

APPENDIX D

AGEAS BOWL REDEVELOPMENT, EASTLEIGH GREAT CRESTED NEWT TECHNICAL NOTE

1 INTRODUCTION

This Technical Note provides an evaluation of waterbodies at or within 500m of the Ageas Bowl and Boundary Lakes Golf Club (hereafter referred to as the Site) associated with their suitability to support breeding great crested newt using the Habitat Suitability Index (HSI) method. The report also details the results of an eDNA survey conducted for great crested newt *Triturus cristatus* at seven ponds.

1.1 PERSONNEL

The eDNA survey was conducted by Kerry White BSc (Hons), GradCIEEM assisted by Katherine Newbert BSc (Hons) MSc. Kerry holds a Natural England Class 1 survey licence for great crested newts (2017-29693-CLS-CLS).

The HSI assessment was conducted by Kerry White.

2 LEGAL PROTECTION

The great crested newt is a European Protected Species included on the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019, fully protected under the Wildlife and Countryside Act 1981 (as amended) and included as a Priority Species under the terms Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act).

It is illegal to *inter alia*:

- capturing, killing, disturbing or injuring great crested newts deliberately
- damaging or destroying a breeding or resting place
- obstructing access to their resting or sheltering places (deliberately or by not taking enough care)
- possessing, selling, controlling or transporting live or dead newts, or parts of them
- taking great crested newt eggs

3 SITE LOCATION AND CONTEXT

The Site is located between West End and Hedge End in Eastleigh Borough. The M27 is located to the east with residential areas to the north, west and south. The Ageas Bowl cricket ground, events venue and is present in the northwest of the Site and Telegraph Woods is located adjacent to the western Site boundary.

Historic surveys of all waterbodies included in the contemporary surveys were completed in 2007. No record of great crested newt has been found historically at the Ageas Bowl site.

No EPS licences or records of great crested newts were identified for a search area extending 2km from the Site. The closest record provided by the Hampshire Biodiversity Information Centre (HBIC) was for a location 2.6km south of the Site.

4 METHODOLOGY

4.1 GREAT CRESTED NEWT HABITAT SUITABILITY INDEX (HSI)

The HSI is a method of quantifying the suitability of a water body to support great crested newt (GCN). All identified ponds within 500 m and surrounding terrestrial habitat were visited on 24 April 2020 and HSI assessments completed.

The calculation of HSI requires that the following ten key variables are recorded and assigned a numerical value:

- Location within Britain;
- Pond area;
- Pond drying (based on both local knowledge and field evidence);
- Water quality;
- Percentage perimeter shaded;
- Presence or absence of waterfowl;
- Presence or absence of fish;
- Number of ponds situated within 1 km;
- Suitability of terrestrial habitat; and
- Percentage of macrophyte cover.

The resulting scores can then be interpreted, as indicated in Table 1.

Table 1: Habitat Suitability Index score and interpretation

HSI Score	Pond Suitability for GCN
<0.5	Poor
0.5	Below average
0.6	Average
0.7	Good
>0.8	Excellent

4.2 GREAT CRESTED NEWT EDNA SURVEY

Seven ponds within 500 m of the proposed site were sampled for great crested newt eDNA on the 14th May 2020.

Figure 1 provides the locations of the ponds and the pond numbers. Six of the ponds were located within the limits of the golf course and the seventh was located in the north of the adjacent Telegraph Woods.

