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Technical Appendix 14.2

Branston Locks, Burton upon Trent

Great Crested Newt Survey Report

Nurton Developments (Quintus) Ltd

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Contents

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1 Introduction

1.1 Terms of Reference

Atmos Consulting Ltd was commissioned by Nurton Developments (Quintus) Ltd to undertake a great crested newt survey and assessment of ponds in proximity to the Branston Locks site, near Burton upon Trent in Staffordshire. Surveys for great crested newts had previously been undertaken at the site in 2009, but were repeated due to the time lapse of three years, during which time conditions at and around the breeding ponds had changed.

Great crested newts benefit from full statutory protection at all times, as detailed in Section 2 below. The 2009 surveys confirmed the presence of this species within 500m of the Branston Locks site. This report provides an update on the status of great crested newts in proximity to the site, based on surveys carried out during the 2012 field season. It is presented here as a Technical Appendix to the main Ecological Impact Assessment chapter in the Environmental Statement (ES) for the proposed development, which will be submitted with an outline application for the site during late 2012.

1.2 Objectives of the Survey

The principal aims of the 2012 great crested newt survey were as follows:

- to determine the presence of great crested newts, based on consultation and field survey; and
- to determine the size class of the population(s) present within proximity to the Branston Locks site.

1.3 Site Description

The Branston Locks site is approximately 136.19ha in size and is situated to the north west of Burton upon Trent, adjacent to the A38 Trunk Road, which forms the eastern boundary. It is a generally linear site which is at its widest in the south west where it is bounded by Branston Road, and tapers to the north east where it ends at Shobnall Road.

The site supports large flat arable fields which are surrounded by mostly intact hedges with standard trees, and occasional ditches. It is bisected by the Trent and Mersey Canal and the private access road Anglesey Street, which leads to Lawns Farm, the main farmstead on the site, and adjacent 'The Bungalows'.

The open fields rise in the west up to Battlestead Ridge, which is a steep-sided spine of wooded land running adjacent to and parallel with the site boundary. The highest point on the ridge, known as Battlestead Hill supports a small area of mature trees, and much of the rest of the ridge supports scrub and dense plantations of mainly deciduous tree species, which were planted in approximately 1996 under the National Forest Initiative, and are collectively known as the Bass Millennium Wood. Pockets of grassland, bramble scrub and tall ruderals are also present, as well as three ponds, situated on the top of ridge. A further nine waterbodies are present within 500m of the site boundary.

2 Legal Protection & Licensing

2.1 Legal Protection of Great Crested Newts

Great crested newts are afforded full statutory protection as a European protected species listed on Schedule 2 of The Conservation of Species and Habitat Regulations 2010, as amended. These regulations, commonly known as the 'Habitats Regulations', transpose into British law EC Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (known as the 'Habitats Directive') and supersede previous legislation known as The Conservation (Natural Habitats, &c.) Regulations 1994, as amended.

Under the terms of Regulation 41, with certain exceptions, a person commits an offence if he/she:

"(1) …

(a) deliberately captures, injures or kills any [a great crested newt],

(b) deliberately disturbs wild [great crested newts],

(c) deliberately takes or destroys the eggs of [great crested newts], *or*

(d) damages or destroys a breeding site or resting place of [a great crested newt],

…

(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely —

(a) to impair their ability –

(i) to survive, to breed or reproduce, or rear or nurture their young, or

(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

(b) to affect significantly the local distribution or abundance of [great crested newts]."

"(3) It is an offence for any person —

(a) to be in possession of, or to control,

(b) to transport,

(c) to sell or exchange, or

(d) to offer for sale or exchange,

[a great crested newt]."

All of the above protections apply regardless of the stage of the life of the animal.

Protection of great crested newts is also provided for in the Wildlife and Countryside Act 1981, as amended. The great crested newt is listed on Schedule 5 of the Act, and is afforded partial protection under the terms of sections 9(4)(b) and (c) and (5). This makes it an offence if any person:

"9 …

(4) "… intentionally or recklessly … (b) … disturbs any [great crested newt] *while it is occupying a structure or place which it uses for shelter or protection; or (c) … obstructs access to any structure or place which any* [great crested newt] *uses for shelter or protection."*

(5) "… (a) sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead [great crested newt], *or any part of, or anything derived from, such an animal; or (b) publishes or causes to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things".*

The other native amphibian species listed on Schedule 5 of the Wildlife and Countryside Act that could be present in this part of Staffordshire, i.e. common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus*, are all subject to limited protection (from sale) under the terms of Section 9(5) only.

2.2 Licensing

In cases where great crested newts are present on a site that has been granted a planning consent, the statutory nature conservation body, Natural England, can issue a licence under Regulation 53(2)(e), *"for the purpose 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"*, in order to permit activities that would otherwise result in an offence being committed.

In the event of an application being submitted, Natural England can only issue such a licence provided that the application has demonstrated to the satisfaction of Natural England that the following criteria have also been met:

"that there is no satisfactory alternative" [Regulation 53(9)(a)]; and

"that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range." [Regulation 53(9)(b)]."

It is Natural England's stated position that it requires full planning permission before an application can meet the requirements of 53(9)(a), that there is no satisfactory alternative. It also states that, *"if conditions or reserved matters relevant to the nature conservation aspects remain to be resolved then a licence cannot be determined until those conditions or reserved matters have been approved."*

3 Desk-Based Review of Existing Information

Consultations with Staffordshire Ecological Record (SER), which is the county's biological record centre, did not reveal any previously held records of great crested newts being present anywhere within 2km of the site. However, SER advised that:

"great crested newts are both widespread and relatively common in Staffordshire, and so any cluster of ponds or pools should be viewed as having breeding potential ... an aggregation of potential breeding habitat may be only a short distance from records which your [sic] *search missed".*

Review of information on the National Biodiversity Network (NBN) gateway website found a similar lack of publicly available records nearby, but within the 10km grid square which encompassed the site (SK22) contained records for great crested newts within the Burton upon Trent area. Two of these were to the east of the River Trent, which constitutes a barrier to the species' movement, whilst one was in the centre of Burton on Trent, but dated back to 1961.

4 Methodology

4.1 Habitat Suitability Index (HSI) Assessment

The first stage in the great crested newt survey was to identify which ponds to survey. Habitats at the Branston Locks site are shown in Figure 14.2 in the ES. The pond shown on maps as being within the application site, approximately 100m south west of Lawns Farm; the old slurry lagoon beside the farm yard itself; and a pond shown in a field corner south of Shobnall Grange, were all dry, and none has ever been observed to hold water during any of the ecological surveys of the site, which have taken place since 2007. These features were therefore excluded from consideration in the study. More recently, in October 2012, a local resident reported that there was an additional pond, in the garden of Shobnall Grange, so this has been added to the list of ponds in this report, although very little is known about it, including where it is within the grounds of that property.

A schedule of all waterbodies within a 500m radius of the Branston Locks application boundary was drawn up, as shown in Figure 14.3, and the suitability of each for great crested newts was assessed as best as possible, including from publicly accessible land, using the Habitat Suitability Index (HSI) methodology[1]. The habitat suitability of all waterbodies within the 500m radius is summarised in Table 1.

The only waterbody within the application site with any potential to support breeding great crested newts was the very slow-flowing drain that runs through the centre of the site, and shown as D1 in Figure 14.3. Although mainly overgrown, there were sections of the drain where shallow open water was present, and it was therefore included within the great crested newt survey.

The waterbodies shown as P1 and P2 in the Figure, Branston Gravel Pits and Branston Water Park, were both large open lakes used for recreation. The fact that their extensive open habitats were unsuitable for great crested newt breeding, combined with their distance from the Branston Locks site, meant that they were excluded from the survey. The Trent and Mersey Canal, which is a busy waterway with very turbid water and minimal marginal vegetation, was also excluded from the survey on the basis that the habitat there made it completely unsuitable as a potential breeding site.

Ponds P3, P4 and P5, up on Battlestead Ridge, were all within the same landownership as the Branston Locks site, and all were visited in the survey. Pond P5 was found to be virtually dry, and so surrounded by impenetrable scrub that it was not physically possible to access it at close quarters. It was not surveyed in 2012.

Ponds 6 to 11 were all on third party land, off site and to the north and west of the application site's northern end, and access permission was not gained. Apart from P10 and P11, these waterbodies were more than 250m from the site. All were potentially suitable for great crested newts and, although unsurveyed, have been assumed for the purposes of development planning to support the species, on a precautionary basis.

Nothing is known about pond P12, but it has been considered in the Ecological Impact Assessment presented in Chapter 14 of the ES, where it has been assumed to be a breeding site for the species, on a precautionary basis.

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[1] ARK UK (May 2010). *Advice note 5: Great crested newt Habitat Suitability Index*.

Table 1: Schedule of Ponds within 500m of Branston Lock site

Waterbody No.	Grid Reference	Pond Location	Surrounding Habitat	Distance from site (to nearest 10m)	Habitat Suitability Index (HSI)	GCN Breeding Status
P1	SK 21117 20766	Branston Gravel Pits	Nature Reserve	230	-	Unsuitable
P2	SK 21507 20821	Branston Water Park	Nature Reserve	400	-	Unsuitable
P3	SK 21098 22429	West Ridge Pond	Woodland	310	0.8 (excellent)	Present
P4	SK 21219 22535	Central Ridge Pond	Woodland	370	0.79 (good)	Present
P5	SK 21421 22654	East Ridge Pond – almost dry	Woodland	330	0.57	Not suitable in 2012
P6	SK 21566 22838	North West of Lawns Farm	Arable	270	0.62	Unknown
P7	SK 21997 23153	West of Sinai Park	Grassland	320	0.62	Unknown
P8	SK 22054 23211	West of Sinai Park	Grassland	360	0.51	Unknown
P9	SK 22095 23279	West of Sinai Park	Grassland	400	0.53	Unknown
P10	SK 22257 23382	South West Shobnall Grange	Grassland	220	0.62	Unknown
P11	SK 22213 23091	Moat at Sinai Park	Woodland	170	-	Unknown
P12	SK 226 233 approx	Shobnall Grange garden pond	Garden	Up to 50m?	?	? Reported to be present by owner
Ditch D1	-	On Site	Arable	-	0.46 (poor)	Not found - absent
Canal	-	On Site	Arable	-	-	Unsuitable

4.2 Great Crested Newt Survey

In 2012 a great crested newt survey was undertaken of all water bodies which were suitable for survey and to which permission for access could be gained. This comprised two ponds P3 and P4 within the woodland on Battlestead Ridge, off-site, and a slow-flowing drain D1 on-site.

The survey was undertaken in accordance with the methodology set out in the Great Crested Newt mitigation guidelines[2]. It consisted of six site visits in suitable weather conditions between the 22nd April and the 19th June 2012, with a range of survey methods used on each occasion.

The following standard methodologies were used on the ponds in proximity to Branston Locks:

- Egg Search – suitable submerged vegetation was checked for the characteristic folded leaves and examined to check for eggs and to determine species where eggs were present.
- Torching - surveys were carried out after dusk with particular attention being paid to marginal vegetation and potential open display areas. A 1,000,000 candlelight power torch was used. Individuals were identified to species and sex where possible.
- Bottle Trapping – traps were set at 2m intervals (where possible) around the ponds edge and left *in situ* overnight. Bottle traps were collected early in the morning of the next day. Any amphibian species found were identified, sexed and released.

All amphibians and other species of interest were recorded and where required identified to species level and sexed. The full results of the surveys undertaken in 2012 are presented in Table 2.

Surveys were carried out under Natural England Licences WML-CL08 (A. Nyul), 20122596 (A. Hodnett) and CLS00917 (C. Lake).

4.2.1 Limitations

It was not possible to survey six ponds, P6-11, as they were on third party land outside of the site boundary, with no access permission. These ponds could potentially support further great crested newts, and the reported presence of the species in a seventh unsurveyed pond (P12) in a nearby garden suggests that this is likely. For the purposes of development control at the current stage of the project, this limitation need not be significant, as suitable design and mitigation measures have been devised to minimise impacts to the species, based on a precautionary approach that has assumed they are present in all of those ponds.

The survey of the ditch in the centre of the Branston Lock site sampled an area approximately 100m in length, as the remaining stretch of ditch was too overgrown with steep sides and low water levels for it to be suitable for survey.

The great crested newt surveys were carried out between 22nd April and 19th June 2012. On the night of the 22nd of April due to a heavy rain shower, the surveyors were unable to carry out the torching survey on the ponds and ditches, as the water was too disturbed and turbid. The remaining surveys were carried out in suitable weather conditions, so this is not considered to represent a significant limitation to the robustness

[2] English Nature (2001). *Great crested newt mitigation guidelines*.

of the survey data gathered from the waterbodies surveyed or the conclusions that can be drawn from it.

5 Survey Results

5.1 Habitats within the Branston Locks Site

The habitats within and around the Branston Lock site and the adjacent ponds are shown on the Phase 1 habitat plan (Figure 14.2). The Pond Location Figure (14.3) shows the location of the ponds on site and the land surrounding the site, with 250m and 500m buffers to illustrate the intermediate and distant zones of the species range around each pond.

The Branston Locks application site itself consists of intensively managed arable fields with intact but over-managed hedgerows with trees, and a limited number of dry ditches.

5.2 Pond Descriptions and Habitat Suitability Assessment

The Habitat Suitability Index (HSI) score for each pond surveyed was calculated in accordance with the guidance (ARG UK, 2010), and are shown alongside the pond descriptions in Table 2 below. The HSI assigns a score for the suitability of a pond for great crested newts, ranging from 1 (highest) to 0 (lowest).

- Pond P3 - has a HSI score of 0.80 which rates the pond as 'excellent' for great crested newts.
- Pond P4 - achieved a high HSI score of 0.79 rating the pond as 'good' for great crested newts.
- Ditch D1 – Due to poor water quality, the ditch has a score of 0.46 which is rated a 'poor' for great crested newts.

Table 2: Descriptions and Habitat Assessments for Waterbodies Surveyed in 2012

Water body No.	Grid Ref.	Pond Description	HSI
Pond P3	SK 21098 22429	Pond P3 was 8m x 10m with clear water 1m deep in banks 0.5m high set at 45°. The substrate was soil and silt. Pond set within a clearing in young mixed plantation, with banks supporting tall ruderal species and scrub casting 5% shade. Margins supported scattered soft and jointed rushes *Juncus effusus* and *J. acutifolius* with emergent bulrush *Typha latofolia* covering 85% of pond surface. Macrophytes included frequent water forget-me-not *Myosotis aquatica,* occasional brooklime *Veronica beccabunga*, cuckoo flower *Cardamine pratensis* and water-cress *Rorippa nasturtium-aquaticum*. Stickleback fish observed present.	0.8
Pond P4	SK 21219 22535	Pond P4 was the smaller of the two ponds approximately 8m^2 with clear water 1m deep in banks 0.5m high set at 45°. Pond situation and marginal vegetation as pond P3. Shading approximately 10% with woodland on three sides. Similar cover of bulrush (90%) and emergent species as per pond P3.	0.79
Ditch D1	-	The ditch spans 1400m in length across the site bordered by dense mixed species hedgerow and Ash *Fraxinus excelsior* and Oak *Quercus* spp. trees. Mud to silt substrate, with moderate shading, approximately 50%. Water approx. 0.5m in depth and 1-2m in width. Film of pollution over water and stickleback fish.	0.46

5.3 Great Crested Newt Records

Great crested newts were recorded within ponds P3 and P4 during the 2012 survey, with both male and female adults observed and eggs indicating breeding. They were also were recorded in these ponds during the 2009 survey, as shown in Table 5.

Amphibians other than great crested newts were also recorded during the survey. As well as the palmate and smooth newts shown in the table overleaf, hundreds of common frog tadpoles were observed in ponds P3 and P4, and to a lesser extent in the ditch. Stickleback *Gasterosteus* species were present within the ditch, with only one smooth newt being observed there.

In addition to the results obtained through survey in spring 2012, in autumn 2012 an unconfirmed sighting of great crested newts was reported from a garden pond at Shobnall Grange. This location is >500m from the surveyed ponds P3 and P4 but within the range of the un-surveyed ponds P7 - P11. It is therefore likely that great crested newts may also be present in these waterbodies to the west of the site, and thus the ecological assessment for the development control stage will assume that these ponds support this species.

5.4 Population Size Class Assessment

The statutory agency for nature conservation in England has produced *Great crested newt mitigation guidelines* (English Nature, 2001), which includes a methodology for great crested newt population size class assessment using as its basis a maximum adult count per pond per night. In some instances, this can be cumulative for the site as a whole or for particular areas where there is definite interchange of animals between ponds, facilitated by proximity and suitable terrestrial habitat.

The two ponds in which great crested newt presence was confirmed, ponds P3 and P4, are located in the mixed woodland on Battlestead Ridge between 310 and 370m west of the site boundary. These two ponds are within 250m of each other (100m) with good terrestrial habitat linkages between them. It is therefore determined likely that population exchange takes place between these ponds, suggesting that they are part of one population. The maximum adult counts can thererfore be summed for ponds P3 and P4, and expressed as a peak count for this population.

As can be seen from Figure 14.3, the unsurveyed ponds P5 (sometimes dries out) and P6 (in arable land to the north) are also within 250m of P3 and P4, meaning that collectively they form a pond cluster, referred to in this report as the Battlestead cluster, likely to support a single population. The remaining ponds P7 to P11, all of which lie within 250m from one another to form a second cluster, referred to here as the Sinai cluster, are assumed on a precautionary basis to support a second population.

Pond P12, irrespective of where it is in the grounds of Shobnall Grange, is more than 250 m from the Sinai cluster, so is not classified as part of the same population. In reality, however, there would be some exchange of individual newts between these populations, as they are relatively close to one another.

The maximum adult count per pond per night results in populations which can be classed as:

- 'Small' for maximum counts up to 10;
- 'Medium' for maximum counts between 11 and 100; or

- 'Large' for maximum counts over 100.

During the 2012 surveys the peak count for great created newts was on the 3rd of May using the bottle trap method. This recorded 66 individual adult great crested newts, as shown in Table 3 below. The great crested newt population present at this point within 370m of the Branston Locks site has therefore been assessed as being towards the higher end of 'medium'.

Table 3: Great crested newt population size class assessment 2012

Pond no.	Peak Count	Survey Method	Date	Population Size Class Assessment
P3	48	Bottle trap	3rd May	Medium
P4	18	Bottle trap	3rd May	

However, as ponds P5 and the unsurveyed P6 fall within this pond cluster, on a precautionary basis, it will be assumed for the purposes of addressing the tests at development control stage that the population of great crested newts at the Battlestead population falls into the large population size class.

Similarly, again on a precautionary basis, it will be assumed for purposes of planning and assessing the impacts of the proposed development at Branston Locks that the Sinai population, assumed to be present in the unsurveyed ponds P7 – P11, and the separate garden pond P12, are also populations within the 'large' size class. The location of ponds P7 – P11 in agricultural land, and the fact that P12 is a garden pond, makes this assumption very much a 'worst case' scenario, and means that the mitigation measures proposed can be certain to be robust.

5.5 Comparison with 2009 Survey Results

As shown in Table 5, the peak count in 2009 was 39 individual adult great crested newts from the two ponds P3 and P4 combined, giving a similar population size is class as medium. The higher total count in 2012 could indicate an increase in the population. However this number was only recorded during one survey visits, with the total counts from the remaining five visits ranging between 21 and 40. It is therefore more likely to be a natural fluctuation due to changes in the suitability of other un-surveyed ponds within the terrestrial range of the species at that particular time.

Appendices

Appendix A. Great crested newt survey results 2012

Waterbody no. (as per Fig 1)	Survey Method(s)	2012 Survey Dates					
		22nd April	3rd May	21st May	7th June	13th June	19th June
Ditch D1	Torching	Too turbid due to heavy rain	Tadpole	Stickleback	-	Too turbid with oil film.	1 ♀ SN
	Egg search	-	-	-	-	-	-
	Bottle Trapping (#10)	3 x Sticklebacks 5 x Tadpole 3 x Snails 1 x Horn snail 1 x Diving beetle larvae	Tadpoles	-	-	1 x 3-spined Stickleback	Sticklebacks
Pond P3	Torching	Too turbid due to heavy rain	7 ♂ GCN 8 ♀ GCN 5 ♂SN 2 ♀ SN	7 ♂ GCN 6 ♀ GCN 5 ♂ SN 4 ♀ SN	11 ♀ GCN 11 ♂ GCN 6 ♀ SN 3 ♂ SN	7 ♀ GCN 15 ♂ GCN 1 Uk GCN 2 Uk SN 1 ♀ P/S (egg laying) 2 ♂ SN	9 ♂ GCN 4 ♀ GCN 11 ♂SN 2 ♀ SN Frog tadpoles
	Egg search	-	Yes, GCN eggs found	-	-	-	-
	Bottle Trapping (#25)	12 ♂ GCN 8 x ♀ GCN 1 ♂ SN 1 x water beetle	19 ♂ GCN 29 ♀ GCN 7 ♀ SN 1 ♂ SN	11 ♀ GCN 8 ♂ GCN 10 ♂ SN 7 ♀ SN	9 ♂ GCN 3 ♀ GCN	7 ♀ GCN 4 ♂ GCN 1 ♂ SN	7 ♂ GCN 13 ♀ GCN 6 ♂ SN 5 ♀ SN Frog tadpoles

Waterbody no. (as per Fig 1)	Survey Method(s)	2012 Survey Dates					
		22nd April	3rd May	21st May	7th June	13th June	19th June
Pond P4	Torching	Too turbid due to heavy rain	1 ♂ GCN 2 ♀ GCN 6 ♀ SN 3 ♂ SN	4 ♂ GCN 1 ♀ GCN 1 ♂ SN 1 ♀ SN	7 ♀ GCN 2 ♂ GCN 3 ♀ SN	1 Uk GCN 2 ♀ GCN 1 ♀ PN	6 ♂ GCN 2 ♀ GCN 3 ♂ SN 3 ♀ SN
	Egg search	-	Yes, GCN eggs found	-	-	-	-
	Bottle Trapping (#20)	1 ♂ GCN 1 x Diving beetle 1 x Crane fly 2 x Water beetle Midge larvae 1 Juv ♂ SN	10 ♂ GCN 8 ♀ GCN 3 ♂ SN	1 ♂ GCN 10 ♀ GCN 12 ♂ SN 2 ♀ SN	1 ♀ GCN 3 ♂ GCN 3 ♂ SN 1 ♀ SN	4 ♀ GCN 3 ♂ SN	4 ♂ GCN 9 ♀ GCN 1 ♂ SN 6 ♀ SN

Key: GCN- Great Crested Newt, SN- Smooth Newt, PN- Palmate Newt, T- Toad, F- Frog, Juv-Juvenile, Uk-Unknown, ♂ = male, ♀ = female.

Appendix B. Great crested newt survey results 2009

Pond No.	Survey Method	2009 Survey Dates					
		8th April 12°C, clear sky, light breeze, no rain.	29th April 9°C, clear sky, no breeze, no rain.	5th May 12.5°C, partially cloudy, light breeze, no rain.	1st June 7°C, clear sky, no breeze, no rain.	22nd June 11.5°C, partially cloudy, light breeze, no rain.	23rd June 11°C, partially cloudy, light breeze, no rain.
Ditch D1	Egg Search	0	0	0	0	0	0
	Refuge Search	0	0	1F	0	2T	1T, 1F
	Torch Survey	0	F	2 x F	0	0	0
	Bottle Trap	-	0	0	-	-	-
Pond P3	Egg Search	GCN, SN	-	-	-	-	-
	Refuge Search	2T, 1F	-	2F	1T, 1F	2T, 1S	-
	Torch Survey	11♂6♀SN, 3T, 2F	9♂7♀GCN, 7♂2♀SN, 1F	7♂4♀GCN, 3♂4♀SN, F, T	9♂8♀GCN, 6♂2♀SN, 1F, F, T	3♂4♀GCN, 2♀SN, Ft, Tt	6♂4♀GCN, 3♂4♀SN, F, T
	Bottle Trap	-	21♂10♀GCN, 3♂1♀SN	5♂2♀GCN, 6♂7♀SN	10♂3♀GCN, 6♂1♀SN, F	2♂GCN, 4♂6♀SN, F, T	7♂6♀GCN, 3♂2♀SN, F, T
Pond P4	Egg Search	-	-	-	-	-	-
	Refuge Search	0	0	0	0	0	0
	Torch Survey	3♂4♀SN	3♂GCN, 2♂2♀SN, 2T	4♂1♀GCN, 1♂1♀SN, F	3♂3♀GCN, 1♂1♀SN, F	4♂2♀GCN, F	2♂2♀GCN, 1♀SN, F
	Bottle Trap	-	6♂2♀GCN, 1♂SN	5♂1♀GCN	2♂GCN, F	F	2♂1♀GCN, 2♀SN, F

Key: GCN- Great Crested Newt, SN- Smooth Newt, PN- Palmate Newt, T- Toad, F- Frog, Juv-Juvenile, Uk-Unknown, ♂ = male, ♀ = female.