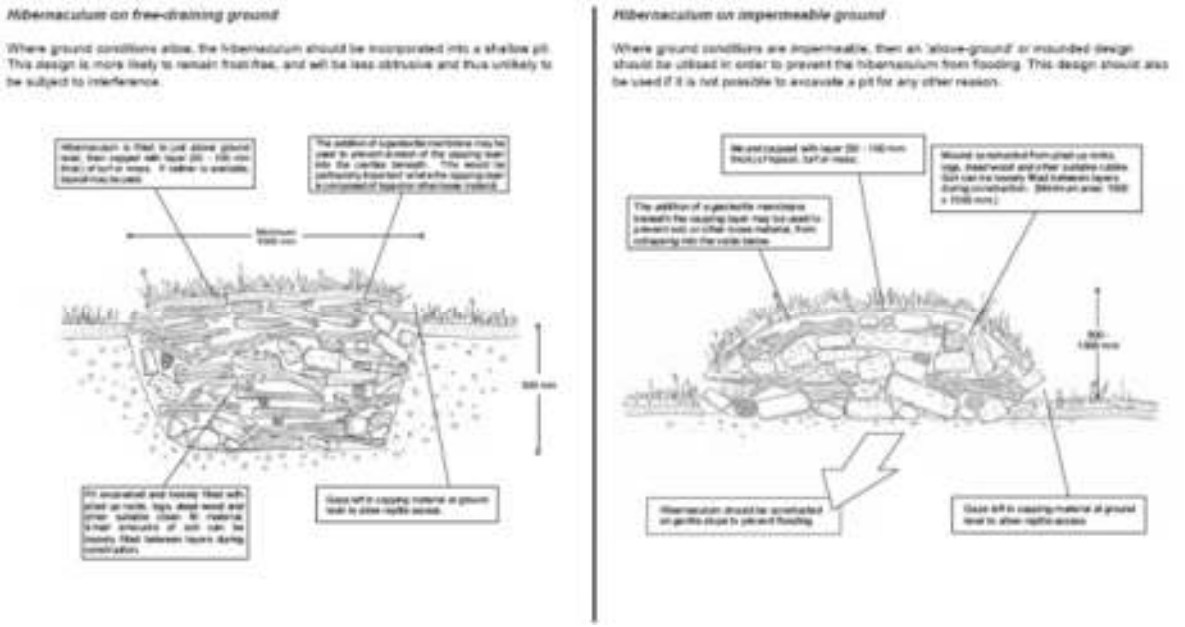
5.1. Further Surveys

No further surveys are necessary in this instance. In line with Natural England guidelines, further surveys would only be required if the proposed works were to be delayed for four years or more. If this is the case, a repeat presence/absence survey is recommended before works commence, to check whether survey evidence and the status of the ponds remains the same as that described within this report.

5.2. Mitigation Measures

5.2.1. Proposed Mitigation Enhancement

No great crested newts were identified during the surveys, although suitable habitat opportunities could be created within the site, in particular the area which has the potential to support Great Crested Newts, as enhancement may attract Great Crested Newts to the site. Great crested newt enhancement could include hibernacula log piles: this would provide more cover and a place of rest for great crested newts and other species of wildlife. If material is piled loosely along with rubble and dead wood, the turves arising from the turf strip could be used to provide refugia/hibernacula habitat for reptiles (see diagrams below).



5.2.2. Care and Vigilance during Works

Great crested newts could still be found on site. Any contractors on site should therefore 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.

5.3. Mitigation Licences

As no great crested newts were identified during the four survey visits it is considered that all effort has been made to ascertain if great crested newts are present or absent. Therefore, the development will not require a Mitigation Licence.

6. Summary

None of the ponds within the surrounding landscape will be affected by the development works.

Although, the desk study did identify the presence of great crested newts within 2km of the site, no breeding ponds have been found within 500m. Populations of GCN outside of this radius will be separated from the site by significant boundaries such as roads and buildings. Given the physical distance it is highly unlikely that Great crested newts would reside within the application site. No great crested newts were found during the survey undertaken on ponds 1 & 2. It is considered that the development can proceed without the requirement of Natural England Development Licence.