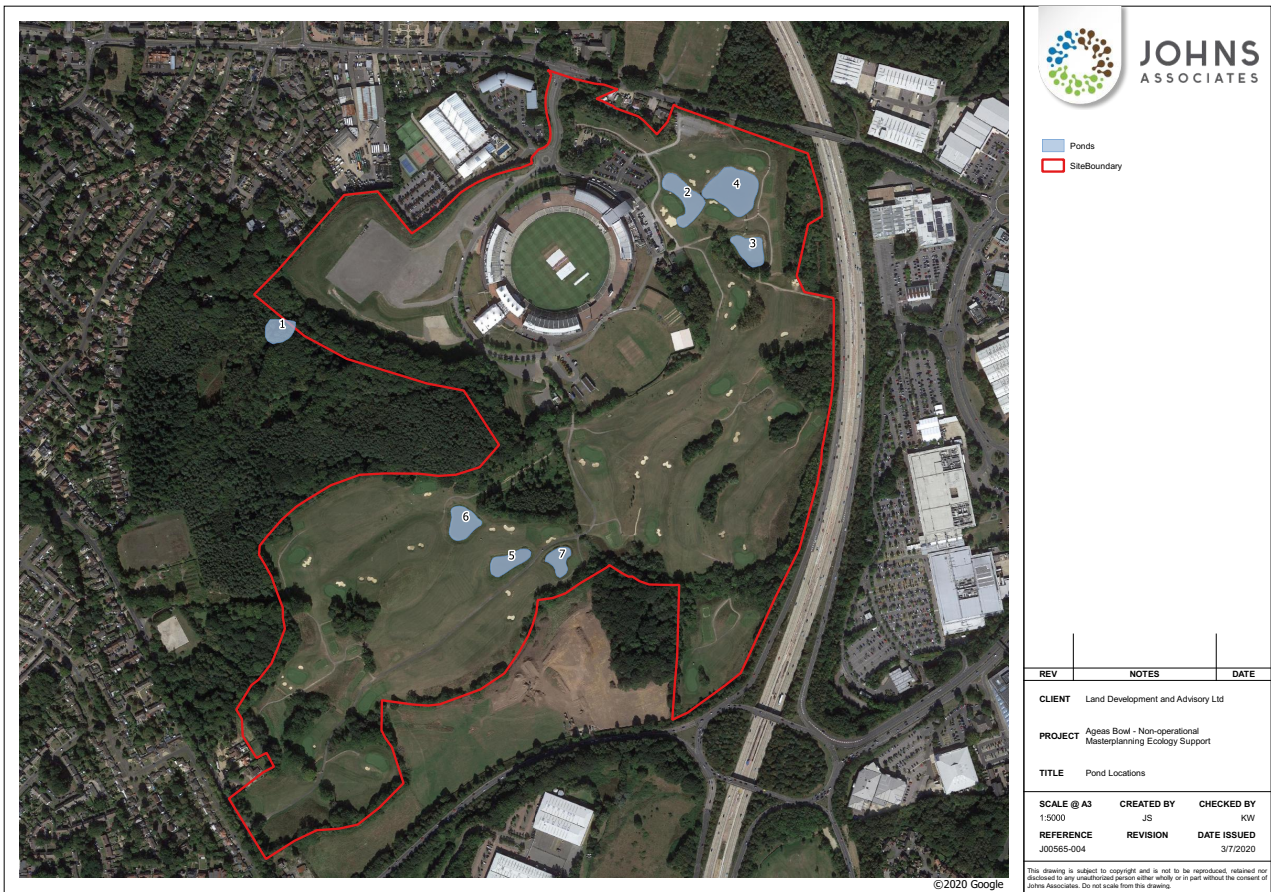
Water was sampled from each of the seven ponds following standard guidance outlined in the Freshwater Habitats Trust Technical Advice Note for field and laboratory sampling of great crested newt environmental DNA, 2014. Twenty water samples were taken from the entire perimeter of each pond margin (access permitting). The water was mixed for ten seconds in a plastic sterile Whirl-Pak bag. 15 ml of the water was then put into seven conical tubes with a preservative and shaken for ten seconds to mix. The water samples were subsequently sent to ADAS for analysis.

4.3 LIMITATIONS

No limitations were encountered, with full access available to all ponds.

An area marked as ‘balancing lagoon’ on the OS 1:25,000 mapping was not considered suitable for this species during previous surveys in 2007 and its current condition comprises a well-vegetated area of marshy grassland/emergent vegetation with no suitable areas of open water and was therefore discounted from further survey. An adjacent Highways Agency motorway balancing lagoon has very poor water quality (anoxic) and is used by waterfowl and was therefore discounted from further investigation on this basis. Great crested newt was not found to be present here in 2007. A reservoir shown on the Ordnance Survey map is covered and therefore not suitable for great crested newt.

