

St. George's Avenue: GCN eDNA Survey



Site:	St. George's Avenue
Client:	BDW Southampton
Job Number:	A117429
Survey Type(s):	GCN eDNA Survey
Date of Survey(s):	12 th May 2020
File Location:	I:\Projects\Projects A117000 on\A117429 St. George's Avenue\REPORTS\eDNA

Introduction

WYG was commissioned by Barratt David Wilson Southampton on the 11th May 2020 to undertake ecological surveys of St. George's Avenue (the 'site'). The site is proposed for the development of residential dwellings with associated access, parking and landscaping. The site is located to the east of St. George's Avenue in Havant and is centred at Ordnance Survey National Grid Reference SU 73244 06351.

The ecological surveys initially comprised of an Ecological Appraisal (EA). This included an extended Phase 1 habitat survey completed in May 2020 supported by a desk based background data search¹. The EA included appraising the habitats present for their suitability to support great crested newts *Triturus cristatus* (GCN). This appraisal was based on guidance outlined in the Herpetofauna Workers' Manual² and the Great Crested Newt Conservation Handbook³.

The site had suitable habitat for GCN in the form of tall ruderal vegetation, dense scrub and areas of longer grassland. In addition, five waterbodies were identified within 500 m of the site. The site was therefore considered to have potential for GCN to be present. It was therefore recommended that samples of water were taken from all suitable and accessible waterbodies not separated from the site by any significant barriers to dispersal, and tested for the presence of environmental DNA (eDNA) belonging to the species. The species can travel more than 500 m from their natal (breeding) ponds and therefore if present in any pond within 500 m, they may be present on the site and represent a constraint to the development proposals.

Figure 3 from the EA¹, shows the location of the waterbodies identified within 500 m of the site.

This letter summarises the results and recommendations following the pond scoping visit and subsequent eDNA test results.

¹ WYG, (2020), *St. George's Avenue, Ecological Appraisal*, Report on behalf of Barratt David Wilson, Project No. A117429

² Gent, T. and Gibson, S., (2003), *Herpetofauna Workers' Manual*, JNCC: Peterborough.

³ Langton, T.E.S, Beckett, C.L and Foster, J.P., (2001), *Great Crested Newt Conservation Handbook*. Froglife: Halesworth.

Methodology

Pond suitability was established using the Habitat Suitability Index⁴ method.

Water samples were taken in accordance with the survey methodologies defined within Natural England's accepted protocol⁵.

The Biggs *et al.* method requires that 20 water samples are taken from each waterbody to form the basis of the DNA sample. The samples are taken using a sterile ladle and emptied into a sterile self-supporting Whirl-Pak bag. Once all 20 samples are collected the sterile self-supporting bag is shaken to mix any DNA across the whole pond sample. A sterile plastic pipette I then used to transfer approximately 15 ml of the mixed pond sample water into a sterile conical tube. This is undertaken for each of the six sterile conical tubes in the kit. Each sterile conical tubes contained 35 ml of ethanol to preserve any DNA within the samples. The box of six sterile conical tubes a then returned the following day at ambient air temperature to the Surescreen Scientifics eDNA testing service for laboratory analysis.

Collection of the eDNA samples was undertaken by Ben Cooke GradCIEEM (GCN licenced surveyor; licence reference number 2015-17214-CLS-CLS) and assisted by Maddie Errington.

Results

The results from the pond scoping and testing are provided in Table 1.

Table 1: Pond scoping results

Waterbody No.	Suitable for GCN	Justification	Water sample taken	GCN eDNA present
1	Yes	HSI score: 0.65, 'average quality' for GCN	Yes	No
2	No	Agricultural drainage ditch separated from site by trainline to the north	No	N/A
3	No	Agricultural drainage ditch separated from site by the A27 to the south	No	N/A
4	No	Agricultural drainage ditch separated from site by the A27 to the south	No	N/A
5	No	Agricultural drainage ditch separated from site by the A27 to the south	No	N/A

⁴ 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 (4), 143-155.

⁵ Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Griffiths, R.A., Foster, J., Wilkinson, J., Arnett, A., Williams, P. and Dunn, F., (2014), *Analytical and methodological development for improved surveillance of the Great Crested Newt: Appendix 5 – Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA*. Freshwater Habitats Trust: Oxford.



Results from the SureScreen Scientifics eDNA testing service were returned on 12th May 2020. Waterbody No. 2 (WB2) was found to be negative for GCN eDNA, therefore it can be concluded that GCN are absent from the pond.

Summary

The survey confirms the likely absence of GCN eDNA in waterbodies within 500 m of the site. It is therefore considered that the species is absent from the site and the development proposals will not have an impact on the species.

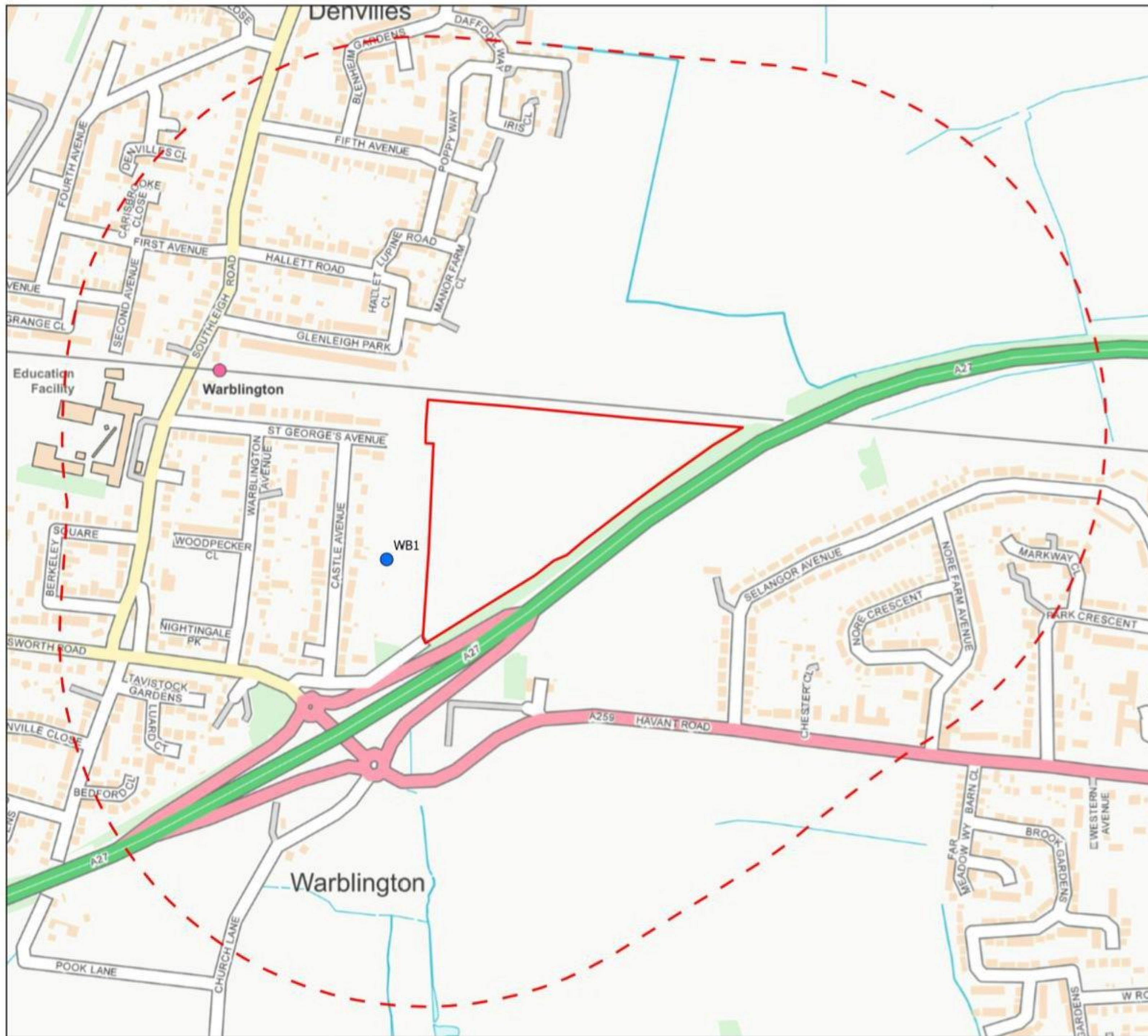


Quality Control		
Version:	June 2020	FINAL
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Version:	Date:	Updated by:	Verified by:	Description of changes:

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Figure 3 – Waterbody Location Plan



Rev	Date	Notes
A	19/06/20	Initial map production

Legend

- Site boundary
- Site boundary 500m buffer
- Waterbody

0 50 100 200 Metres



Waterbody Location Plan

St. George's Avenue Barratt David Wilson

Scale at A3: 1:5,000	Project No: A117429	Drawing No: Figure 3	Revision: A
Drawn by: Maddie Errington	Drawn date: 19/06/2020	Approved by: Ben Cooke	

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