7. References

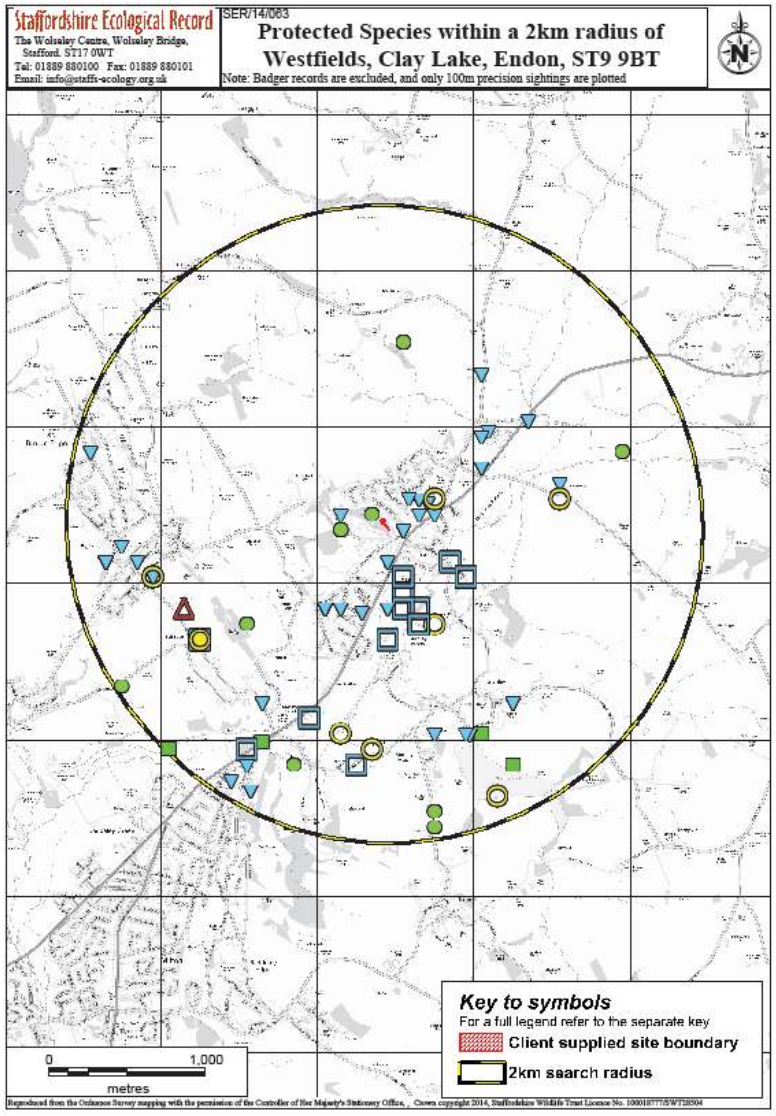
The Conservation (Natural Habitats, &c.) Regulations 1994, 2007 & 2010. HMSO.

