A358 Taunton to Southfields Dualling

A358 Great Crested Newt Technical Report

PCF STAGE 2

HE551508-MMSJV-EBD-000-RP-LB-0040

Notice

Date: May 2021

Version: P03

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Document control

Client	Highways England
Project	A358 Taunton to Southfields Dualling
Document title	A358 Great Crested Newt Technical Report
Job no.	HE551508
Document reference	HE551508-000-RP-LP-0040

Revision history

Job number: HE551508			Document ref: HE5551508-MMSJV-EBD-000-RP-LB-0040			
Revision	Purpose description	Originator	Checked	Approved	Authorised	Date
P01	First Revision	A. Evans	K. Atkinson	V. Hollands	E. Rapa	02/12/2020
P02	Updated following comments	A. Evans	S. White	K. Atkinson	E. Rapa	10/02/2021
P03	Updated following comments	R. Webb	A. Evans	S. White	E. Rapa	29/04/2021

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Executive summary

The proposed A358 Taunton to Southfields Dualling scheme (hereafter referred to as 'the scheme') would provide a dual carriageway along the length of the A358 between Taunton and Ilminster in Somerset, connecting the A303 at Ilminster to the M5 motorway to the north. The scheme would include grade separated junctions and, with the purpose of providing a high-quality free flow journey for those using the route, the removal of at-grade junctions and direct accesses.

Great crested newts *Triturus cristatus* (GCN) are afforded full protection under the *Conservation of Habitats and Species Regulations 2017 (as amended)* and the *Wildlife and Countryside Act 1981* (as amended). GCN are widely distributed throughout the lowland areas of Great Britain but are absent from Ireland. Their populations have declined over the last century across Europe, including Britain, mainly as a result of pond loss and deterioration.

Mott MacDonald Sweco Joint Venture have undertaken GCN surveys in the 2017, 2018, 2019 and 2020 survey seasons to assess the presence or likely absence of this European protected species from within the Zone of Influence of the scheme. Surveys in 2017 included Habitat Suitability Index (HSI) surveys, to assess suitability of waterbodies to support GCN, population surveys and eDNA surveys. Surveys in 2018, 2019 and 2020 comprised HSI surveys and eDNA surveys.

The surveys identified the presence of GCN within seven ponds within 400m of the Pink Modified option. Pond 54 is located 23m from the construction footprint, population surveys identified a medium population, with a peak count of 13 GCN. Pond 40a is 397m from the construction footprint, population surveys have identified a small population, with a peak count of four GCN. Ponds 67, 115a, 116, 117 and 120a have had eDNA surveys which have returned a positive result for GCN. Further population surveys will be required in 2021 to estimate the population size.

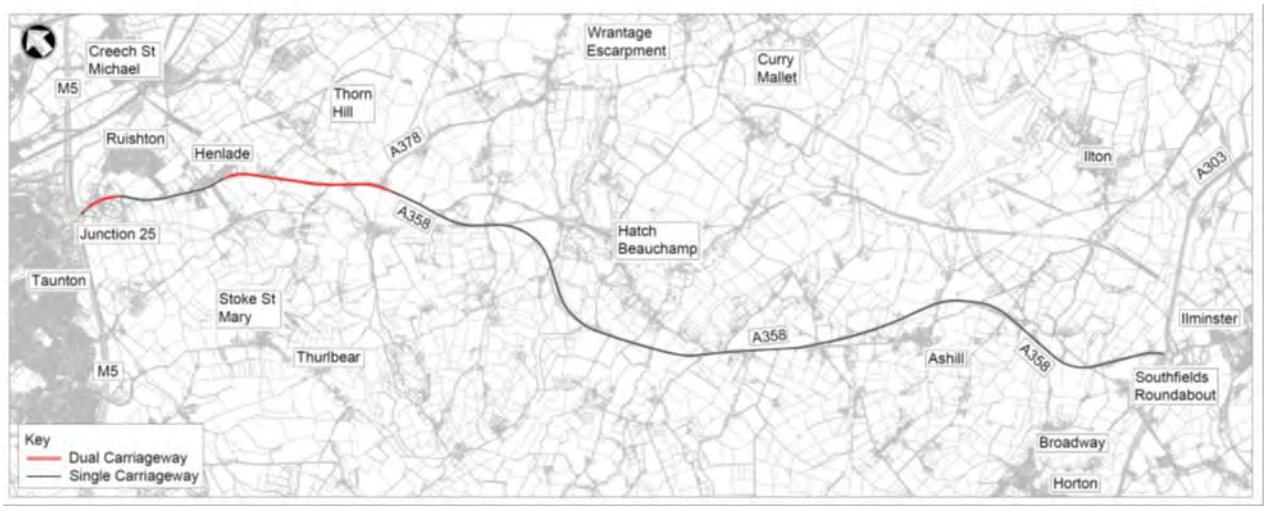
1. Background

1.1.1. The A303 / A358 corridor is a vital connection between the south-west, London and the south-east. Due to the population density, employment opportunities, urban concentrations and tourist attraction of the south-west the A303 / A30 / A358 corridor experiences a wide range of traffic flows which lead directly to severe and regular instances of congestion and delay.

1.1.2. The A303 / A30 is part of the strategic road network (SRN) and together with the A358 forms a key strategic link between the South West Peninsular (SWP) and the rest of the south, south-east and London. Although it is dualled over much of its length there are several unimproved single carriageway sections between the M3 motorway at Basingstoke and the M5 at Taunton and Exeter which cause congestion, especially during summer weekends.

1.1.3. The existing A358 between Taunton and Southfields Roundabout is predominantly single carriageway with a short (1.1 miles) dual carriageway section in the vicinity of Thornfalcon and a 3 lane (2+1) section (0.3 miles) immediately to the south of that. It has many side roads and private accesses directly onto it. The national speed limit applies between Southfields and Henlade where it reduces to 30mph; the speed limit increases to 40mph north of Henlade on the approach to M5 junction 25. A plan showing the existing route between Taunton and Southfields is provided in Figure 1-1.

Figure 1-1 : A358 Taunton to Southfields existing road layout



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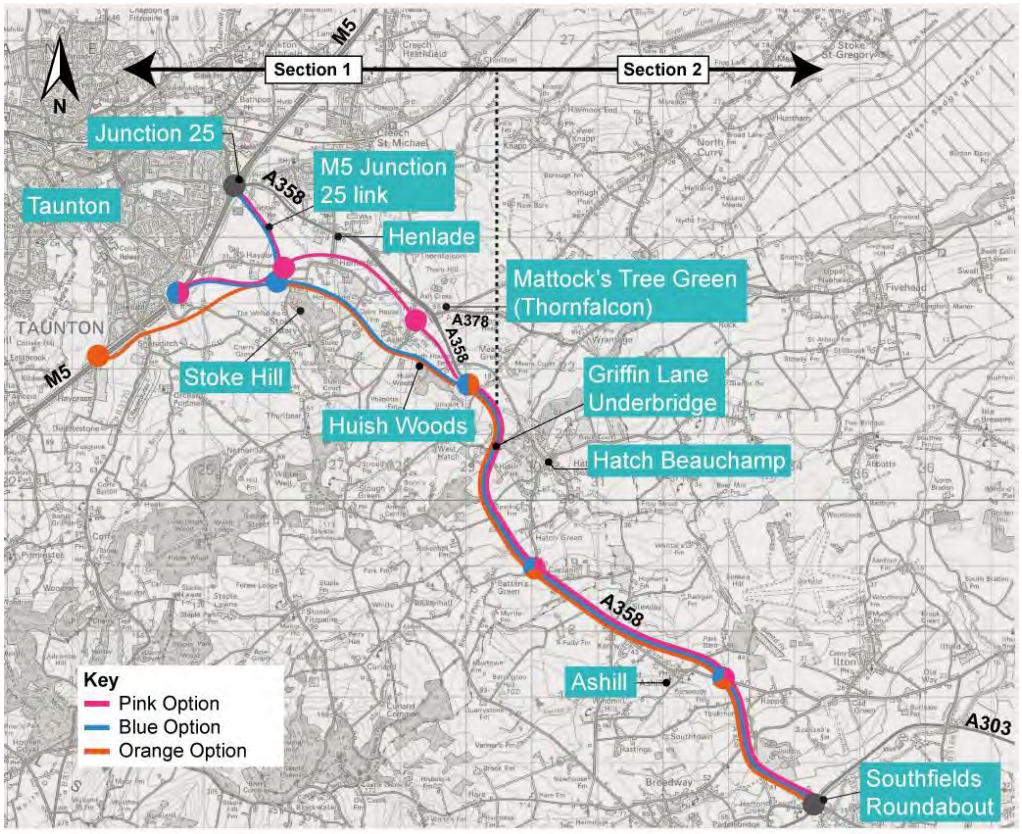
1.1.4. Three potential route options were chosen, the Orange, Pink and Blue. At the public consultation in 2017 only the Orange option was presented. A further consultation was held in 2018 in which all three options were presented. The three route options presented at the 2018 consultation are described below:

- The **Pink option** commences at a new junction on the M5 approximately 1.2 miles (2 kilometres) south of junction 25. South-facing slip roads from the M5 would combine to become the new dual carriageway, which runs eastwards and north of Stoke Hill. Here a limited-movement junction is proposed with east-facing slip road connections to the new road which would allow traffic to travel between the new A358 and junction 25 via a new 0.9 mile (1.5 kilometre) dual carriageway link past the planned Nexus 25 site. The proposed route would then follow the existing A358 to Southfields Roundabout enabling the existing road to be upgraded from a single to a dual carriageway. The total length of the Pink option is 9 miles (14.6 kilometres), plus the 0.9 miles (1.5 kilometres) spur leading to M5 junction 25.
- The **Blue option** commences at the M5 approximately 1.2 miles (2 kilometres) south of junction 25 and runs eastwards on a more southerly alignment. At Stoke Hill a junction is proposed similar to that with the Pink option which would allow traffic to travel between the road and junction 25 via a new 1.2 miles (2 kilometres) dual carriageway link past the planned Nexus 25 site. The road would then continue in a south-easterly direction to West Hatch Lane, where an all-movement, grade separated junction is proposed to allow access to Hatch Beauchamp, Henlade and surrounding communities, and the A378. This option is identical to the Pink option from this point onwards to Southfields Roundabout. The total length of the Blue option is 8.7 miles (14.1 kilometres), plus the 1.2 miles (2 kilometres) spur leading to M5 junction 25.
- The **Orange option** commences at the M5 approximately 2.1 miles (3.5 kilometres) south of junction 25 at a proposed new two-bridge roundabout which would form a new all-movements junction between the new A358 and the motorway. The proposed road initially takes a north-easterly course towards Henlade before arcing around the north of Stoke Hill. In contrast to the Blue option, there is no link to junction 25 from this location, and therefore no junction at Stoke Hill. This option is identical to the Blue option from this point onwards. The total length of the Orange option is 9.5 miles (15.3 kilometres).