Figure 1: Location of Ponds Sampled and their Identification Numbers



5 RESULTS

5.1 GREAT CRESTED NEWT HABITAT SUITABILITY INDEX

Seven ponds on Site were assessed and the HSI results are presented in Table 2. The following section provides a brief description of each pond. Plates 1 - 6 illustrate the condition of the ponds located within the Site. Pond 2 was not photographed but resembled the size and condition of Pond 3 and was connected via an overflow channel.

- Pond 1: Semi-natural pond located within Thorneywoods, marginal egg laying vegetation present
- Pond 2: Large golf course waterbody located within Boundary Lakes Golf Course. Waterfowl present, suitable egg laying vegetation present.
- Pond 3: Large golf course waterbody located within Boundary Lakes Golf Course. Waterfowl present, lack of egg laying vegetation. Connected to pond 4.
- Pond 4: Large irrigation lagoon located within Boundary Lakes Golf Course. Waterfowl present, suitable egg laying vegetation present. Connected to pond 2.
- Pond 5: Large golf course waterbody located within Boundary Lakes Golf Course, waterfowl present.
- Pond 6: Large golf course waterbody located within Boundary Lakes Golf Course, waterfowl present.
- Pond 7: Large golf course waterbody located within Boundary Lakes Golf Course, waterfowl present.

Plate 1: Pond 1



Plate 2: Pond 3



Plate 3: Pond 4



Plate 4: Pond 5



Plate 5: Pond 6



Plate 6: Pond 7



Table 2: Habitat Suitability Index Results

ARGUK GCN HSI Calculator								
	Pond Name	1	2	3	4	5	6	7
	Grid Ref	SU47281397	SU47951413	SU48031408	SU48051414	SU47681357	SU47611363	SU47771361
SI No	SI Description	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value
1	Geographic location	1	1	1	1	1	1	1
2	Pond area	0.9	0.8	0.8	0.8	0.8	0.8	0.85
3	Pond permanence	1	0.9	0.9	0.9	0.9	0.9	0.9
4	Water quality	0.1	0.33	0.33	0.1	0.1	0.1	0.1
5	Shade	0.6	1	1	1	1	1	1
6	Water fowl effect	1	0.67	0.67	0.67	0.67	0.67	0.67
7	Fish presence	0.67	1	1	1	0.67	0.67	0.67
8	Pond Density	1	1	1	1	1	1	1
9	Terrestrial habitat	1	0.33	0.33	0.67	1	1	1
10	Macrophyte cover	0.07	0.4	0.4	0.3	0.3	0.3	0.5
HSI Score		0.55	0.68	0.68	0.63	0.63	0.63	0.67
Pond suitability (see below)		Below average	Average	Average	Average	Average	Average	Average

5.2 GREAT CRESTED NEWT EDNA

The eDNA results were provided by ADAS on 27th May 2020. All ponds returned a negative result for great crested newt eDNA and it is therefore considered that great crested newts are absent from these ponds.

6 CONCLUSIONS

It is considered that great crested newts are unlikely to be present within the ponds conclusion is supported by the absence of any records for great crested newt within 2km of the Site. The nearest EPS licence for great crested newt is for a site 4.1km north east of the Site and the nearest known record is 2.6km to the south (see Appendix A – Desk Study Technical Note).

Author:

Kerry White BSc (Hons) Grad CIEEM
Consultant Ecologist

Johns Associates Ltd
Green Tree House
11 St Margaret's Street
Bradford on Avon,
Wiltshire, BA15 1DA
T: 01225 723652
W: johnsassociates.co.uk

Third party disclaimer

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Johns Associates at the instruction of, and for use by, our client named on the front of the report. It does not in any way constitute advice to any third party who is able to access it by any means. Johns Associates excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage howsoever arising from reliance on the contents of this report. We do not however exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability.