



APPENDIX 11.9
EAST HILL, HEMPSTEAD, MEDWAY

**Amphibian Assemblage
Survey Report**

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1.0 INTRODUCTION

1.1 Corylus Ecology has undertaken an amphibian assessment including great crested newt *Triturus cristatus* at East Hill, Hempstead, Medway, hereinafter referred to as the 'Site'. This report summarises the results of this assessment.

Summary

1.2 There are no waterbodies within the Site and a single pond located within a 2km radius of the Site. This waterbody is located 60m to the south of Field 3: it is a large lake within Capstone Country Park. The location this pond is shown in Figure 1.

2.0 METHODOLOGY

2.1 Desk Study

2.1.1 Full desk study records for amphibians were sought from the Kent and Medway Biological Records Centre (KMBRC), encompassing a 3km search area. In addition, information regarding European Protected Species Mitigation licences for great crested newts were searched for.

2.2 Great Crested Newt – Habitat Suitability Index (HSI) Survey Methodology

2.2.1 There are no waterbodies within the Site and a single pond located within a 500m radius of the Site (see Figure 1). This waterbody is located 60m to the south of Field 3: it is a large lake within Capstone Country Park with a small, connected pond to the east. This waterbody is a fishing lake with carp, tench, bream, rudd, roach, perch and eels.

Great Crested Newt Habitat Suitability Index (HSI)

2.2.2 Pond P1 was assessed in terms of its suitability for great crested newts GCN using the Habitat Suitability Index (HSI) Assessment on 9th March 2018. The HSI assessments were undertaken by Alexander Watkinson (licence number 2016-19692-CLS-CLS) of Corylus Ecology. This followed guidance published by the Amphibian and Reptile Groups (ARG) in 2010. The HSI is a simple field and desk based assessment of waterbodies for their potential to support great crested newts. It involves examining ten “Factors” which are subsequently calculated and given a Suitability Index (SI). These ten factors are thought to affect the distribution of great crested newts and include:

- Location (in Britain);
- Pond area;
- Desiccation rate (years out of ten that pond dries);
- Water quality (subjective assessment);
- Percentage of pond shaded;
- Number of waterfowl;
- Fish population (subjective assessment);
- Number of ponds within 1km;
- Terrestrial habitat quality; and
- Percentage macrophyte cover.

2.2.3 Once each factor and the accompanying suitability indices are ascertained, a simple geometric mean is calculated. The resulting figure, the HSI, is a value between 0.00 and 1 and is used against a categorical scale to establish the potential of encountering great crested newts, as follows:

- HSI value of <0.5 = Poor suitability
- HSI value of 0.5 – 0.59 = Below average suitability

-
- HSI value of 0.6 – 0.69 = Average suitability
 - HSI value of 0.7 – 0.79 = Good suitability
 - HSI value of >0.8 = Excellent suitability

2.2.4 In general, waterbodies/ponds with high HSI scores are more likely to support great crested newts than those with low scores. However, the system is not sufficiently precise to allow the conclusion that any particular pond with a high score will support newts, or that any pond with a low score will not do so. Therefore, professional judgement, consideration of the surrounding habitat and location of the pond are all factors in deciding the suitability of the pond to support GCN.

3.0 RESULTS

3.1 Desk Study

- 3.1.1 There are six species of amphibian recorded within a 3km radius of the Site boundary. These include great crested newt, smooth newt *Lissotriton vulgaris*, palmate newt *L. helveticus*, common frog *Rana temporaria*, common toad *Bufo bufo* and marsh frog *Pelophylax ridibundus*.
- 3.1.2 No records of great crested newt have been found within 1km of the Site. Desk Study records for amphibians show that they have a limited presence within 3km of the Site with only 14 records of GCN found. The nearest record of great crested newt is from 1.8km to the north-east in 2011 with the next nearest record located 2.55km to the west also in 2011.
- 3.1.3 No records of palmate newt have been found within 1km of the Site. Desk Study records for amphibians show that they have a limited presence within 3km of the Site with only 6 records of palmate newts found. The nearest record of palmate newt is from 2.5km to the north-east in 2009.
- 3.1.4 In total 60 records smooth newt have been found with the nearest record of smooth newt is from 1.2km to the south-east in 2011.
- 3.1.5 In total 37 records common toad have been found with the nearest record of common toad from 75m to the north in 2016.
- 3.1.6 In total 89 records common frog have been found with the nearest record of common frog from 200m to the north in 2009.
- 3.1.7 There are no EPSM GCN licences within a 5km radius of the Site.