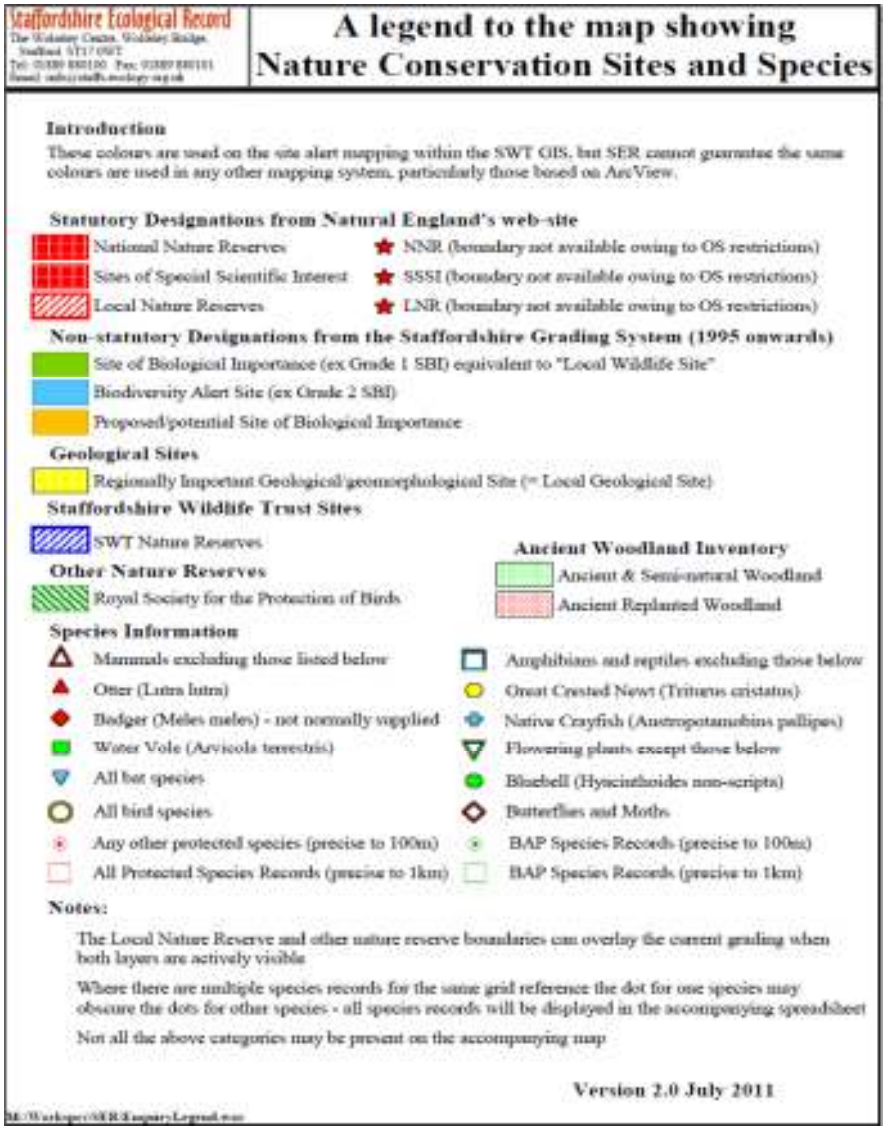
Countryside and Rights of Way Act (2000).

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

Wildlife and Countryside Act (1981).

Appendix 1 Pre-Survey Data Search


Staffordshire Ecological Record
The Wolseley Centre, Wolseley Bridge,
Stafford. ST17 0WT
Tel: 01889 880100 Fax: 01889 880101
Email: info@staffs-ecology.org.uk
SER/14/063
Protected Species within a 2km radius of
Westfields, Clay Lake, Endon, ST9 9BT
Note: Badger records are excluded, and only 100m precision sightings are plotted
N
Key to symbols
For a full legend refer to the separate key
Client supplied site boundary
2km ssarch radius
0
1,000
metres