Figure 1-2 : Route options presented at the public consultations



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1.2. Scheme proposal

1.2.1. The proposed scheme would provide a dual carriageway along the length of the A358 between Taunton and Ilminster in Somerset, connecting the A303 at Ilminster to the M5 motorway to the north. The scheme would include grade separated junctions with the purpose of providing a high-quality free flow journey for those using the route, with the removal of at-grade junctions and direct accesses.

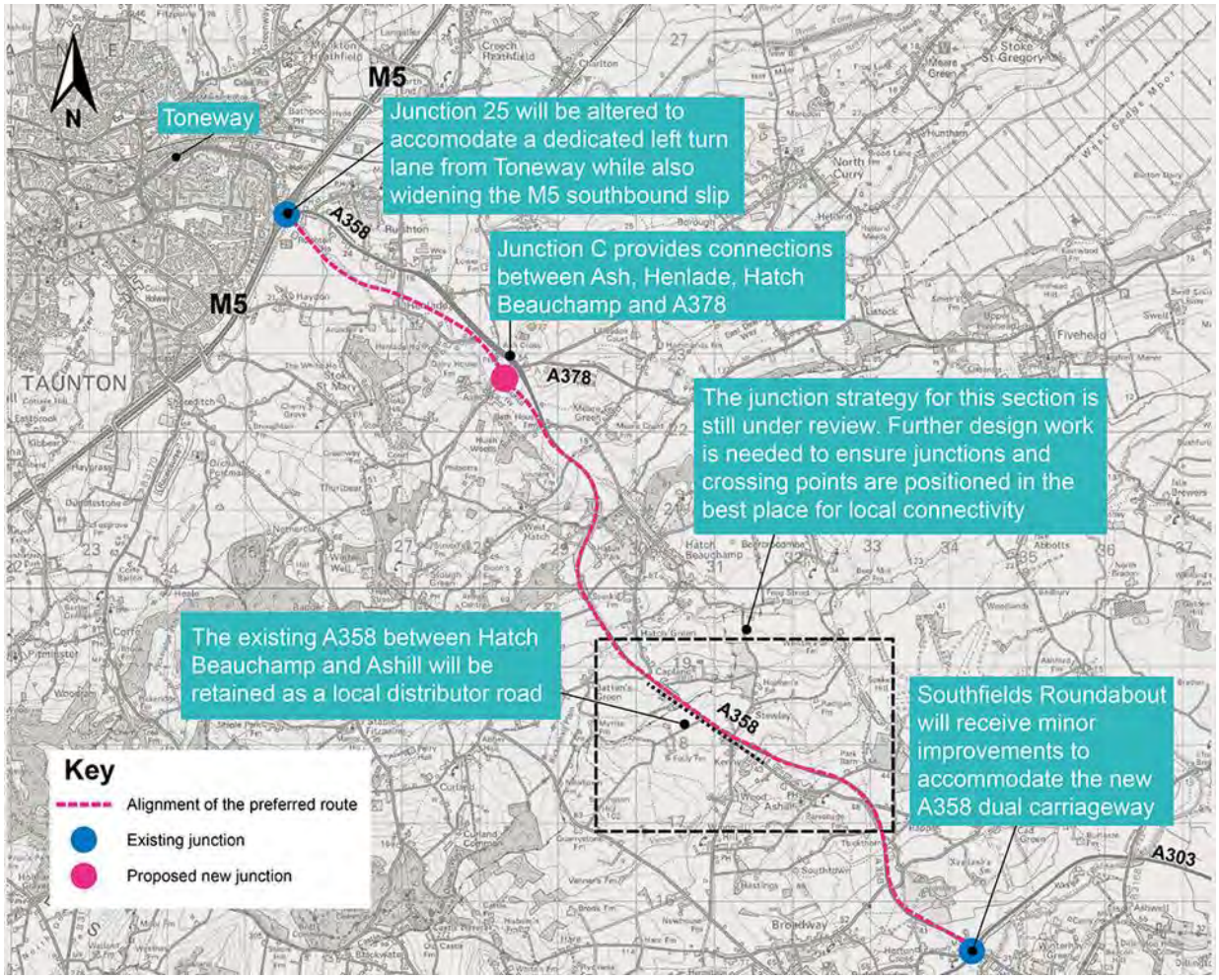
1.2.2. The Preferred Route Announcement (PRA) on the 13 June 2019 identified the Pink Modified option as the preferred route option (PRO), (refer to the Scheme Appraisal Report (SAR) for details of the development of the Pink option to the Pink Modified option).

1.2.3. The Pink Modified option would comprise online widening between West Hatch Lane and Southfields Roundabout. This option would involve the re-use of a large amount of the existing A358 corridor, and between West Hatch Lane and Henlade the route would pass close to the A378 junction at Mattocks Tree Green. This would enable direct connections between the proposed road and the A378. The Pink Modified option retains

the bypass at Henlade, connects with the A378, and connects directly to junction 25 on the M5. A plan showing the Pink Modified option route is shown in Figure 1-3 below.

1.2.4. The scheme would provide a dual carriageway along the length of the A358 between Taunton and Ilminster in Somerset, connecting the A303 at Ilminster to the M5 motorway to the north. The scheme would include grade separated junctions and, with the purpose of providing a high-quality free flow journey for those using the route, the removal of at-grade junctions and direct accesses.

Figure 1-3 : Pink Modified option



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1.3. Scope of report

1.3.1. The objectives of the report are:

- to present the methodology used and identify any constraints during the great crested newt (GCN) surveys within 400m of the Pink Modified option

- to present the results of the Habitat Suitability Index (HSI) assessment for all ponds and other potentially suitable waterbodies
- to present the results of the eDNA and presence / absence and population assessment surveys
- to present the relative abundance of the GCN populations

1.3.2. The report does not provide any detailed impact assessment or recommendations for mitigation as this aspect will be developed by the RDP DIP supplier during PCF Stage 3 of the scheme.

1.3.3. Guidance on ecological assessment recommends that all ecological features that occur within a zone of influence (ZoI) for a proposed scheme are investigated (Chartered Institute of Ecology and Environmental Management (CIEEM), 2016)[1]. In 2017, all ponds within 500m of the Pink Modified option scheme footprint were assessed for great creased newt suitability. This buffer was reduced to 400m in 2019 (in agreement with Natural England) as a proportional approach.

1.4. Legislation

1.4.1. GCN are afforded full protection under the *Conservation of Habitats and Species Regulations 2017* (as amended) and the *Wildlife and Countryside Act 1981* (as amended).

1.4.2. Under Regulation 43 of the *Conservation of Habitats and Species Regulations* it is illegal to:

- Deliberately capture, injure or kill a GCN
- Deliberately disturb a GCN (in particular, disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong)
- Deliberately take or destroy the eggs of GCN
- Damage or destroy a breeding site or resting place of GCN

1.4.3. Under Schedule 5 of the *Wildlife and Countryside Act 1981* it is illegal to:

- Intentionally or deliberately kill, injure or take any GCN
- Possess or control any live or dead specimen or anything derived from GCN
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protected by GCN
- Intentionally or recklessly disturb GCN whilst they are occupying a structure or place used for that purpose

[1] Chartered Institute of Ecology and Environmental Management (2016) Guideline for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Costal.

1.4.4. GCN are also listed as an Annex II species of the *EU Habitats Directive*, meaning they meet the criteria for site selection of Special Areas of Conservation to specifically conserve this species. Site selection is based on evidence of a large and robust population of GCN.

1.5. Status of great crested newt at national level

1.5.1. GCN are widely distributed throughout the lowland areas of Great Britain but are absent from Ireland. Their populations have declined over the last century across Europe, including Britain, mainly because of habitat loss and deterioration.

1.5.2. Historically, GCN were listed as a *UK Biodiversity Action Plan* (BAP) species and are now listed as a species of 'principal importance for the conservation of biodiversity in England' under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006*. Following the production of *Biodiversity 2020*, the national strategy for England, actions were identified by experts to help in the recovery of populations of the S41 listed species. Actions identified for the recovery of GCN include the following:

i. Create, restore and manage ponds to provide breeding sites for great crested newts, and manage surrounding terrestrial habitats sympathetically.
ii. Develop and implement methods and policies to remedy reversible adverse impacts at the population level, notably introduction of fish and invasive plants.
iii. Develop and implement a surveillance plan to meet data needs at all spatial scales, for all appropriate stakeholders.
iv. Review land use regulation and propose changes to improve outcomes for great crested newts.

1.6. Status of great crested newt at county level

1.6.1. Although the UK BAP has been superseded, BAPs are still widely used at county level to support *Biodiversity 2020*. GCN are not listed as a species on the *Somerset BAP*, as it is considered that Somerset contains significant populations of GCN. However, ditches and ponds are listed as a *Somerset BAP* habitat, which benefits this species through habitat creation and maintaining habitat connectivity.

1.7. Great crested newt ecology

1.7.1. The GCN annual cycle commences on emergence from hibernation. They will move from their hibernation sites between February and April toward breeding ponds. GCN breed, and live during breeding season, in a wide range of natural, semi-natural and man-made aquatic habitats including marshes, reed beds, wet ditches and ponds. They spend the spring and summer moving between water and land to satisfy feeding and shelter needs, as well as to find mates. Most adult newts move away from ponds and into terrestrial habitat between May and July. Suitable terrestrial habitat typically includes

woodland, scrub, hedgerows and less intensively managed grassland. They seek out crevices and holes in the ground to spend the autumn, and regularly emerge to disperse and forage in warmer, wetter conditions. They will hibernate over winter once temperatures regularly fall below 5°C overnight.

1.7.2. GCN are typically known to range up to between 400m and 500m from breeding ponds in search of feeding and hibernation sites. Some GCN have been found to move over considerable distances (up to 1.3 kilometres from breeding sites), however the majority inhabit an area much closer to the pond. The quality of the terrestrial habitat near to breeding ponds is important, as are the lack of barriers to dispersal (such as watercourses or busy roads).

1.7.3. GCN often exist in metapopulations. A metapopulation is a group of associated populations. That is, a metapopulation is made up from newts which breed in, and live around, a cluster of ponds. There will be some interchange of newts between ponds, although most adults consistently return to the same pond to breed. Metapopulations are much less vulnerable to habitat changes than populations based on single breeding ponds[2].

[2] Langton, T.E.S., Beckett, C.L. and Foster, J.P. (2001). Great Crested Newt Conservation Handbook, Froglife, Halesworth.

2. Methodology

2.1. Desk study

2.1.1. A desk study was undertaken to identify records of great crested newt (GCN) within the study area and up to a distance of 2 kilometres from all three route options. At the time of the desk study and subsequent surveys, there were three scheme options under consideration (Orange option, Blue option and the Pink option). Records were acquired from the Somerset Environmental Records Centre (SERC) in 2016. The results can be found within Appendix A.

2.1.2. Ponds within 500m of the three scheme options were identified using the MAGIC (Multi-agency geographic information for the countryside) online viewer tool (Department for Environment Food and Rural Affairs (Defra), 2017).

Habitat Suitability Index Assessment

2.1.3. All waterbodies identified within the desk study were assessed for their potential to support GCN using the standardised Habitat Suitability Index (HSI) methodology (Oldham et al, 2000). The HSI is a measure of suitability and incorporates ten indices, all of which are environmental factors known to affect this species.

2.1.4. The results are expressed as an HSI score between 0 and 1, with 0 being unsuitable habitat and 1 representing optimal habitat, as shown in Table 2:1. It is considered that ponds with a higher overall HSI score are more likely to support GCN than those with a lower score. The method is not sufficiently precise to conclude that ponds with a high score will support newts, or that any pond with a low score will not. It is therefore a tool to support, rather than a substitute for, GCN surveys.

Table 2:1 : Habitat Suitability Index scores

HSI Score	HSI Category	Predicted presence
<0.50	Poor	3%
0.50 – 0.59	Below Average	20%
0.60 – 0.69	Average	55%
0.70 – 0.79	Good	79%
>0.80	Excellent	93%

Source: Oldham et al (2000)

2.2. GCN presence / absence and populations surveys

2.2.1. At the start of the survey season the Development Consent Order (DCO) date was May 2018. Due to this, ponds identified in the early part of 2017 were subject to an initial presence / absence surveys and population surveys, if required.

2.2.2. Ponds given a 'Poor' score (<0.5) by the HSI assessment were generally scoped out of further surveys, however, professional judgement was also used to determine suitability.

2.2.3. Those ponds deemed suitable to support populations of GCN were subject to presence / absence surveys. The surveys were undertaken in accordance with the *Great Crested Newt Mitigation Guidelines (English Nature, 2001*).

2.2.4. Each survey was undertaken by a Natural England GCN Class Licence holder and assistant between March and mid-June 2017. Initially four visits per pond were completed to assess presence / absence. A further two surveys were completed where GCN were present in order to ascertain a population estimate. At least three survey methods were utilised for each visit. These included:

i. Bottle trapping: bottle traps are 2 litre plastic bottles with inverted funnels, which are set in the water at approximately 2m intervals all around the pond's edge using canes. They are set in the evening ensuring an air bubble is present and left overnight to allow amphibians to explore and get caught inside. They are removed the next morning after no more than 17 hours.

ii. Torching: shortly after dusk, the pond is systematically searched from the bank using a high power (100,000 candle power) torch and counts made of any newts present.

iii. Egg searching: examination of potential egg laying substrate such as marginal vegetation, dead leaves and litter. GCN lay their eggs singularly in folds of substrate and can be identified by their colour and size. Once a confirmed GCN egg is identified (confirming the presence of a breeding pond) no more egg searching is undertaken.

iv. Netting: Using a long-handled dip-net, GCN can be captured by sampling the area around the pond edge. The edge of the pond is systematically sampled, with at least 15 minutes of netting per 50m of shoreline. Netting is not a suitable indication of population size.

v. Refuge Search: This was used as an additional method if one of the other three methods could not be used. Refuges such a rocks, logs, moss, and discarded debris were subject to a search. Population size class estimates were calculated according to the Great Crested Newt Mitigation Guidelines (2001). It is the peak adult count per survey visit that is significant, with juveniles not included for population estimates. Although these are very broad classifications, they can inform licensing and mitigation requirements. Table 2:2 summarises its application.

Table 2:2 : Population size class estimates

Peak adult count in a single survey visit	Population size class
Maximum counts up to 10	Small
Maximum counts between 11 and 100	Medium
Maximum count >100	Large

2.3. eDNA Survey

2.3.1. Towards the end of the 2017 survey season the DCO date changed from May 2018 to September 2019, therefore allowing enough time to undertake eDNA surveys. Therefore, suitable waterbodies from this point on were subject to eDNA surveys.

2.3.2. When GCN inhabit a pond, cells containing their DNA are continually sloughed off into the water. The eDNA survey involves the collection of 20 water samples from around the perimeter of a waterbody, which are then subject to laboratory analysis of the environmental DNA present in the water column to assess presence or absence of GCN.

2.3.3. eDNA test kits were obtained from SureScreen Scientific Ltd in order to collect water samples to enable tests to be carried out of the waterbodies to determine the presence of great crested newt. The methods used for water sample collection and eDNA analysis were those described by Biggs et. al. 2014[3].

2.3.4. eDNA surveys were undertaken in June 2018, May 2019 and May 2020. Detailed survey dates are provided in Appendix D. Surveys were undertaken by experienced ecologists holding a Natural England GCN Class Licence (Level 1 CL08).

2.4. Site status assessment

2.4.1. Following the completion of the surveys an assessment of the status of the site was then made. The importance of the site takes into account the population size class estimate but also several other factors:

- The quality and rarity of the habitat and population
- How connected the population is to the wider area
- The local significance of the population
- The size of the meta-population

[3] Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, 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.

2.5. Survey constraints

2.5.1. Where GCN were not identified as occupying a pond or pond cluster, this does not guarantee their absence. There is always the risk of GCN being over-looked due to timing of surveys and scarcity of GCN on site.

2.5.2. Estimating population can be fraught with issues due to the detectability of GCN, the complex population dynamics and mobility between ponds amongst other factors. As a result, where licensing is required a maximum estimate is implemented.

2.5.3. Due to programme changes and access permissions being granted at various times during the project, surveys for GCN started in 2017 and continued into 2018, 2019 and 2020.

2.5.4. HSI's and surveys were undertaken on all waterbodies within 500m of the three route options where access allowed in 2017 and 2018. A meeting was held with Natural England in April 2019 to discuss a more proportional approach to surveys, this resulted in the survey buffer being reduced to 400m. In June 2019 the preferred route was announced and the surveys only focused on ponds within 400m of the Pink Modified option.

2.5.5. As a result, waterbodies between 400m and 500m of the Pink Modified option, 53, 63, 77, 79, 125, 142, 143, 144, 151, 165, 166, 151 and ditches 44 and 105, were scoped out.

2.5.6. Waterbodies surveyed that now fall outside the 400m Pink Modified Option buffer are 27, 50, 57, 58 71, 72, 74, 75, 78, 86, 86a, 87, 89, 113, 118, 134, 139, 141, 142, 150 and 154, and ditches 52, 53, 54, 92, 97, 98 and 104. Of these only pond 154 returned a positive eDNA result for GCN.

2.5.7. Waterbodies 60, 60a, 60c and 61, and ditches 59, 60, and 62 have not been subject to a HSI survey as no access has been granted. These surveys will be undertaken in 2021.

2.5.8. Waterbodies identified with positive eDNA samples were due to have population surveys in 2020. However, due to the Covid-19 pandemic these could not be undertaken. As a result, population surveys for ponds 67, 116, 117, 115b and 120a will be undertaken in 2021.

2.5.9. Pond 167 was not subject to surveys, although the HSI score was 0.73 it was deemed unsafe to survey as it was surrounded by steep banks. Although there is good connecting habitat to pond 167 it is somewhat isolated. Pond 147 is within 250m but has been assessed as unsuitable. It is considered unlikely GCN are present within this pond.

2.5.10. Pond 64 was only subject to three surveys; the pond was surrounded by steep sided slippery banks and torching was only possible from a distance. Due to health and safety concerns and torching being ineffective, the survey ceased. Ponds within 250m were considered unsuitable because they were dry or returned a negative eDNA result. It is therefore considered unlikely that pond 64 supports breeding GCN.

2.5.11. Ponds 35 and 84c have not been subject to HSI or further surveys so will need to be assessed in 2021.

2.5.12. All suitable ponds within the 400m buffer of the scheme had HSI surveys completed. Ninety-one waterbodies were deemed unsuitable for HSI surveys as they were either dry, isolated or had flowing water. These ponds being 22, 28, 29, 31, 32, 44, 55, 65,70, 80, 83, 85, 92, 93, 94, 95, 96, 112, 114, 119, 121, 129, 133, 137, 138, 140, 147, 148, 149, 112b, 112c, 131a, 133a, 31a, 55a, 69d, 69e, and 69f, and ditches 38, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 55, 58, 64, 65, 67, 68, 69, 70, 71, 72, 74, 75, 78, 79, 80, 81, 82, 83, 84, 85, 85a, 86, 87, 88, 89, 90, 91, 93, 95, 96, 97, 99, 100, 101,106, 107, 109, 110, 111 and 112. However, this is not considered to be a constraint on the results of the surveys as waterbodies that dry regularly during the breeding season are unlikely to support breeding populations of GCN. Flowing water does not support GCN, and isolated ponds were cut off from the scheme footprint by busy roads.

2.5.13. Pond 82 was subject to a HSI and scored 0.51, below average. No surveys have been undertaken as the pond was surrounded by thick impenetrable bramble meaning that none of the survey techniques could be used, as no access to the pond's edge was possible. The pond is located between the A358 and the D099, although the A358 is considered a substantial barrier to movement, the D099 is a quieter road which GCN could potentially cross. Although the surrounding habitat is good for GCN, there are no suitable waterbodies within 250m of this pond. There is a watercourse 235m east of the pond further restricting access. It is therefore considered unlikely that GCN will be present at this pond.

2.5.14. Ponds 30b, 90, 90a and 91 dried during the survey season resulting in too few surveys being undertaken. However, this is not considered to be a significant constraint as if these ponds regularly dry during the breeding season, they are unlikely to support breeding GCN.

2.5.15. Ponds 126, 127, 128, 217a and 127b scored between below average and average in the HSI survey and an eDNA survey was proposed. However, upon the eDNA survey the ponds were dry and no eDNA sample could be taken. This is not considered to be a significant constraint as if these ponds regularly dry during the breeding season, they are unlikely to support GCN.

2.5.16. Due to dense vegetation, only 85% of pond 37 was accessible for eDNA sampling. Only ten percent of pond 47 was accessible due to steep vegetated banks, and

twenty eDNA samples were taken from the north section of the pond. Sixty percent of pond 67 was accessible although 20 eDNA samples were taken.

2.5.17. Access to ponds 97 and 98 (joined) had a small percentage of the bank that was not accessible, however 20 eDNA samples were taken. Due to dense vegetation, only 60% of pond 100 was accessible to take eDNA samples.

