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Great Crested Newt Survey Report

Client:	**Mick, Terry, & Gill Parker**
Site:	**Land at Scocles Road, Minster, Isle of Sheppey, Kent**
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Author:	**Amy Wright Msc Bsc CEcol MCIEEM**
Checked by:	**James Madden Msc Bsc Grad CIEEM**

Native Ecology, Unit 93, Waterham Business Park, Highstreet Road, Waterham, Faversham, Kent. ME13 9EJ

t: 01227 656757 **e**: info@native-ecology.co.uk **w**: www.native-ecology.co.uk

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S.2 The development proposals include the construction of 72no. residential dwellings with associated access and open space.

S.3 A presence / likely absence survey was undertaken for two waterbodies in May 2016.

S.4 No great crested newts were found to be present

S.5 No further survey work or mitigation for great crested newt is recommended.

2. INTRODUCTION

2.1 This report details the results of a great crested newt survey associated with development proposals at Scocles Road, Minster, Isle of Sheppey, Kent (site centred TQ 954 723).

COMMISSION

2.2 Native Ecology were commissioned by Mick, Terry and Gill Parker on 10th May 2016 to undertake a great crested newt presence / likely absence survey for accessible waterbodies within 250m of the development site.

SURROUNDING HABITATS

2.3 The survey area lies to the south-east of Minster within the Isle of Sheppey. The B2008, Minster Road lies approximately 0.5km north of the site, the A2500, Lower Road 0.7km south, and the nearest area of coastline approximately 1.3km north.

2.4 The north of the site is bounded by residential gardens, the east by grazed fields. Elm Lane forms the southern site boundary, beyond which is arable farmland. The western boundary is formed by Scocles Road and beyond this lies residential housing, some of which is recent development, and grazed fields.

2.5 The development site location is shown in Figure 1, Section 3.

DEVELOPMENT SITE

2.6 The development site extends to approximately 2.6ha and includes horse grazed paddocks, associated stables and hardstanding as well as patches of semi-improved grassland, scrub and tall ruderal vegetation. Shrubs and scrub line the eastern, southern and western boundaries of the site.

2.7 A single pond lies within the northern portion of the site and a shallow, flowing ditch runs along the eastern boundary.

Terrestrial habitat

2.8 The majority of terrestrial habitat within the site is suboptimal for great crested newts, comprising horse grazed paddocks, buildings and hard standing.

2.9 The areas of semi-improved grassland, scrub and tall ruderal vegetation within the site may provide terrestrial foraging habitat for great crested newts.

2.10 There were narrow and shaded flowing ditches along the site boundaries.

Waterbodies

2.11 A single pond (Waterbody 1) lies within the development site.

2.12 According to the OS map, Magic map and aerial images one pond (WB 3) lies within 250m of the site that is not separated by barriers to dispersal. This pond lies approximately 90m to the south-east of the site boundary.

2.13 There are also ditches in close proximity to the site that may provide aquatic habitat for great crested newts, the closest of which lies approximately 20m to the south (WB 2).

2.14 The location of waterbodies in relation to the development boundary are shown in Figure 1, Section 3.

PROPOSED DEVELOPMENT

2.15 The development proposals include the construction of 72no. residential dwellings with associated access and open space.

PURPOSE OF REPORT

2.16 The objectives of the report are to:

- Determine the presence or likely absence of great crested newt within the development site.
- Provide a population assessment if great crested newt are found to be present in waterbodies within 250m of the development site.
- Make recommendations for mitigation measures where appropriate in order to avoid, minimise or compensate for any impacts caused by development proposals on great crested newt.