3.2 Habitat Suitability Index (HSI) assessments

- 3.2.1 There are no ponds within the Site and a single mapped waterbody within a 500m radius. Pond P1 is a waterbody is located 60m to the south of Field 3: it is a large lake within Capstone Country Park with a small, connected pond to the east. This waterbody is use as a fishing lake and recreation area with carp, tench, bream, rudd, roach, perch and eels present and understood to have been stocked; it is therefore highly unlikely to support great crested newt (GCN).
- 3.2.2 The waterbody is large over 14,000m² and is understood to never dry, the water quality is moderate and quite turbid. The banks of the waterbody are partially vegetated with 20% of the shoreline shaded. There is a significant fish presence as well as a significant wildfowl presence with mallards, geese, swans and a number of gull species seen. Emergent vegetation is limited to small sections of the lake

shore where bull rush and yellow flag iris is present. Terrestrial habitat is moderate with the immediate area being amenity in nature with short grass and hardstanding, however the wider areas has woodland and scrub. No other ponds within 1km of this waterbody are present. Pond P1 received a HSI score of 0.30 indicating 'Poor' suitability for GCN. The HSI results table is shown below.

Table 1 – Pond 1 HSI Results

Pond 1	Score	Description
SI1 - Location	1	South-east
SI2 - Pond area	0.8	14,000m ²
SI3 - Pond drying	1	Never dries
SI4 - Water quality	0.67	Moderate
SI5 - Shade	1	20%
SI6 - Fowl	0.01	Major
SI7 - Fish	0.01	Major
SI8 - Ponds	0.3	no ponds within 1km
SI9 - Terr'l habitat	0.67	Moderate
SI10 - Macrophytes	0.5	20%
HSI	0.30	
HSI Score	Poor	

3.2.3 The Desk Study records for amphibians show that they have a limited presence within 3km of the Site. There are records of common toad within Darland Banks LNR to the north with the nearest record being located 80m to the north of Field 2 and of common frog 170m to the north of Field 3. The nearest record of newts is of smooth newt approximately 1.26km to the south of Field 1. The nearest records for palmate newts is located 2km to the west of the Site in 2013. The nearest record of great crested newt is from 1.8km to the north-east in 2011 with the next nearest record located 2.55km to the west also in 2011.

4.0 EVALUATION

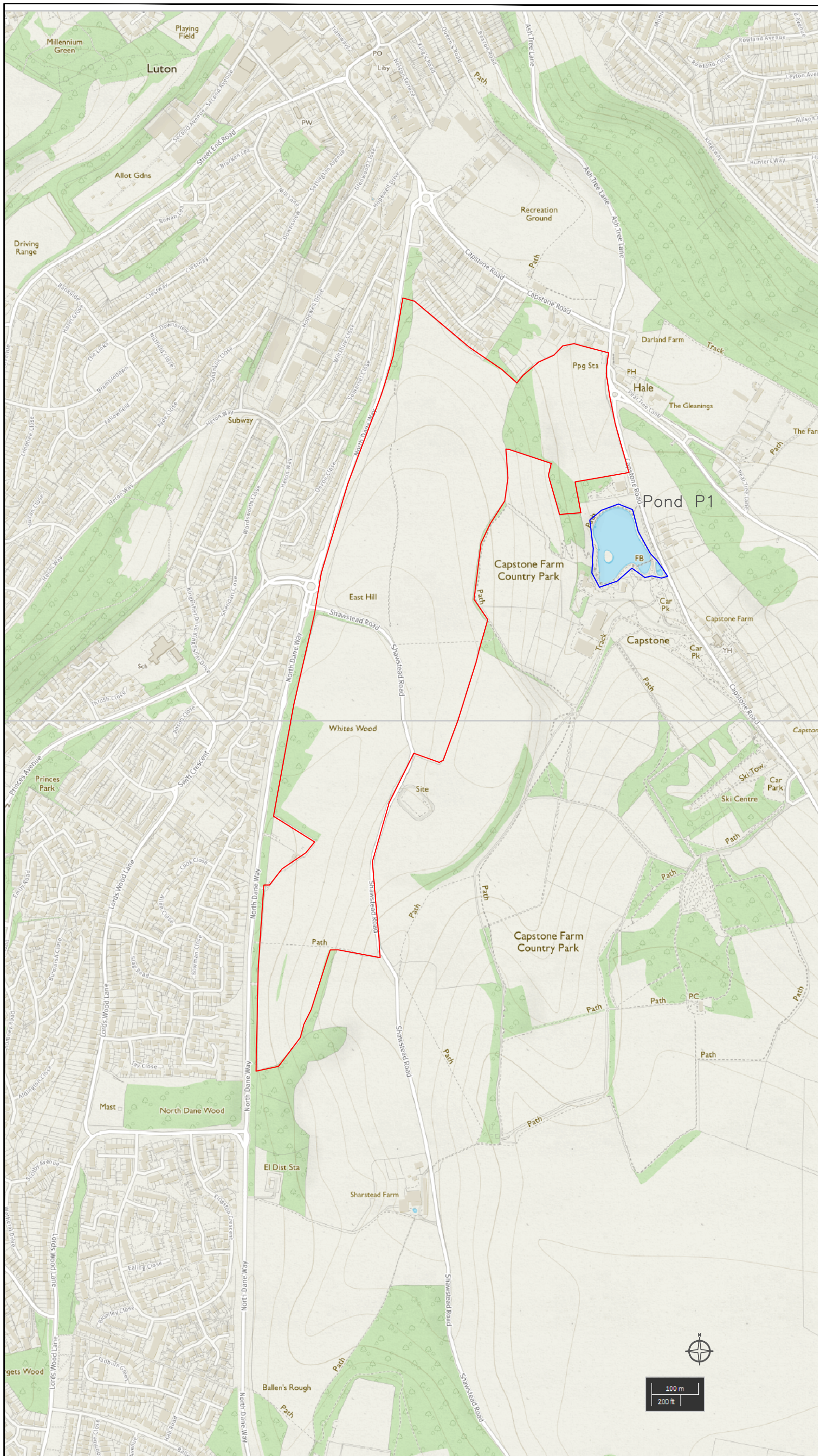
- 4.1 Within a 500m radius of the Site there is a single waterbody located 60m to the south of Field 3. Pond P1 received a low HSI score indicating 'Poor' suitability; this lake is highly unlikely to support great crested newt (GCN) due to the presence of a large stocked fish and fowl population which would predate on newts and their eggs. The wider area lacks the pond network to support amphibian Metapopulations with no further ponds located within 1km of this pond or the Site. This waterbody is understood to be artificial in nature and was constructed in 1984 when the country park was established, it was constructed as an amenity space and for fishing being stocked with large number of fish. Due to the isolated nature of this waterbody and the detrimental factors to use by amphibian species and the desk study records showing limited use of the wider area by amphibians species, it is unlikely that this pond would be used by great crested newts and no further surveys are recommended.