2.5.18. Pond 23, 132, 129, 145 and 145a were surrounded by dense vegetation therefore only a small section of the ponds was accessible to undertake an eDNA sample. Pond 115b had a fallen tree across it which prevented access around the whole pond, however 20 eDNA samples were taken.

2.5.19. Several ponds were subject to high proportions of vegetation cover. In most of these instances searches of terrestrial natural refugia were undertaken to increase the survey effort, or as alternative survey methods.

3. Results

3.1. Desk study

3.1.1. The data search results from Somerset Environmental Records Centre (SERC) returned two records of great crested newt within 2 kilometres of the three scheme options. One record from 2002 located approximately 143m from the Pink Modified option and the other in 2002 located approximately 1.5 kilometres from the Pink Modified option. One-hundred and eighty-six waterbodies were identified within 400m of the Pink Modified option. A map showing the location of SERC results is provided in Appendix A.

3.2. Description of waterbodies

3.2.1. A description of the waterbodies identified within 400m of the Pink Modified option along with their distance from the proposed construction footprint is provided in Appendix B. The waterbodies consist mainly of ponds within arable and grazed farmland; there are also ponds within woodland habitat and garden ponds. Many of the waterbodies identified during the desk study were ditches.

3.3. Habitat suitability index

3.3.1. A total of 180 waterbodies were identified within 400m of the Pink Modified option. A total of 82 had a habitat suitability index (HSI) survey completed, the other waterbodies were assessed as unsuitable for supporting breeding great crested newt (GCN) due to either being dry during the breeding season, isolated by significant barriers or were flowing water.

3.3.2. The detailed results of the HSI surveys can be found within Appendix C. Ponds that did not receive a HSI assessment are detailed above in Section 2.5.11. A map showing the results of the HSI surveys is shown in Appendix D.

3.4. Presence / absence surveys

3.4.1. Detailed results of the presence / absence surveys are provided in Appendix E and a map in Appendix F.

3.4.2. Of the 180 ponds, presence / absence surveys were conducted on 22 ponds, those ponds being 33, 38, 54, 64, 88, 90, 91, 110, 111, 115, 115a, 30a, 30b, 36a, 36b, 40a, 64b, 84a, 86b, 90a and A2, and ditch 001.

3.4.3. GCN were found to be present in ponds 54 and 40a.

3.4.4. GCN were likely absent from the remaining waterbodies that were subject to a presence / absence survey, as no evidence of GCN was found during the surveys of these ponds.

3.4.5. In addition to the GCN, the surveys found populations of smooth newt *Lissotriton vulgaris* and palmate newt *Lissotriton helveticus.*

3.5. eDNA Presence / likely absence

3.5.1. Of the 180 waterbodies, eDNA surveys were conducted on 40 waterbodies. Those ponds being 34, 37, 47, 67, 96a, 97 and 98 (joined), 99, 100, 101, 102, 103, 104, 105, 106, 106a, 107, 108, 109, 116, 117, 118, 120, 120a, 123, 126, 127, 128, 131, 132, 135, 136, 145, 145a, 146, 115b, 119a, 127a, 127b and 244a, and ditch 39.

3.5.2. Five ponds had positive eDNA results; ponds 67, 116, 117, 115b and 120a. Population surveys on these ponds are yet to be carried out. The results of the eDNA surveys can be viewed in Appendix G and mapping in Appendix E.

Table 3:1 : Summary of eDNA results 2017 to 2020

Pond number	Date of eDNA survey	Land parcel	Distance from Pink Modified option (m)	eDNA result
34	20/06/2019	ST132051	200m	Negative
37	08/05/2019	ST304835	240m	Negative
47	25/05/2020	ST277430	150m	Negative
67	26/06/2020	ST324729	195m	Positive
96a	24/06/2018	WS78616	139m	Negative
97 and 98 (joined)	20/06/2019	WS78616	265m	Negative
99	20/06/2019	WS78616	169.5	Negative
100	11/05/2018	WS44365	10.5	Negative
101	20/06/2019	WS78633	97.2	Negative
102	27/06/2019	WS78633	134.5	Negative
103	20/06/2019	WS78633	266	Negative
104	27/06/2019	WS78633	62	Negative
105	27/06/2019	WS78633	Adjacent to the scheme	Negative
106	27/06/2019	WS78633	7	Negative
106a	27/06/2019	WS78633	7	Negative
107	27/06/2019	WS78621	Within scheme footprint	Negative
108	19/06/2019	WS78633	219	Negative
109	19/06/2019	WS78633	155	Negative
116	19/06/2019	WS78646	397	Positive
117	19/06/2019	WS78646	320	Positive
118	19/06/2019	WS78646	397	Negative
120	12/06/2019	ST98650	Within scheme footprint	Negative
120a	09/05/2019	WS75255	90	Positive
123	24/04/2019	WS59859	244	Negative
126	12/06/2017	WS78646	196	Dry
127	12/06/2017	WS78646	257	Dry
128	12/06/2017	WS78701	117	Dry
131	25/06/2019	WS78713	80	Negative
132	25/06/2019	WS78713	26	Negative
135	13/06/2017	ST324729	148	Negative

Pond number	Date of eDNA survey	Land parcel	Distance from Pink Modified option (m)	eDNA result
136	11/05/2018	ST324729	122	Negative
145	24/06/2019	WS64776	248	Negative
145a	24/06/2019	WS64776	248	Negative
146	20/06/2019	WS78616	300	Negative
115b	09/05/2019	ST107626	Within scheme footprint	Positive
119a	25/06/2019	WS78646	357	Negative
127a	12/06/2017	WS78646	266	Negative
127b	12/06/2017	WS78646	267	Negative
244a	21/05/2019	U00053	102	Negative
D39	30/04/2019	ST304801	107	Negative

3.6. Population class size and metapopulations

3.6.1. Results for population surveys are displayed in Appendix G, detailing the survey methods and weather conditions. Pond 54 was subject to six GCN surveys using three survey methods to provide an estimate of population size. The maximum number of GCN found during any one survey was 13 males and two female adults. The lowest maximum count for any one survey was no GCN recorded. These were identified through torching and bottle trapping. No GCN eggs were found during these surveys. Pond 55 is within 250m of pond 54, and as this pond was dry during the GCN breeding season, it is unlikely to support breeding GCN. The population size is classed as a medium population.

3.6.2. Pond 40a was subject to six GCN surveys using three survey methods to provide a population estimate. The maximum number of GCN found during any one survey was one male and three females which were identified through torching. Pond 40 and pond 143 are within 250m of pond 40a. Pond 40 was considered unsuitable for GCN due to its size and the presence of wildfowl, and pond 143 was not subject to a survey as it is over the 400m buffer. However as there is suitable connecting habitat between the three ponds, there is potential that GCN will use these waterbodies. The population class is classed as a small population.

3.6.3. Ponds 116 and 117 are next to each other and have both had the presence of GCN identified through eDNA surveys. Ponds 118 and 119a are located within 250m of pond 116 and 117 and although no GCN have been recorded at these ponds, there is good connecting habitat between all four ponds. Therefore, there is the potential that these ponds may be used by GCN in the future.

3.6.4. Pond 115b has had the presence of GCN identified through eDNA surveys. Ponds 115 and 115a are located next to this pond but presence / absence surveys did not identify GCN as being present. However, as they are located in close proximity to one another there is the potential these ponds may be used by GCN in the future. Pond 120a is also located within 250m of these ponds; GCN have been confirmed here through eDNA surveys. Although there is a road between the ponds, it is a country lane and not expected to be a barrier to dispersal. Pond 123 is located within 250m of pond 120a and

although returned a negative eDNA result for GCN, the pond may be used by GCN in the future. It is possible that these ponds are part of the same metapopulation.

3.6.5. Pond 67 has had the presence of GCN identified through eDNA surveys. Although this pond is not within 250m of any other ponds, pond 154 (over 400m from the Pink Modified option) is 340m away and has had the presence of GCN confirmed through eDNA surveys. These ponds are separated by a road, this is however a country lane and not considered a significant barrier to dispersal. As there are no other ponds within 250m of pond 67 there is the potential that these ponds form a metapopulation.

3.7. Site survey status

3.7.1. GCN are locally common in Somerset despite a national decline. Two ponds from the population surveys identified the presence of GCN while eDNA confirmed the presence of GCN in five ponds; it is therefore considered populations may be defined as locally important.

4. Conclusion

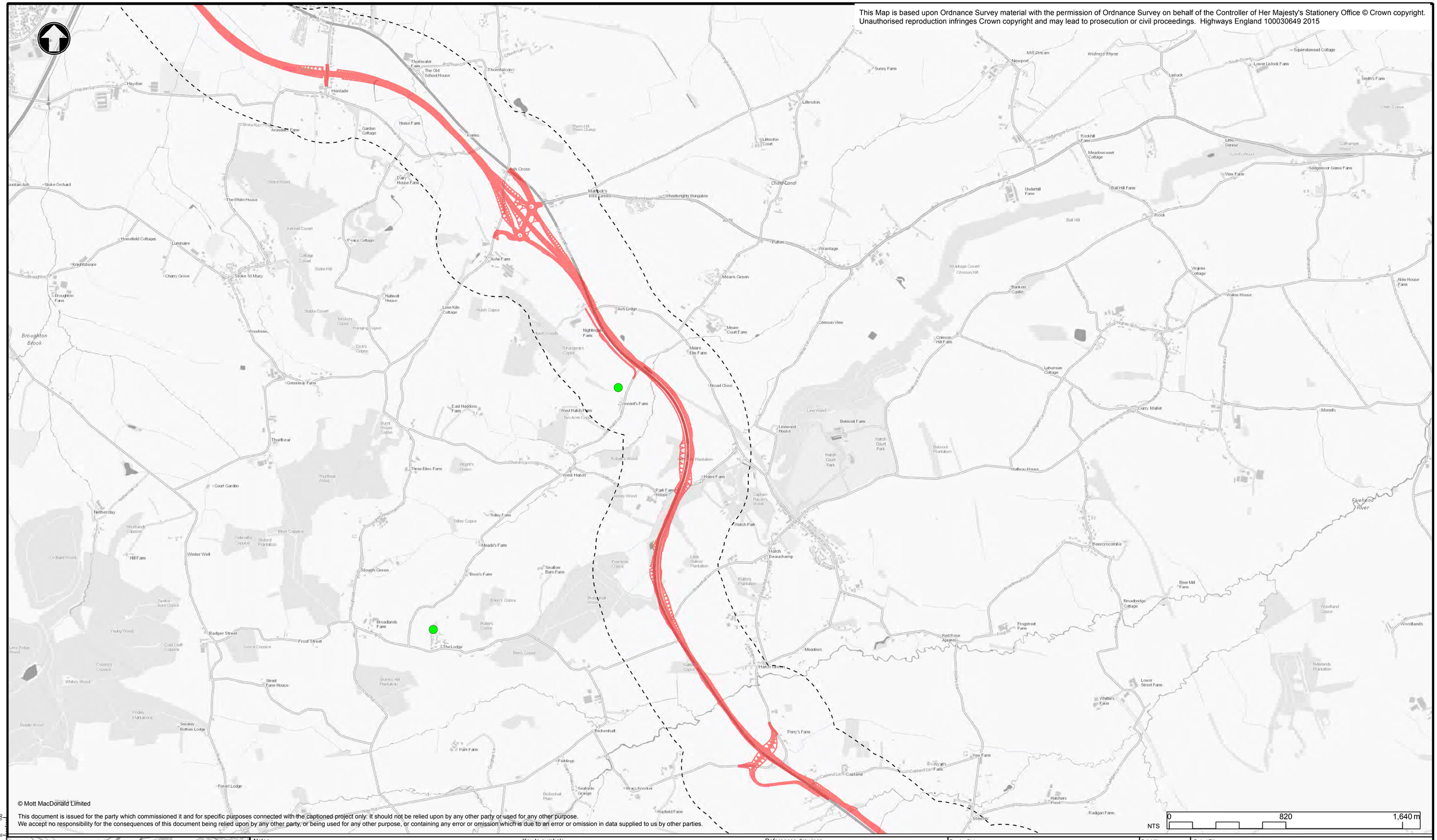
4.1.1. A medium population of greater crested newts (GCN) has been identified within 23m of the Pink Modified option. As pond 54 is in close proximity to the scheme footprint, impacts on terrestrial habitat associated with this population are likely to be significant which could have an impact on the viability of the population. Pond 40a has identified a small population of GCN but due to the distance of this pond from the scheme; 379m, impacts on terrestrial habitat associated with this population are likely to be relatively minor and not anticipated to have an impact on the viability of the population.

4.1.2. Ponds 60, 60a, 60c, and 61, and ditches 59, 60, and 62 were not subject to any surveys due to no access being granted and will require a habitat suitability index and potentially further surveys in 2021.

4.1.3. Ponds 67, 115b, 116, 117 and 120a have had eDNA surveys undertaken but will require population surveys in 2021.

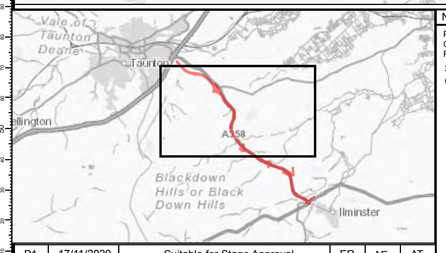
4.1.4. The impact assessment and any mitigation measures required will be fully detailed within the Environmental Statement.

Appendix A: Somerset environmental records



NTS

0 820 1,640 m



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	17/11/2020	Suitable for Stage Approval	ER	AE	AT

Notes

Pink Modified Scheme, Mott MacDonald (2018)
GCN Historical Records, Somerset Environmental Records (2020)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink modified scheme option
- 400m buffer
- Great Crested Newt Historical Records

References drawings

Drawing Status: Suitable for Stage Approval

Suitability: S4

Mott MacDonald Sweco

Stoneham Place
Stoneham Lane
Southampton
SO50 9NW

Tel : +44 (0)23 8062 8800
Fax : +44 (0)23 8062 8801
www.mottmac.com

Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Great Crested Newt Somerset Biological Records

Scale	Designed	Drawn	Checked	Approved
NTS	AE	ER	AE	AT
Original Size	**Date**	**Date**	**Date**	**Date**
A1	17/11/2020	17/11/2020	17/11/2020	17/11/2020

Drawing Number: HE PIN | Originator | Volume
HE551508 - MMSJV - EBD -
000 - DR - LB - 0092
Location | Type | Role | Number

Project Ref. No.: 370774

Revision: P1

Appendix B: Description of waterbodies

Pond reference	Description of waterbody	Distance from the Modified option (metres)
22	Dry pond.	165
28	Dry pond.	391
29	Dry pond.	79
30a	Balancing pond choked with common reed and some bulrush. Very shallow water present, <5cm deep over majority but slightly deeper on one side.	47
30b	As above.	95
31	Pond scoped out due to the A358 between the scheme and the pond.	375
31a	Pond scoped out due to the A358 between the scheme and the pond.	389
32	Dry pond.	221
33	Long pond with lots of leaf litter, turbid, overhanging scrub, bare earth banks and poached in places. Located within a boundary of grazed fields.	Within scheme footprint
34	Lined pond in garden surrounded by mown lawn.	200 (from main option)
36a	Small pond located between woodland and pastural field, broken trees in pond, leaf litter, shallow, less than 10cm deep ivy banks.	293
36b	Pond located between woodland and pastural field, broken trees in pond, leaf litter, shallow, about 10cm deep ivy banks, dry muddy edges.	254
37	Widened section of ditch forms a pond. Pond was shallow at less than 30cm deep and heavily silted on the bottom. Ducks present and tadpoles seen. Located in a closely mown garden, surrounding habitat was species poor semi-improved grassland and hedgerows.	240
38	Large pond in the middle of species poor semi-improved grassland. Dominant bulrush within the pond. Surrounding habitat hedgerows and arable fields.	300
40	A large lake with a small island in the middle. The habitat in the wider area consists of arable fields, hedgerows a line of trees and blocks of woodland.	400
40a	Lined feeding pond to pond 40 lake off natural issue.	379
47	Large pond surrounded by woodland, pasture and mown lawn. Silty bottom, reeds / sedges in majority of pond. Mostly exposed to sunlight but some trees around edge.	150
51	Very small and shallow within a small woodland and arable fields.	332

Pond reference	Description of waterbody	Distance from the Modified option (metres)
52	Shallow puddle on the edge of a woodland arable and hedgerows surrounding.	120
54	Irregular shaped, with small island in the middle ducks and fish present.	23
55	Dry pond located within a block of trees surrounded by arable fields and a hedgerow.	65
55a	Dry large rectangular road drainage pond.	Directly impacted
56	Small garden pond entirely covered in duckweed. water barely visible.	274
56a	Small shallow garden pond, flag iris throughout pond.	295
59	Man-made/managed pond for duck shooting - hides and plastic decoy ducks present	1.5
60	No access.	377
60a	No access.	295
60c	No access.	315
61	No access.	292
62	Man-made/managed pond for duck shooting - hides and plastic decoy ducks present	32
64	Dug out as part of farmyard operation. Steep sided banks, 100% cover of duckweed. Pipes from farmyard outflow into pond.	391
64a	Dug out as part of farmyard operation. Steep sided banks, 100% cover of duckweed.	393
64b	Small pond in between agricultural fields. Dense algae / grass showing nutrient enrichment.	194
65	Dry pond located in a hedgerow surrounded by arable fields.	91
67	Pond heavily shaded, covered in pondweed. Surrounded by arable fields. Connected to hedgerows with some woodland within a kilometre. No other vegetation within pond.	195
68	Pond located within small woodland. The pond is shaded, with vegetation, poor water quality. The small woodland block is connected to hedgerows. Arable fields are the dominant habitat nearby.	216.5
69a	Old bathtub sunk into the ground.	78
69b	Stone walled filtered goldfish pond, plastic lined, chicken wire structure covering.	98
69c	Raised fish pool, approx. 2m deep, stone wall, filter creating water flow, large koi fish.	86
69d	Dry pond located on a hedgerow boundary between arable fields.	168
69e	Dry pond located on a hedgerow boundary between arable fields.	177
69f	Dry pond located on a hedgerow boundary between arable fields.	162
70	Dry pond on the edge of a woodland.	368
72	Small pond, which dries annually surrounded by mature trees and scrub, woodland located to the	400

Pond reference	Description of waterbody	Distance from the Modified option (metres)
	west of the pond. Connecting hedgerows and arable fields adjacent.	
80	No pond present.	283
81	Small turbid pond in field corner, surrounded by arable land.	392
82	Small pond surrounded by thick bramble. Located in a petrol fuelling yard.	7
83	Dry pond located on the edge of a woodland with arable land adjacent.	52.5
84	Garden pond located with an closely mown amenity grassland. Ducks present, duck island in the middle of the pond.	25
84a	Small garden pond lined with rocks.	93
86b	Pond in top corner of field between two mature trees, within scrub hedgerow. Brackish water.	334
86c	Walled fishpond with filter.	5
84b	Concrete lined garden pond.	94
84c	Large garden pond, unlined.	62
85	Dry pond located with a rough grassland with trees.	297
86a	Deep pond, willow scrub, on hedge line, between pasture fields. Trees growing in middle of pond.	
88	Farmland pond, with turbid water and trees and scrub overhanging. Located in a hedge line surrounded by arable land.	400
90	Small pond with, lots of leaf litter, shallow banks located in a small woodland. Connected to wider landscape by hedgerows.	12
90a	Small pond west of pond 90, in woodland. Many midge larvae.	21
91	Small pond located on the edge of a woodland, leaf litter, shallow banks, lots of midge larvae present, broken branches in middle.	13.5
92	Dry pond located in woodland.	196
93	Dry pond located in woodland.	211
94	Dry pond located in woodland.	235
95	Dry pond located in woodland.	222
96	Dry pond located in woodland.	139
96a	Woodland pond, with shallow banks, shaded.	139
97 and 98 (joined)	Two ponds on the map but joined, sloped backs, fallen wood and debris in pond.	265
99	Small pond on the edge of a woodland, shaded, lots of leaf litter.	169.5
100	Small pond located with woodland between two arable fields.	10.5
101	Pond on the edge of a woodland, next to arable fields.	97.2
102	Woodland pond.	134.5

Pond reference	Description of waterbody	Distance from the Modified option (metres)
103	Large pond located on the edge of a woodland.	266
104	Shaded turbid pond, with leaf litter decomposing in shallow water and facilitating grass growth in the middle.	62
105	Shaded pond located on the edge of a woodland. Lots of leaf litter.	Adjacent to the scheme
106	Large wooded pond with willow trees as emergent vegetation, shaded in places with leaf litter forming at base of the pond. Mixed woodland surrounding the pond with dense pendulous sedge common ivy, holly and bramble on banks. Water is slightly turbid but supports large numbers of invertebrates.	7
106a	Smaller woodland pond located close to pond 106.	7
107	Wooded pond with an irregular shape supporting few macrophytes, pendulous sedge and willow sp on banks, possible connection to small pond and ditch to the south. The pond was covered by a leaf litter layer with deadwood and emergent willow trees. Good invertebrate numbers.	Within scheme footprint
108	Pond filled with dense vegetation, located within a small woodland block with hedgerows connecting to larger areas of ancient woodland.	219
109	Large pond on the edge of a woodland and arable field. Filled with dense vegetation.	155
110	Circular pond located within a scrub area on the edge of an arable field. Pond is fed by a wet ditch.	Within scheme footprint
111	Pond in centre of field surrounded by willow scrub which is growing through the pond.	168
112	Dry pond located in small woodland between agricultural fields.	123.5
112b	Dry pond located in small woodland between agricultural fields.	123.5
112c	Dry pond located in small woodland between agricultural fields.	123.5
114	Dry pond located in the corner or an agricultural field.	384
115	Small circular pond located within a woodland between the A358 and a country road. Connected to other areas of woodland by hedgerows. Fly tipping in pond.	Within scheme footprint
115a	Irregular shaped pond with no macrophyte cover. Adjacent to pond 115 and 115b. Fly tipping pond.	Within scheme footprint
115b	Turbid pond, no macrophyte cover in the pond and the pond was heavily shaded. Adjacent to ponds 115 and 115a.	Within scheme footprint
116	Small shaded pond surrounded by mature trees and scrub. Connected to the wider landscape by hedgerows.	397

Pond reference	Description of waterbody	Distance from the Modified option (metres)
117	Small pond within woodland, close to pond 116. Good terrestrial habitat. Pond clogged with crassula helmsii. Connected to the wider landscape by hedgerows.	320
118	Small woodland pond next to pasture with hedges and scattered trees.	397
119	Dry pond located on a roadside verge.	318
119a	Partially wet ditch with dry areas covered by dense hemlock water dropwort. Ditch next to road and north of hedgerow. No visible macrophytes and low number of invertebrates as the ditch is used to drain the adjacent road.	357
120	Large lake bordered by dense scrub.	Within scheme footprint
121	Very small pond located within woodland on the edge of agricultural fields. Pond dries annually.	81
122	The pond is fed by ditch which is running water when there has been recent rain fall. The water is 100% turbid, which is also enclosed in a duck pen. No vegetation present in or around water body.	266
123	Small pond in corner of field surrounded by arable and grazed fields as well as well-connected hedgerows leading to small wooded areas. Habitat immediately around pond is good for foraging and refuge but this is a small area. Not much submerged vegetation and little that is suitable for egg laying.	244
124	Pond on the verge of being dry, located within a wooded areas between agricultural fields.	377
126	Small pond located in dense woodland on the edge of a county lane with agricultural fields surrounding.	196
127	Small pond located in dense woodland on the edge of a county lane with agricultural fields surrounding.	257
127a	Small pond located in dense woodland on the edge of a county lane with agricultural fields surrounding.	266
127b	Small pond located in dense woodland on the edge of a county lane with agricultural fields surrounding.	267
128	Small pond shallow pond with sloping banks, in an area of grassland on the edge of a road.	177
129	No evidence of pond just a small dry ditch.	228
131	Pond located on the edge for a semi-natural broadleaved woodland, adjacent to arable fields and hedgerows. Pond covered by duckweed.	80
131a	Waterbody located on the edge for a semi-natural broadleaved woodland, adjacent to arable fields and hedgerows. Pond covered by duckweed. This	66

Pond reference	Description of waterbody	Distance from the Modified option (metres)
	pond used to be part of pond 131 but has dried up in places forming two ponds.	
132	Small woodland pond.	26
133	Isolated pond located in a field south of the Southfields Roundabout.	109
133a	Isolated pond located in a field south of the Southfields Roundabout.	142
135	Shallow pond within mixed woodland, no macrophyte cover.	148
136	Shallow pond located in the same woodland as pond 135.	122
137	Isolated pond located at the entrance of Taunton Park and Ride.	212
138	Part of a fast flowing stream.	156
140	This is not a pond; it is part of ditch 47.	79
145	Pond next to slurry pit, water is dark and murky but apparently natural. Possible agricultural run-off with a couple of cows in the field as well. Very little marginal vegetation at current water level, slight shade with one bush on the northern edge. No macrophyte cover, water quality appears poor.	248
145a	Pond next to P145 description as above.	248
146	Shallow pond of the edge of a broadleaved woodland. No macrophyte cover, lots of leaf litter.	300
147	No pond present.	117
148	Dry pond located in small wood on the edge of an agricultural field.	145
149	Dry pond located in small wood on the edge of an agricultural field.	236
153	Tiny pond within small woodland / scrub block on field boundary. Water quality is bad, with some rubbish dumped. No marginal vegetation and almost 100% shading.	Within scheme footprint
167	A pond located under road bridge with turbid water and sediment, densely covered by a floating carpet of duckweed, water quality moderate with low invertebrate numbers and suffers from fly tipping and road run-off. The pond was surrounded by tall ruderal and trees,	48
244a	Lined garden pond with rough grassland and habitat piles next to the pond, offering hibernation opportunities. Pond is small, but with good egg laying vegetation.	102
A2	Small woodland pond.	45
D001	Ditch approximately 3.5 meters wide, surrounded by scrub poached by cattle. Surrounding landscape is arable fields and connecting hedgerows.	179.5
D004	Ditch with no obvious flow, poor water quality,	43.8

Pond reference	Description of waterbody	Distance from the Modified option (metres)
	located within a landscape of arable fields and connecting hedgerows.	
D038	Water flowing in ditch.	66
D039	Ditch has deep and steep banks. Ditch inundated with leave litter. Located within an arable field.	107
D040	Dry ditch.	298
D041	Flowing stream.	245
D042	Dry ditch.	132
D043	Dry ditch.	123
D044	Dry ditch.	97
D045	Dry ditch.	168
D046	Dry ditch.	65
D047	Dry ditch.	1.5
D048	No ditch present.	141.8
D049	Dry ditch.	Within scheme footprint
D050	Dry ditch.	260
D051	Dry ditch.	363
D055	Dry ditch.	286
D058	Flowing stream.	Within scheme footprint
D059	No access.	2
D060	No access	302
D062	No access.	75
D064	Same as ditch 58.	Within scheme footprint
D065	Dry ditch.	30
D066	Same as pond 88.	400
D067	Dry ditch.	2
D068	Dry ditch.	Within scheme footprint
D069	Dry ditch.	188
D070	Dry ditch.	3.5
D071	Dry ditch.	7
D072	Ditch with flowing water.	146
D074	Dry ditch.	377
D075	Dry ditch.	Within scheme footprint
D078	Dry ditch.	4.5
D079	Isolated ditch.	266
D080	Dry ditch.	254
D081	Dry ditch.	215
D082	Dry ditch.	180
D083	Dry ditch.	279
D084	Dry ditch.	282
D085	Dry ditch.	3
D085a	No ditch present.	93
D86	Dry ditch.	232
D087	Dry ditch.	85
D088	Dry ditch.	4

Pond reference	Description of waterbody	Distance from the Modified option (metres)
D089	Dry ditch.	0.5
D090	Dry ditch.	Within the scheme footprint
D091 (Same as 87)	Dry ditch.	85
D093	Partially dry ditch.	19.5
D095	Dry ditch.	187
D096	Dry ditch.	347
D097	Unsuitable for GCN.	361
D099	Dry ditch.	45
D100	Dry ditch.	79.4
D101	Dry ditch.	109
D106	Dry ditch.	386
D107	Dry ditch.	65
D109	Dry ditch.	217
D110	Dry ditch.	273
D111	Dry ditch.	Unknown
D112	Dry ditch.	Unknown