3. WATERBODY LOCATION PLAN

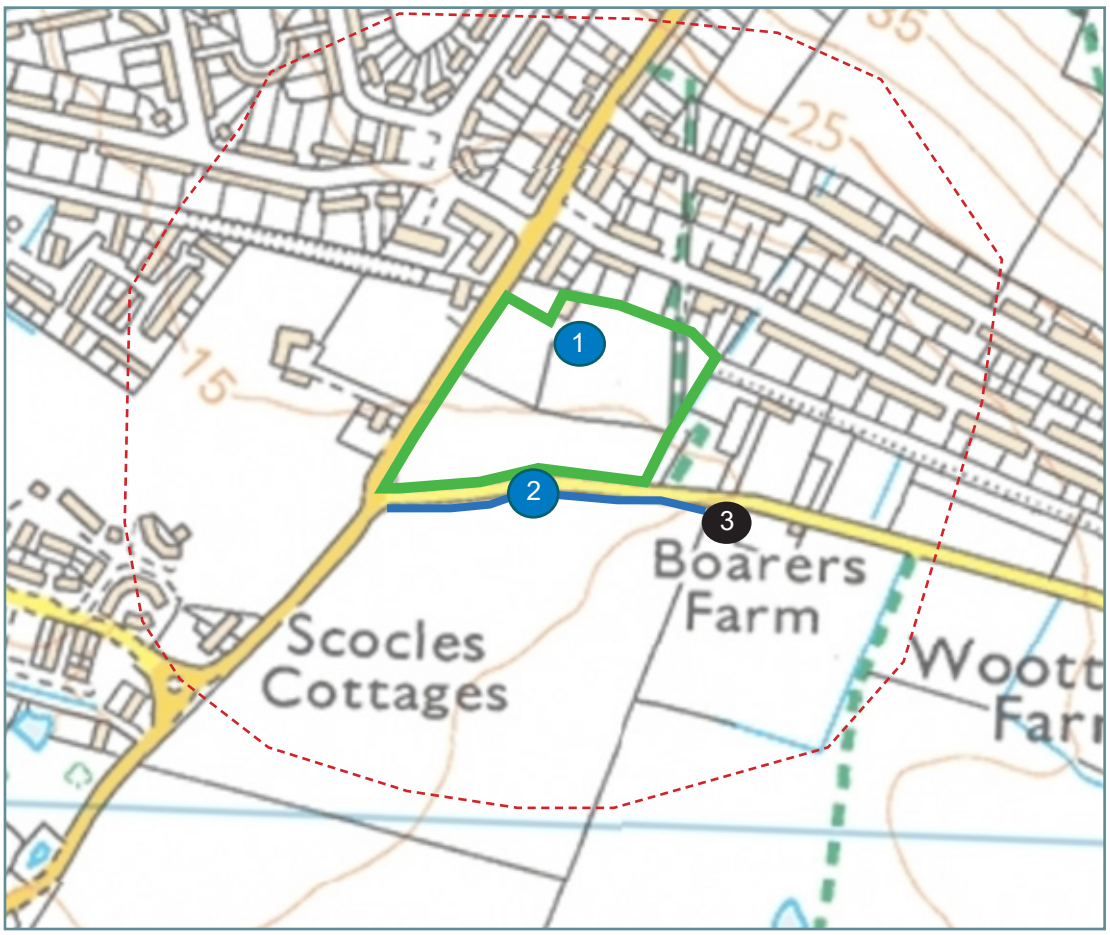

Figure 1: Location of known waterbodies without dispersal barriers within 250m.

Existing waterbody - surveyed

Access not gained

250m site boundary buffer

Site boundary

4. METHODOLOGY

DESK STUDY

4.1 Ordnance survey maps, the Multi Agency Geographic Information for the Countryside (MAGIC) website and aerial images was used to identify waterbodies within 250m of the development site boundary.

FIELD SURVEY

Habitat Suitability Index (HSI) assessment

4.2 A Habitat Suitability Index (HSI) assessment for great crested newt was undertaken by Amy Wright of Native Ecology on 12th May 2016 for waterbodies within 250m of the development site boundary.

4.3 The methods outlined by Oldham *et al.* (2000) and in the Amphibian and Reptile Groups (ARG) UK Advice Note 5 (2010) were used in the assessment.

4.4 The HSI assessment was used to determine the suitability of Waterbody 1 and 3 for great crested newt and provide an assessment of the likelihood of great crested newt being present.

Presence / likely absence survey

4.5 The survey methods of bottle trapping, torching and egg search were used.

Bottle trapping

4.6 Bottle traps constructed using empty plastic two-litre bottles were set at approximately 2 metre intervals around the water's edge.

4.7 Each trap was held firmly in place using a wooden cane that was pushed through the bottle. The trap was sunk so that an air bubble was left at the top of the bottle of sufficient size to minimise the risk of asphyxiation to animals.

4.8 Since newt activity decreases at low water temperatures bottle trapping below 5 degrees centigrade was not undertaken as it cannot be relied upon to detect newts.

Torching

4.9 The waterbody was torched after sunset by a surveyor walking slowly around the shoreline checking for newts using a 1,000,000 candle power torch.

4.10 Torching was undertaken in suitable weather conditions with no rain, water surface undisturbed by wind and when the air temperature was 5 degrees centigrade or above.

Egg Searching

4.11 A search was undertaken within suitable aquatic and overhanging vegetation for the presence of great crested newt eggs. Any folded leaves were carefully opened and the eggs identified.

4.12 The jelly capsule of a great crested newt is oval and approximately 4.5mm long, whereas that of the palmate or smooth newt is more rounded and approximately 3mm long. The eggs of great crested newt are paler in colour than the smaller newt species being a pale yellow/white as opposed to off-white shades of grey and brown.

Survey details

4.13 Table 1 provides details of the dates and weather conditions for each survey. Surveys were led by Amy Wright BSc MSc CEcol MCIEEM Class 1 Licence holder (2016-21988-CLS-CLS).

4.14 A maximum of ten bottle traps were set around the pond edge at 2m intervals.

4.15 Surveyors familiarised themselves with the latest information on chytrid fungus before conducting the survey visits and appropriate precautions were undertaken as per ARG UK Advice Note 4 (ARG, 2008).

Table 1: Survey details

Survey number	Survey visit date	Surveyors	Weather conditions
1	12/05/16 (pm)	Amy Wright Victoria Bolding	16.7°C, 30% cloud cover, still, no precipitation, ground dry.
	13/05/16 (am)	Amy Wright Jane Wright	17.0°C, 40% cloud cover, still, no precipitation, ground damp.
2	14/05/16 (pm)	Amy Wright Victoria Bolding	11.3°C, 20% cloud cover, still, no precipitation, ground dry.
	15/05/16 (am)	Amy Wright Victoria Bolding	8.4°C, 50% cloud cover, still, no precipitation, ground damp.
3	16/05/16 (pm)	Amy Wright Victoria Evans	16.1°C, 40% cloud cover, light breeze, no precipitation, ground dry.
	17/05/16 (am)	Amy Wright Victoria Bolding	8.1°C, 30% cloud cover, light breeze, no precipitation, ground dry.

Survey number	Survey visit date	Surveyors	Weather conditions
4	29/05/16 (pm)	Amy Wright Victoria Bolding	14.3°C, 40% cloud cover, light breeze, no precipitation, ground damp.
	30/05/16 (am)	Amy Wright	11.1°C, 100% cloud cover, light breeze, no precipitation, ground damp.

Survey limitations

4.16 The vegetation cover within Waterbody 1 was relatively high and therefore torch surveys were of limited efficiency. However, bottle trapping and egg searching were also employed with no limitations, and therefore the overall survey efficiency was good.

4.17 Waterbody 2 comprises a ditch adjacent to the roadside. Therefore, it was deemed inappropriate to set bottle traps as the risk of interference was high. Netting could not be used as a survey method as the water level within the ditch was too shallow.

4.18 The overhanging vegetation surrounding Waterbody 3 obscured some of the shoreline. However, since this ditch was dry or very shallow through most of its length throughout the survey, this limitation did not impact significantly on the overall survey. There were pools of water that could be viewed and at these points turbidity levels were low and torching was efficient.