5.0 CONCLUSION

- 5.1 A single pond is located within 500m of the Site, Pond P1 is located 60m to the south of Field 3 and received a low HSI score indicating 'Poor' suitability. Due to the isolated nature of this waterbody and the detrimental factors for use by amphibian species such as of a large fish and fowl population which would predate on newts and their eggs, and the desk study records showing limited use of the wider area by amphibians species, it is unlikely that this pond would be used by great crested newts and no further surveys are recommended.

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- Key
- Site Survey Area
 - Pond

Ordnance Survey
Licence Number
100050443

revision	description	date	checked by

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Project:
17032 East Hill, Hempstead

Title:
Pond Location Plan

Status: drawing no. **Figure 1**

scale	size	date	drawn	checked
NTS	A3	27.02.2019	AW	HL

CAD filename: Figure_1.dwg

Appendix 1 – Amphibian Legislation

All British amphibian species receive legal protection in the United Kingdom though the degree to which different species are protected varies. The Wildlife and Countryside Act 1981 (WCA) (as amended) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The 1981 Act was recently amended by the Countryside and Rights of Way (CRoW) Act 2000 and the more recent Conservation Regulations (2007). The great crested newt is listed under Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt [Section 9(1)];
- Possess or control any live or dead specimen or anything derived from a great crested newt [Section 9(2)]
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)];
- Intentionally or recklessly obstruct access to any structure or place which a great crested newt uses for shelter or protection [Section 9(4)(c)]
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell a great crested newt [section 9(5)]

The other more common amphibian species are protected against sale (Section 9(5)) only. In all cases, the legislation applies to all life stages including spawn, eggs, juveniles and adults.

The great crested newt is also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the UK ratifying this directive, the great crested newt is protected under The Conservation of Habitats and Species Regulations 2010 (The Conservation Regulations). Annex IV of the Habitats Directive requires member states to construct a system of protection as outlined in Article 12, this is done through Part 3 of the Regulations whereby Regulation 41 makes it an offence to:

- Deliberately capture or kill a great crested newt [Regulation 41(1)(a)];
- Deliberately disturb great crested newts in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young, OR ii) the local distribution of that species. [Regulation 41(1)(b) and 41(2)];
- Damage or destroy a breeding site or resting place of a great crested newt [Regulation 41(1)(d)].