

Sensible Ecological Survey Solutions

The Ecology Consultancy that Makes Sense

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Sensible Ecological Survey Solutions Limited is a registered company

'WOODLANDS, LODGE LANE, CRONTON, WIDNES'

PROTECTED SPECIES SURVEY STATEMENT

Amphibian 'Habitat Suitability Index' (HSI) Assessment of Ponds in proximity to site.

Introduction

Sensible Ecology Survey Solutions was instructed to complete 'Habitat Suitability Index' (HSI) Assessments for three ponds (Figure A) located in proximity to a site referred to as:-

"Woodlands, Lodge Lane., Cronton, Widnes, WA8 4QB "

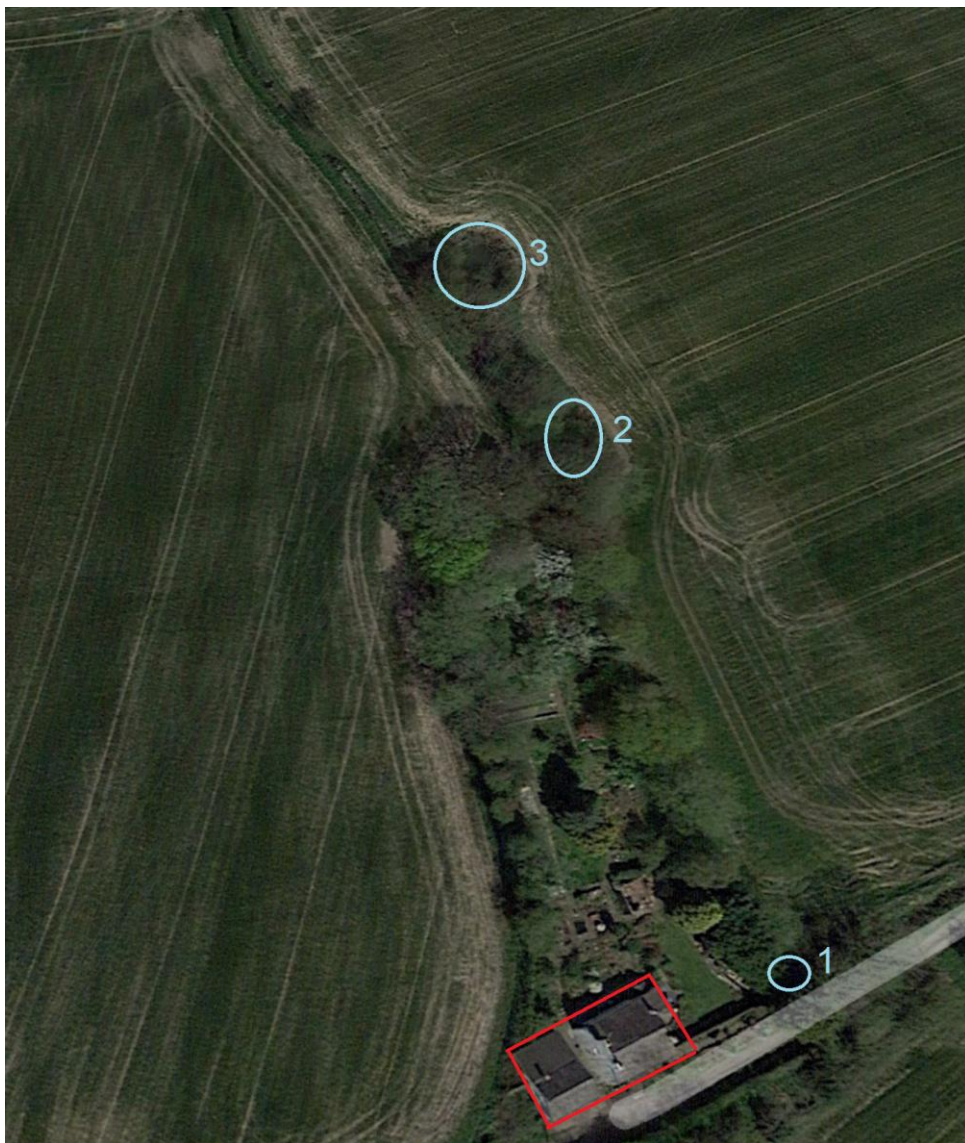
Plans are being advanced to demolish current buildings on site (SESS 2021a; Figure A) to allow for redevelopment of the site for new residential usage. The new residential structures will largely occupy the footprint of the existing buildings.

The proposed works could be harmful to legally protected Great crested newt (GCN) (*Triturus cristatus*) if individuals are current present within the site.

This report presents the findings of HSI assessments which score each pond under ten criteria. Through use of the algorithm a pond can be categorised as having either: Poor, Below Average, Average, Good or Excellent potential to support GCN.

Ponds assessed to fall within the 'Average' or better categories to support GCN which are located within a 250m radius of a proposed development site normally trigger a requirement to complete full GCN surveys to confirm presence or absence of the species, and if present, to determine population size. Ponds falling within the 'below average' category do not generally require follow up surveys but may still trigger a requirement for amphibian 'Reasonable Avoidance Measures' to reduce the potential risk to GCN from low to negligible levels.

Figure A: Aerial view of site. The location of the subject ponds is identified by blue ring. The ponds are numbered for ease of reference in the report. The location of the building to be demolished is indicated by red boxing.



Photograph 1: View of Pond 1. *(All pond photographs in this report were taken in December 2021).*

Note: The shallow transient nature of this very small pond, heavy shading, and poor water quality.



Photograph 2: View of Pond 2.

Note: The heavy shading and poor water quality.



Photograph 3: View of Pond 3.

Note: The largest and less shaded of the three ponds, however water quality is still poor.



Assessment Procedures

The assessment was completed by Dr David Bell, Director, Sensible Ecological Survey Solutions Ltd, Warrington. A professional ecologist with forty years experience, Dr Bell is a full and long standing member of the Chartered Institute of Ecology & Environmental Management (MCIEEM).

Dr Bell is a Natural England licensed GCN surveyor (Licence Registration No. 2015-18607-CLS-CLS), and has been completing GCN surveys and assessment for over twenty years.

The ponds were subject to ecological survey and assessment on 3rd December 2021. Weather conditions were ideal for survey. The surveys were complete outside the optimal macrophytes (emergent & floating plants) coverage assessment period (March to end of September); appropriate correction allowance was made in the HSI assessment.

Reference was made to Google Earth aerial images to determine density of ponds in a 1km radius around the target ponds.

General Description of Surveyed Ponds

POND 1

Pond 1 (Photograph 1) is a very small ephemeral pond arising from a tree fall blockage of a field boundary drainage ditch. The pond is located approximately 10m to the east of the proposed development site (Figure A).

The pond is heavily shaded, maximum 1500mm deep when holding water, subject to heavy leaf fall build up, water quality is poor and macrophytes are absent due to heavy shading and frequent drying out.

POND 2

Pond 2 (Photograph 2) is a small permanent pond fed by a field boundary ditch and located approximately 90m to the north of the proposed development area. The pond is heavily shaded, subject to heavy leaf fall and water quality is poor. Macrophyte coverage is assessed as low. Waterfowl presence was assessed as likely 'low' and fish presence as likely 'possible'.

The pond is surrounded by intensively managed arable farmland to three sides, and other than the feeder ditch corridor flowing from south to north and the overall potential opportunities for amphibian colonisation and dispersal are poor.

POND 3

Pond 3 (Photograph 3) is a small permanent pond fed by the same drainage ditch that feeds Pond 2 located to its south. The pond is located approximately 125m to the north of the proposed development site.

Shading is moderate, water quality is poor, and estimated macrophyte coverage is low. As with the neighbouring Pond 2, Pond 3 is surrounded by arable farmland, with the feeder ditch running away from the pond to the north and south as the only viable dispersal corridor for amphibians.

Results

Please refer to the attached ARC Advise No. No 5: Great Crested Newt Habitat Suitability Index (2010) for information on the ten assessment criteria.

POND 1

Category	Score
S1 Geographic Location	1.0
S2 Pond area - Area=9.5m ²	0.05
S3 Permanence – dries annually	0.1
S4 Water - Quality - Poor	0.33
S5 Shade - 90%	0.3
S6 Waterfowl - none	1.0
S7 fish - absent	1.0
S8 Pond Count – 3.18 (density)	0.9
S9 Habitats – poor	0.33
S10 Macrophytes - 10%	0.4

$$S1 \times S2 \times S3 \times S4 \times S5 \times S6 \times S7 \times S8 \times S9 \times S10 = 0.0000588$$

HSI score $0.0000588^{1/10} = 0.37$ which put the pond in the '**Poor**' category (Poor Category range <0.5), indicating a 3% predicted presence for GCN (based on amalgamated national survey data).

POND 2

Category	Score
S1 Geographic Location	1.0
S2 Pond area - Area=54m ²	0.1
S3 Permanence - never dries	0.9
S4 Water - Quality - Poor	0.33
S5 Shade - 80%	0.6
S6 Waterfowl - minor	0.67
S7 fish - possible	0.67
S8 Pond Count – 3.18 (density)	0.9
S9 Habitats – poor	0.33
S10 Macrophytes - 10%	0.4

$$S1 \times S2 \times S3 \times S4 \times S5 \times S6 \times S7 \times S8 \times S9 \times S10 = 0.00095$$

HSI score $0.00095^{1/10} = 0.498$ which put the pond in the '**Poor**' category (Average Category range <0.5), indicating a 3% predicted presence for GCN (based on amalgamated national survey data).

POND 3

Category	Score
S1 Geographic Location	1.0
S2 Pond area - Area=141m ²	0.2
S3 Permanence - never dries	0.9
S4 Water - Quality - Poor	0.33
S5 Shade - 60%	1.0
S6 Waterfowl - minor	0.67
S7 fish - possible	0.67
S8 Pond Count – 3.18 (density)	0.9
S9 Habitats – poor	0.33
S10 Macrophytes - 10%	0.4

$$S1 \times S2 \times S3 \times S4 \times S5 \times S6 \times S7 \times S8 \times S9 \times S10 = 0.00316$$

HSI score $0.00316^{1/10} = 0.562$ which put the pond in the '**Below Average**' category (Average Category range 0.5-0.59), indicating a 20% predicted presence for GCN (based on amalgamated national survey data).

Conclusions & Recommendations

Ponds found to have an HSI assessment of 'Average' or better and located in proximity to a proposed development will normally lead to a requirement for full GCN surveys to confirm presence or absence, and if present to determine breeding population size.

In this case two of the three ponds subject to HSI Assessment were classed as having 'Poor' potential to support GCN populations, and the third pond (Pond 3) was assessed as having 'Below Average' potential. If a small GCN population were still present in Pond 3, then there remains a risk that individuals could disperse into the garden area to the north of the proposed development footprint. In its current unmanaged state the garden offers terrestrial habitats of potential value to GCN. The overall risk to GCN from the proposed development is therefore assessed as ranging from 'Negligible' to 'Low' and appropriate 'Reasonable Avoidance Measures (or RAMs)' are recommended to confidently reduce the risk to negligible.

The key considerations of risk in this case are the current nature and shape of the site, the relative location of Pond 2 to the north, and the linking drainage ditch running just beyond the eastern site boundary. The most appropriate RAMs would therefore be expected to comprise of the erection of pre commencement of works 'Temporary Amphibian Fencing' ('TAF') to the northern and eastern boundaries of the redevelopment footprint, scrub clearance and grass mowing to render the redevelopment footprint habitats hostile to GCN, and finally hand searches and removal of features such as log piles located within the development footprint as these could currently serve as amphibian refuges. Recovered amphibians of all species to be released into a suitable receptor area to the northern end of the large garden area.

The timing of the completion of the RAMs will inevitably be linked to the eventual agreed works scheduling, however the details of the RAMs may need to be altered to reflect understanding of seasonal behaviour and movements of amphibians.

The completion of RAM activities should be completed under the supervision of a licensed amphibian ecologist or suitably qualified person.

References

SESS (2021a) Woodlands, Lodge Lane, Cronton, Widnes. Protected Species Survey Report. Sensible Ecological Survey Solutions, Warrington. July 2021

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