Staffordshire Ecological Record
A legend to the map showing
Nature Conservation Sites and Species
Introduction
These colours are used on the site alert mapping within the SWT GIS, but SER cannot guarantee the same colours are used in any other mapping system, particularly those based on ArcView.
Statutory Designations from Natural England's web-site
National Nature Reserves
NNR (boundary not available owing to OS restrictions)
Sites of Special Scientific Interest
SSSI (boundary not available owing to OS restrictions)
Local Nature Reserves
LNR (boundary not available owing to OS restrictions)
Non-statutory Designations from the Staffordshire Grading System (1995 onwards)
Site of Biological Importance (ex Grade 1 SBI) equivalent to "Local Wildlife Site"
Biodiversity Alert Site (ex Grade 2 SBI)
Proposed/potential Site of Biological Importance
Geological Sites
Regionally Important Geological/geomorphological Site (= Local Geological Site)
Staffordshire Wildlife Trust Sites
SWT Nature Reserves
Other Nature Reserves
Royal Society for the Protection of Birds
Ancient Woodland Inventory
Ancient & Semi-natural Woodland
Ancient Replanted Woodland
Species Information
Mammals excluding those listed below
Otter (Lutra lutra)
Badger (Meles meles) - not normally supplied
Water Vole (Arvicola terrestris)
All bat species
All bird species
Any other protected species (precise to 100m)
All Protected Species Records (precise to 1km)
Amphibians and reptiles excluding those below
Great Crested Newt (Triturus cristatus)
Native Crayfish (Austropotamobius pallipes)
Flowering plants except those below
Bluebell (Hyacinthoides non-scripta)
Butterflies and Moths
BAP Species Records (precise to 100m)
BAP Species Records (precise to 1km)
Notes:
The Local Nature Reserve and other nature reserve boundaries can overlay the current grading when both layers are actively visible
Where there are multiple species records for the same grid reference the dot for one species may obscure the dots for other species - all species records will be displayed in the accompanying spreadsheet
Not all the above categories may be present on the accompanying map
Version 2.0 July 2011

Appendix 2 Great Crested Newt Result Table

Great Crested Newt Survey Results

Survey visit: 1	Date: 08/05/2014	Min air temp: 9 °C	Weather conditions: Dry
Pond ref: 1		Turbidity: 50%	No. of Traps: 30

	Method										
	Torch			Bottle trap			Net			Egg search	Larvae
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	1	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	Common Frog										

Survey visit: 2	Date: 15/05/2014	Min air temp: 9 °C	Weather conditions: Dry
Pond ref: 1		Turbidity: 50%	No. of Traps: 30

	Method										
	Torch			Bottle trap			Net			Egg search	Larvae
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	3	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	Common Frog										

Great Crested Newt Survey

Survey visit: 3	**Date: 22/05/2014**	**Min air temp: 10 °C**	**Weather conditions: Dry**
Pond ref: 1		**Turbidity: 50%**	**No. of Traps: 30**

	Method										
	Torch			**Bottle trap**			**Net**			**Egg search**	**Larvae**
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	2	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	-										

Survey visit: 4	**Date: 29/05/2014**	**Min air temp: 10 °C**	**Weather conditions: Dry**
Pond ref: 1		**Turbidity: 11.4**	**No. of Traps: 30**

	Method										
	Torch			**Bottle trap**			**Net**			**Egg search**	**Larvae**
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	Common Frog										

Great Crested Newt Survey

Survey visit: 1	**Date: 08/05/2014**	**Min air temp: 9 °C**	**Weather conditions: Dry**
Pond ref: 2		**Turbidity: 50%**	**No. of Traps: 30**

	Method										
	Torch			**Bottle trap**			**Net**			**Egg search**	**Larvae**
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	1	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	Common Frog										

Survey visit: 2	**Date: 15/05/2014**	**Min air temp: 9 °C**	**Weather conditions: Dry**
Pond ref: 2		**Turbidity: 50%**	**No. of Traps: 30**

	Method										
	Torch			**Bottle trap**			**Net**			**Egg search**	**Larvae**
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	3	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	Common Frog										

Great Crested Newt Survey

Survey visit: 3	Date: 22/05/2014	Min air temp: 10 °C	Weather conditions: Dry
Pond ref: 2		Turbidity: 50%	No. of Traps: 30

	Method										
	Torch			Bottle trap			Net			Egg search	Larvae
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	2	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	-										

Survey visit: 4	Date: 29/05/2014	Min air temp: 10 °C	Weather conditions: Dry
Pond ref: 1		Turbidity: 11.4	No. of Traps: 30

	Method										
	Torch			Bottle trap			Net			Egg search	Larvae
Species	Male	Female*	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0		0	0	0	0	0	0	0	0	0
Other amphibian species	Common Frog										

Appendix 3 Pond Location

Map 1: Pond Location Plan