5. RESULTS

DESK STUDY

5.1 There are three waterbodies present within 250 m of the development site.

HABITAT SUITABILITY INDEX (HSI) ASSESSMENT

Table 2: Summary of HSI results

Waterbody no.	Distance from site	HSI Score	Suitability for GCN
1	0m	0.69	Average
2	20m	0.64	Average
3	90m	Unknown	Poor - large ornamental fish viewed from roadside

5.3 The HSI scores indicate that WB 1 and WB 3 are currently 'average' in terms of suitability for great crested newt. Although WB 2 was not viewed in its entirety, the presence of large ornamental fish reduces its suitability to poor.

SURVEY RESULTS

5.4 A summary of results for the presence / likely absence survey is provided in Table 3 below. Appendix 2 shows full survey results.

Table 3: Summary of presence/absence survey results

WB no.	Peak count (no. of adults / bottle trap)	Eggs present
WB 1	0	No
WB 2	0	No

Other amphibian results

5.5 Smooth newt (*Triturus vulgaris*) were recorded within WB 1 (peak count 29) and WB 2 (peak count 3).

5.6 A single common frog (*Rana temporaria*) was recorded within WB 1.

6. EVALUATION AND RECOMMENDATIONS

GREAT CRESTED NEWTS

6.1 No great crested newts were recorded during the survey and therefore no further survey work or mitigation for this species is required.

COMMON AMPHIBIANS

6.2 If possible, the integration of Waterbody 1 within the final design is recommended. The retention and enhancement of this pond would benefit the biodiversity of the site, in particular common amphibian and aquatic invertebrate species.

6.3 If Waterbody 1 is to be removed as part of the proposals, it is recommended that this is drained down and infilled between October and January in order to avoid the amphibian breeding season.

6.4 It is recommended that if smooth newts or common frogs are found sheltering within the development area during works, they are carefully relocated to a location outside of the development site that offers immediate shelter, such as boundary hedgerows and scrub.

7. REFERENCES

- ARG UK (2010) Advice note 5: Great crested newt habitat suitability index. Amphibian and Reptile Groups of the United Kingdom.
- ARG (2008). ARG-UK Advice Note 4. Amphibian disease precautions: a guide for UK fieldworkers. Version 1.
- English Nature (now Natural England) (2001). Great crested newt mitigation guidelines.
- Oldham, R.S., Keeble, J., Swan, M.J.S and Jeffcote, M (2000). Evaluating the suitability of habitat for the great crested newt (Triturus cristatus). Herpetological Journal, 10, 143-155.
- Natural England (2015). Template for Method Statement to support application for licence under Regulation 53(2)e of The Conservation of Habitats and Species Regulations 2010 (as amended) in respect of great crested newts (*Triturus cristatus*).

8. APPENDIX 1: SUMMARY OF PLANNING POLICY AND LEGISLATION

LEGAL PROTECTION OF GREAT CRESTED NEWT

8.1 Species protected under the Habitats and Species Directive 992/43/EC) enacted through the Conservation of Habitats and Species Regulations 2010 (SI 2010/490) are also known as European Protected Species. In the context of this report, this relates to great crested newts.

8.2 European Protected Species relate to those listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended) and are afforded the highest level of protection. These species are also protected under the Wildlife and Countryside Act 1981. Taken together this level of protection makes it an offence to:

- deliberately capture, injure or kill any wild animal of a European protected species,
- deliberately disturb wild animals of any such species
- deliberately take or destroy the eggs of such an animal
- damage or destroy a breeding site or resting place of such an animal

8.3 Disturbance of animals includes in particular any disturbance which is likely:

- to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or
- in the case of animals of a hibernating or migratory species, impair their ability to hibernate or migrate
- to affect significantly the local distribution or abundance of the species to which they belong

8.4 The legislation requires that any derogation be dealt with by licencing through an appropriate licencing body (Natural England in England). In determining whether a licence can be granted the licencing body must apply the requirements of Regulation 53, and in particular, the three tests:

1. Regulation 53(2)(e) states: a licence can be granted for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment".
2. Regulation 53(9)(a) states: the appropriate authority shall not grant a licence unless they are satisfied "that there is no satisfactory alternative".
3. Regulation 53(9)(b) states: the appropriate authority shall not grant a licence unless they are satisfied "that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range."

NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT 2006

8.5 Following consultation with Natural England, the Secretary of State identified species and habitats considered to be of principal importance for the conservation of biological diversity in England. These species and habitats are listed under Section 41 of the Act . The list is to be kept under review and revisions are made as necessary as part of the progress reports on the Biodiversity Strategy for England.

8.6 Following the Biological Diversity in Japan, 2012, a new initiative in England, 'Biodiversity 2020', replaced the former UK Biodiversity Action Plan Species aiming to reinforce the protection of Section 41 habitats and species.

THE NATIONAL PLANNING POLICY FRAMEWORK

8.7 The National Planning Policy Framework was published on 27 March 2012 and sets out the Government's planning policies for England and how these are expected to be applied. Within this document, Chapter 11 is titled Conserving and enhancing the natural environment.

8.8 Of particular relevance within this chapter are the following statements:

'That the planning system should contribute to and enhance the natural and local environment by:

- *minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'*

'Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.'

'Proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest.'

'Opportunities to incorporate biodiversity in and around developments should be encouraged.'

9. APPPENDIX 2: HSI ASSESSMENT

Table 4: Detailed HSI results

Suitability indices	Waterbody 1	
		Score
Geographic location	South East England (Zone A)	1
Surface area (m^2)	70	0.1
Permanence	Sometimes dries	0.1
Water quality	Good	1
Shade	0%	1
Waterfowl	Minor	0.67
Fish	Absent	1
Pond count	5	0.79
Terrestrial habitat	Moderate	1
Macrophyte cover (%)	70	1

Suitability indices	Waterbody 2	
		Score
Geographic location	South East England (Zone A)	1
Surface area (m^2)	140	0.28
Permanence	Dries annually	0.1
Water quality	Good	1
Shade	50%	1
Waterfowl	Absent	1
Fish	Absent	1
Pond count	5	0.79
Terrestrial habitat	Moderate	0.67
Macrophyte cover (%)	50	0.81

10. APPPENDIX 3: DETAILED SURVEY RESULTS

Table 5: Waterbody 1 - Detailed presence /absence survey results

WB no. 1		Survey conditions				Bottle-trap			Torching			Eggs found? (Yes/No)	Larvae found? (Yes/No)
Survey no.	Date	Water Temp °C	Veg cover (0-5)	Turbidity (0-5)	No. traps	Male	Female	Imm.	Male	Female	Imm.		
1	12.05.2016	12.1	4	3	10	N/a			0	0	0	No	No
	13.05.2016	12				0	0	0	N/a			No	No
2	14.05.2016	13.4	4	2	10	N/a			0	0	0	No	No
	15.05.2016	10.5				0	0	0	N/a			No	No
3	16.05.2016	13.6	4	2	10	N/a			0	0	0	No	No
	17.05.2016	12.1				0	0	0	N/a			No	No
4	29.05.2016	14.2	4	2	8	N/a			0	0	0	No	No
	30.05.2016	12.5				0	0	0	N/a			No	No
				Peak adult count		0							

Table 6: Waterbody 2 - Detailed presence /absence survey results

WB no. 2		Survey conditions				Torching			Eggs found? (Yes/No)	Larvae found? (Yes/No)
Survey no.	Date	Water Temp °C	Veg cover (0-5)	Turbidity (0-5)	No. traps	Male	Female	Imm.		
1	12.05.2016	11.1	4	2	0	0	0	0	No	No
	13.05.2016	9.5				N/a			No	No
2	14.05.2016	12.5	4	2	0	0	0	0	No	No
	15.05.2016	10.6				N/a			No	No
3	16.05.2016	14.6	4	2	0	0	0	0	No	No
	17.05.2016	12.3				N/a			No	No
4	29.05.2016	14.4	4	2	0	0	0	0	No	No
	30.05.2016	12.5				N/a			No	No
				Peak adult count		0				