Appendix C: HSI results

Water Course ID	Distance from pink modified option (m)	Description of waterbody	Within 400m of the pink modified option	Date of HSI survey	Survey still required after HSI	Geographic location	Pond Area/m2	Permanence	Water quality	Shade	Waterfowl	Fish	Pond count	Terrestrial habitat	Macrophytes	HSI score	Habitat suitability rating
22	165	Dry pond	Yes	10/05/2018	No	DRY POND											
28	391	Dry pond	Yes	12/06/2017	No	DRY POND											
29	79	Dry pond	Yes	12/06/2017	No	DRY POND											
31	375	N/A	Yes	N/A	No	SCOPED OUT											
32	221	Dry pond	Yes	23/03/2017	No	DRY POND											
33	Within scheme footprint	Overgrown pond, in pasture	Yes	23/03/2017	No	1.00	0.80	1.00	0.67	0.60	1.00	1.00	1.00	0.33	0.31	0.71	Good
34	200 (from main option)	Lined pond in garden	Yes	22/03/2017	Yes	1.00	0.10	0.90	0.67	1.00	1.00	0.67	0.43	0.67	0.81	0.63	Average
35	176	Unknown	Yes	n/a	Yes 2021												
37	240	Amenity pond with ducks	Yes	08/05/2019	No	1.00	1.00	0.5	0.67	40	0.01	0.67	0.43	1.00	0.36	0.49	Poor
38	300	Large pond in a field	Yes	17/02/2017	Yes	1.00	0.40	0.90	1.00	1.00	1.00	1.00	1.00	1.00	0.41	0.81	Good
40	400	A large lake with and island in the middle	Yes	25/04/2017	No	1.00	1.00	0.90	1.00	1.00	0.01	0.01	13+	1.00	0.60	0.37	Poor
47	150	Large pond in woodland	Yes	26/05/2020	No	1.00	1.00	0.90	1.00	1.00	0.67	0.67	1.00	0.67	0.41	0.76	Good
51	332	Small pond in woodland	Yes	23/02/2017	No	1.00	0.05	0.10	1.00	0.20	1.00	1.00	0.55	1.00	0.31	0.42	Poor
52	120	Small pond in woodland	Yes	23/02/2017	No	1.00	0.05	0.10	1.00	0.20	1.00	1.00	0.55	0.67	0.36	0.41	Poor
54	23	Irregular shaped, ducks and fish present	Yes	06/02/2017	Yes	1.00	0.95	0.50	1.00	1.00	0.67	0.33	1.00	0.67	0.36	0.69	Good
55	65	Dry pond	Yes	11/05/2017	No	DRY POND											
56	274	Garden pond	Yes	24/04/2019	No	1.00	0.05	1.00	0.67	1.00	1.00	0.67	1.00	0.67	0.00	0.57	Below Average
59	1.5	Amenity pond with ducks	yes	25/11/2019	No	1.00	1.00	1.00	0.33	0.20	0.01	0.67	1.00	1.00	0.00	0.41	Poor
60	400	Unknown	Yes	NO ACCESS	Yes 2021												
62	32	Amenity pond with ducks		25/11/2019	No	1.00	1.00	0.90	0.33	0.20	0.01	0.67	1.00	1.00	0.31	0.41	Poor
61	349	Unknown	Yes	NO ACCESS	Yes 2021												
64	391	Agricultural drainage pond	Yes	11/05/2017	Yes	1.00	0.05	0.50	0.33	1.00	1.00	1.00	0.90	0.67	0.41	0.54	Below Average
65	91	Dry pond	Yes	03/06/2020	No	DRY POND											
67	195	Pond in field	Yes	26/05/2020	Yes	1.00	1.00	1.00	0.67	0.40	1.00	1.00	1.00	0.67	0.31	0.49	Poor
68	216.5	Pond in woodland	Yes	12/04/2017	No	1.00	0.05	0.90	0.33	0.30	0.67	1.00	0.93	0.67	0.31	0.47	Poor
70	368	Dry pond	Yes	14/02/2017	No	DRY POND											
80	283	n/a	Yes	22/03/2017	No	NO POND PRESENT											
81	392	Small turbid pond in field corner	Yes	25/04/2017	No	1.00	0.05	1.00	1.01	0.30	1.00	1.00	0.69	0.67	0.30	0.34	Poor
82	7	Small pond surrounded by scrub	Yes	02/02/2017 and 22/04/2019	No	POND INACCESSABLE											
83	52.5	Dry pond	Yes	08/05/2017	No	DRY POND											
84	25	Garden pond	Yes	09/05/2017	No	1.00	0.40	0.90	0.67	1.00	0.01	0.33	0.55	0.67	0.36	0.40	Poor
85	297	Dry pond	Yes	21/02/2017	No	DRY POND											
88	400	Farmland pond	Yes	22/02/2017	Yes	1.00	0.40	0.90	0.67	0.40	1.00	1.00	1.00	0.33	0.31	0.63	Average
90	12	Small pond in woodland	Yes	22/02/2017	Yes	1.00	0.05	1.00	0.33	0.80	1.00	1.00	0.98	1.00	0.31	0.58	Below Average
91	13.5	Small pond in woodland	Yes	22/02/2017	Yes	1.00	0.40	0.90	0.67	0.60	1.00	1.00	1.00	1.00	0.41	0.75	Good
92	196	Dry pond	Yes	17/06/2019	No	DRY POND											
93	211	Dry pond	Yes	17/06/2019	No	DRY POND											
94	235	Dry pond	Yes	17/06/2019	No	DRY POND											
95	222	Dry pond	Yes	17/06/2019	No	DRY POND											
96	139	Dry pond	Yes	17/06/2019	No	DRY POND											
96a	139	Woodland pond	Yes	24/06/2019	Yes	1.00	0.20	0.50	0.67	0.30	1.00	1.00	1.00	1.00	0.31	0.60	Average
97 and 98 (joined)	265	Two ponds on the map but joined	Yes	20/06/2019	Yes	1.00	1.00	1.00	0.67	0.60	1.00	0.67	1.00	1.00	0.41	0.80	Excellent
99	169.5	Woodland pond	Yes	20/06/2019	Yes	1.00	1.00	0.50	0.33	0.20	1.00	1.00	1.00	1.00	0.31	0.63	Average
100	10.5	Woodland pond	Yes	11/05/2018	No	1.00	1.00	1.00	0.67	0.60	0.67	1.00	1.00	1.00	0.71	0.79	Good

101	97.2	Woodland pond	Yes	20/06/2019	Yes	1.00	1.00	1.00	0.33	0.20	1.00	1.00	1.00	1.00	0.31	0.68	Average
102	134.5	Woodland pond	Yes	27/06/2019	Yes	1.00	1.00	0.50	0.67	0.80	1.00	0.67	1.00	1.00	0.80	0.84	Excellent
103	266	Woodland pond	Yes	20/06/2019	Yes	1.00	1.00	0.90	0.33	0.20	1.00	1.00	1.00	1.00	0.43	0.69	Average
104	62	Shaded turbid pond	Yes	27/06/2019	Yes	1.00	0.30	1.00	0.67	0.30	1.00	1.00	1.00	1.00	0.81	0.74	Good
105	Adjacent to the scheme	Woodland pond	Yes	27/06/2029	Yes	1.00	0.00	0.50	0.67	0.20	1.00	1.00	1.00	1.00	0.31	0.68	Average
106	7	Woodland pond	Yes	27/06/2019	Yes	1.00	0.00	0.90	1.00	1.00	1.00	0.67	1.00	1.00	0.36	0.78	Good
106a	7	Woodland pond	Yes	27/06/2019	Yes	1.00	0.00	0.90	1.00	0.60	1.00	0.67	1.00	1.00	0.31	0.74	Good
107	Within scheme footprint	Woodland pond	Yes	27/06/2019	Yes	1.00	0.00	1.00	1.00	0.30	1.00	0.67	1.00	1.00	0.46	0.74	Good
108	219	Woodland pond	Yes	19/06/2019	Yes	1.00	0.60	0.50	1.00	0.80	1.00	1.00	1.00	1.00	0.90	0.86	Excellent
109	155	Woodland pond	Yes	19/06/2019	Yes	1.00	0.00	0.90	1.00	1.00	0.67	1.00	1.00	1.00	0.80	0.93	Excellent
110	Within scheme footprint	Pond surrounded by scrub	Yes	14/03/2017	Yes	1.00	0.05	0.90	0.67	0.40	1.00	1.00	1.00	0.67	0.36	0.56	Below Average
111	168	Pond surrounded by scrub	Yes	13/03/2017	Yes	1.00	1.00	1.00	0.33	0.70	1.00	1.00	0.98	0.33	0.31	0.69	Average
112	123.5	Dry pond	Yes	26/05/2020	No	DRY POND											
114	384	Dry pond	Yes	08/05/2017	No	DRY POND											
115	Within scheme footprint	Woodland pond	Yes	02/03/2017	Yes	1.00	0.05	0.50	1.00	0.20	1.00	1.00	0.80	1.00	0.31	0.51	Below Average
116	397	Pond surrounded by scrub	Yes	19/06/2019	Yes	1.00	0.20	1.00	0.33	0.50	1.00	1.00	1.00	1.00	0.36	0.69	Average
117	320	Woodland pond	Yes	19/06/2019	Yes	1.00	1.00	1.00	0.67	0.60	1.00	1.00	1.00	1.00	0.80	0.89	Excellent
118	397	Woodland pond	Yes	19/06/2019	Yes	1.00	No value	0.00	0.67	1.00	1.00	1.00	1.00	1.00	0.81	0.94	Excellent
119	318	Dry pond	Yes	10/10/2017	No	DRY POND											
120	Within scheme footprint	Large lake bordered by dense scrub	Yes	07/03/2017	Yes	1.00	0.00	0.90	0.33	0.80	0.67	0.67	1.00	0.67	0.31	0.71	Good
121	81	Dry pond	Yes	11/10/2017	No	DRY POND											
122	266	Duck pond	Yes	02/02/2017	No	1.00	0.05	0.10	0.33	1.00	0.01	1.00	0.43	0.67	0.31	0.26	Poor
123	244	Farmland pond	Yes	24/04/2019	Yes	1.00	0.05	1.00	0.33	1.00	1.00	1.00	1.00	0.67	0.41	0.58	Below Average
124	377	Woodland pond	Yes	13/03/2017	No	1.00	0.05	0.10	0.33	0.20	1.00	1.00	0.85	1.00	0.36	0.40	Poor
126	196	Woodland pond	Yes	07/03/2017	Yes	1.00	0.20	1.00	0.67	0.20	1.00	0.67	1.00	1.00	0.41	0.61	Average
127	257	Woodland pond	Yes	07/03/2017	Yes	1.00	0.05	0.50	0.67	0.20	1.00	1.00	1.00	1.00	0.36	0.51	Below Average
128	177	Road verge pond	Yes	07/03/2017	No		0.05	0.50	1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.67	Average
129	228	Dry pond	Yes	10/10/2017	No	DRY POND											
131	80	Woodland pond	Yes	04/10/2017	Yes	1.00	0.40	0.50	0.33	0.50	1.00	1.00	0.43	1.00	0.31	0.58	Below Average
132	26	Woodland pond	Yes	04/10/2017	Yes	1.00	0.10	0.50	0.33	0.30	1.00	1.00	0.55	1.00	0.31	0.49	Poor
133	109	Farmland pond	Yes	N/A	No	SCOPED OUT - ISOLATED POND											
135	148	Woodland pond	Yes	11/05/2017	No	1.00	0.00	1.00	0.67	1.00	1.00	0.67	1.00	0.01	0.67	0.37	Poor
136	122	Woodland pond	Yes	11/05/2017	Yes	1.00	0.00	1.00	0.67	1.00	1.00	0.67	1.00	1.00	0.41	0.60	Average
137	212	Isolated pond	Yes	N/A	No	ISOLATED POND											
138	156	N/A	Yes	N/A	No	SCOPED OUT - PART OF FAST FLOWING STREAM											
140	79	N/A	Yes	N/A	No	SCOPED OUT PART OF DITCH 047											
145	248	Farmland pond	Yes	26/06/2019	Yes	1.00	0.00	1.00	0.33	1.00	1.00	0.67	1.00	1.00	0.31	0.60	Average
145a	248	Farmland pond	Yes	26/06/2019	Yes	1.00	0.00	1.00	0.33	1.00	1.00	0.67	1.00	1.00	0.36	0.70	Good
146	300	Woodland pond	Yes	20/06/2019	Yes	1.00	1.00	0.50	0.33	1.00	1.00	1.00	1.00	1.00	0.31	0.63	Average
147	117	N/A	Yes	20/06/2019	No	NO POND PRESENT											
148	145	Woodland pond	Yes	20/06/20119	No	POND HAS BEEN FILLED IN											
149	236	Woodland pond	Yes	20/06/2019	No	POND HAS BEEN FILLED IN											
153	Within scheme footprint	Farmland pond	Yes	01/06/2020	No	1.00	0.00	0.50	0.01	0.30	1.00	1.00	1.00	0.67	0.31	0.33	Poor
112b	123.5	Dry pond	Yes	26/05/2020	No	DRY POND											
112c	123.5	Dry pond	Yes	26/05/2020	No	DRY POND											
115a	Within scheme footprint	Woodland pond	Yes	02/03/2017	Yes	1.00	0.30	1.00	0.67	0.40	1.00	1.00	0.80	1.00	0.31	0.68	Average

115b	Within scheme footprint	Woodland pond	Yes	10/05/2019	Yes	1.00	0.07	0.50	0.33	0.40	0.67	1.00	1.00	1.00	0.36	0.51	Below Average
120a	90	Woodland pond	Yes	09/05/2019	yes	1	0.1	1	0.33	0.4	0.67	1	1	1	0.8	0.63	Average
119a	357	Wet Ditch	Yes	26/06/2019	Yes	1.00	0.05	0.50	0.33	1.00	1.00	1.00	10.00	0.93	0.67	0.53	Below Average
127a	266	Woodland pond	Yes	07/03/2017	No	1.00	0.05	0.50	0.67	0.20	1.00	1.00	1.00	1.00	0.36	0.51	Below Average
127b	267	Woodland pond	Yes	07/03/2017	No	1.00	0.05	0.50	0.67	0.20	1.00	1.00	1.00	1.00	0.51	0.53	Below Average
131a	66	Dry pond	Yes	26/06/2019	No	DRY POND											
133a	142	Farmland pond	Yes	N/A	No	SCOPED OUT ISOLATED POND											
244a	102	Garden pond	Yes	08/05/2019	No	1.00	0.00	0.90	1.00	1.00	1.00	0.67	1.00	1.00	0.36	0.79	Good
30a	47	Balancing pond	Yes	13/03/2017	No	1.00	0.87	0.10	1.00	1.00	1.00	1.00	0.80	1.00	0.80	0.75	Good
30b	95	Balancing pond	Yes	13/03/2017	No	1.00	0.20	0.10	1.00	1.00	1.00	1.00	0.80	1.00	0.80	0.65	Average
31a	389	N/A	Yes	N/A	No	SCOPED OUT PHYSICAL BARRIER A358											
36a	293	Woodland pond	Yes	23/02/2017	Yes	1.00	0.05	1.00	1.00	0.60	1.00	1.00	1.00	1.00	0.41	0.64	Average
36b	254	Woodland pond	Yes	23/02/2017	Yes	1.00	0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	Excellent
40a	379	Lined pond	Yes	25/04/2017	Yes	1.00	0.05	0.90	1.00	1.00	0.01	0.67	1.00	1.00	0.50	0.41	Poor
55a	Directly impacted	Dry pond	Yes	04/04/2017	No	DRY POND											
56a	295	Garden pond	Yes	22/05/2019	No	1.00	0.05	0.10	0.67	1.00	1.00	1.00	1.00	0.67	1.00	0.54	Below Average
60a	352	Unknown	Yes	NO ACCESS	Yes 2021												
60c	350	Unknown	Yes	NO ACCESS	Yes 2021												
64a	393	Agricultural drainage pond	Yes	11/05/2017	Yes	1.00	0.10	0.50	0.33	1.00	1.00	1.00	0.90	0.67	0.31	0.56	Below Average
64b	194	Farmland pond	Yes	11/05/2017	Yes	1.00	0.05	0.50	0.33	0.40	1.00	1.00	0.90	0.67	0.51	0.55	Below Average
69a	78	Bathtub sunk into ground	Yes	02/02/2017	No	1.00	0.05	0.90	0.33	1.00	1.00	1.00	0.55	0.33	0.36	0.50	Poor
69b	98	Garden pond	Yes	22/02/2017	No	1.00	0.05	0.90	1.00	1.00	1.00	0.01	0.98	0.33	0.71	0.40	Poor
69c	86	Garden pond	Yes	22/02/2017	No	1.00	0.05	0.90	1.00	1.00	1.00	0.01	1.00	0.33	0.31	0.37	Poor
69d	168	N/A	Yes	26/04/2019	No	NO POND PRESENT											
69e	177	N/A	Yes	26/04/2019	No	NO POND PRESENT											
69f	162	N/A	Yes	26/04/2019	No	NO POND PRESENT											
84a	97	Garden pond	Yes	16/02/2017	Yes	1.00	0.05	0.90	0.67	1.00	1.00	0.67	0.55	0.67	0.31	0.54	Below Average
84b	94	Garden pond	Yes	09/05/2017	No	1.00	0.05	0.50	0.33	1.00	1.00	0.67	0.43	0.33	1.00	0.49	Poor
84c	62	Garden pond	Yes	14/02/2017	No	1.00	0.05	0.90	0.67	1.00	1.00	0.85	0.85	0.67	0.31	0.59	Average
86b	334	Pond located in corner of field	Yes	06/04/2017	Yes	1.00	0.20	1.00	0.33	0.40	1.00	1.00	0.55	1.00	0.31	0.58	Below Average
86c	5	Walled fish pond with filter	Yes	07/02/2017	No	1.00	0.05	0.90	0.67	1.00	1.00	1.00	1.00	0.33	0.41	0.36	Poor
90a	21	Woodland pond	Yes	22/02/2017	Yes	1.00	0.10	1.00	0.33	0.80	1.00	1.00	0.98	1.00	0.41	0.63	Average
a2	45	Woodland pond	Yes	20/02/2017	Yes	1.00	0.10	1.00	0.33	0.20	1.00	1.00	0.55	1.00	0.31	0.51	Below Average
D001	179.5	Ditch	Yes	23/02/2017	Yes	1.00	0.80	1.00	0.67	0.60	1.00	1.00	1.00	0.33	0.31	0.71	Good
D004	43.8	Wet ditch	Yes	22/02/2017	No	1.00	0.05	0.10	0.33	1.00	1.00	1.00	0.98	0.67	0.61	0.48	Poor
D038	66	Fast flowing ditch	Yes	03/07/2017	No	FLOWING DITCH - UNSUITABLE FOR GCN											

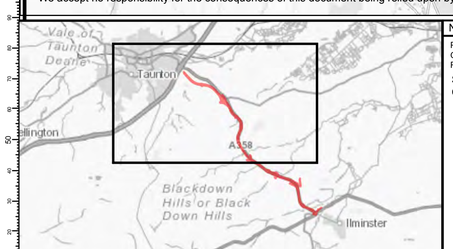
D039	107	Wet ditch	Yes	22/04/2019	Yes	NO HSI TAKEN BUT eDNA
D040	298	Dry ditch	Yes	Jun-17	No	DRY DITCH
D041	245	Stream	Yes	Jun-19	No	STREAM
D042	132	Dry ditch	Yes	03/07/2017	No	DRY DITCH
D043	123	Dry ditch	Yes	03/07/2017	No	DRY DITCH
D044	97	Dry ditch	Yes	03/07/2017	No	DRY DITCH
D045	168	Dry ditch	Yes	01/06/2017	No	DRY DITCH
D046	65	Dry ditch	Yes	01/06/2017	No	DRY DITCH
D047	1.5	Dry ditch	Yes	01/06/2017	No	DRY DITCH
D048	141.8	N/A	Yes	01/06/2019	No	NO DITCH PRESENT IN THIS LOCATION
D049	Within scheme footprint	Dry ditch	Yes	01/06/2019	No	DRY DITCH
D050	260	Fast flowing ditch	Yes	01/06/2019	No	FLOWING DITCH - UNSUITABLE FOR GCN
D051	363	Fast flowing ditch	Yes	01/06/2019	No	FLOWING DITCH - UNSUITABLE FOR GCN
D055	286	N/A	Yes	01/06/2019	No	SCOPED OUT - UNSUITABLE FOR GCN
D058	footprint	Flowing stream	Yes	28/06/2017	No	FLOWING STREAM
D059	2	N/A	Yes	NO ACCESS	Yes 2021	
D060	302	N/A	Yes	NO ACCESS	Yes 2021	
D062	75	N/A	Yes	NO ACCESS	Yes 2021	
D064	Within scheme footprint	N/A	Yes	N/A	No	SAME DITCH AS D58
D065	30	N/A	Yes	06/07/2017	No	UNSUITABLE FOR GCN
D067	2	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D068	Within scheme footprint	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D069	188	N/A	Yes	29/09/2019	No	UNSUITABLE FOR GCN
D070	3.5	Dry ditch	Yes	20/07/2017	No	DRY DITCH
D071	7	N/A	Yes	29/09/2017	No	UNSUITABLE FOR GCN
D072	146					
D074	377	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D075	Within scheme footprint	Dry ditch	Yes	21/09/2017	No	DRY DITCH
D078	4.5	Dry ditch	Yes	26/06/2019	No	DRY DITCH
D079	266	Isolated ditch	Yes	24/06/2019	No	SCOPED OUT - ISOLATED DITCH
D080	254	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D081	215	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D082	180	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D083	279	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D084	282	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D085	3	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D085a	93	N/A	Yes	24/06/2019	No	NO DITCH
D086	232					
D087	85	Dry ditch	Yes	19/09/2017	No	DRY DITCH
D088	4	Dry ditch	Yes	19/09/2017	No	DRY DITCH
D089	0.5	Dry ditch	Yes	01/09/2017	No	DRY DITCH
D090	Within the scheme footprint	Dry ditch	Yes	24/06/2019	No	DRY DITCH
D091 (same as pond 87)	85	Dry ditch	Yes	19/09/2017	No same as 87	DRY DITCH
D093	19.5	Dry ditch	Yes	05/07/2017	No	PARTIALLY DRY - UNSUITABLE FOR GCN
D095	187	N/A	Yes	05/07/2019	No	UNSUITABLE FOR GCN
D096	347	N/A	Yes	05/07/2020	No	UNSUITABLE FOR GCN
D099	45	Dry ditch	Yes	05/07/2020	No	UNSUITABLE FOR GCN
D100	79	Dry ditch	Yes	01/06/2017	No	DRY DITCH

D101	109	Dry ditch	Yes	01/07/2017	No	DRY DITCH											
D106	386	Dry ditch	Yes	19/09/2017	No	DRY DITCH											
D107	65	N/A	Yes	29/09/2017	No	UNSUITABLE FOR GCN											
D109	217	Dry pond	Yes	24/06/2019	No	DRY POND											
D110	273	Dry pond	Yes	24/06/2019	No	DRY POND											
D111	Unknown	Dry pond	Yes	24/06/2019	No	DRY POND											
D112	Unknown	Dry pond	Yes	24/06/2019	No	DRY POND											
167	48	Farmland pond	Yes	24/06/2019	Yes	1.00	157.00	1.00	0.33	0.70	1.00	0.67	1.00	1.00	0.36	0.73	Good

Appendix D: HSI results map

30b
30a
86C
33
34
37
36a
D001
38
36b
40
40a
51
47
167
52
54
56
A2
64
64b
64a
135
136
68
67

0 1,000 2,000m



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	18/11/2020	Suitable for Stage Approval	ER	AE	AT

Notes

Pink Modified Scheme, Mott MacDonald (2018)
GCN Historical Records, Somerset Environmental Records (2020)

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Key to symbols

Pink modified scheme option

400m buffer

GCN Ponds
HSI Rating

- Excellent
- Good
- Average
- Below average
- Poor

GCN Ditch
HSI Rating

- Average
- Below average

References drawings

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Client: highways england

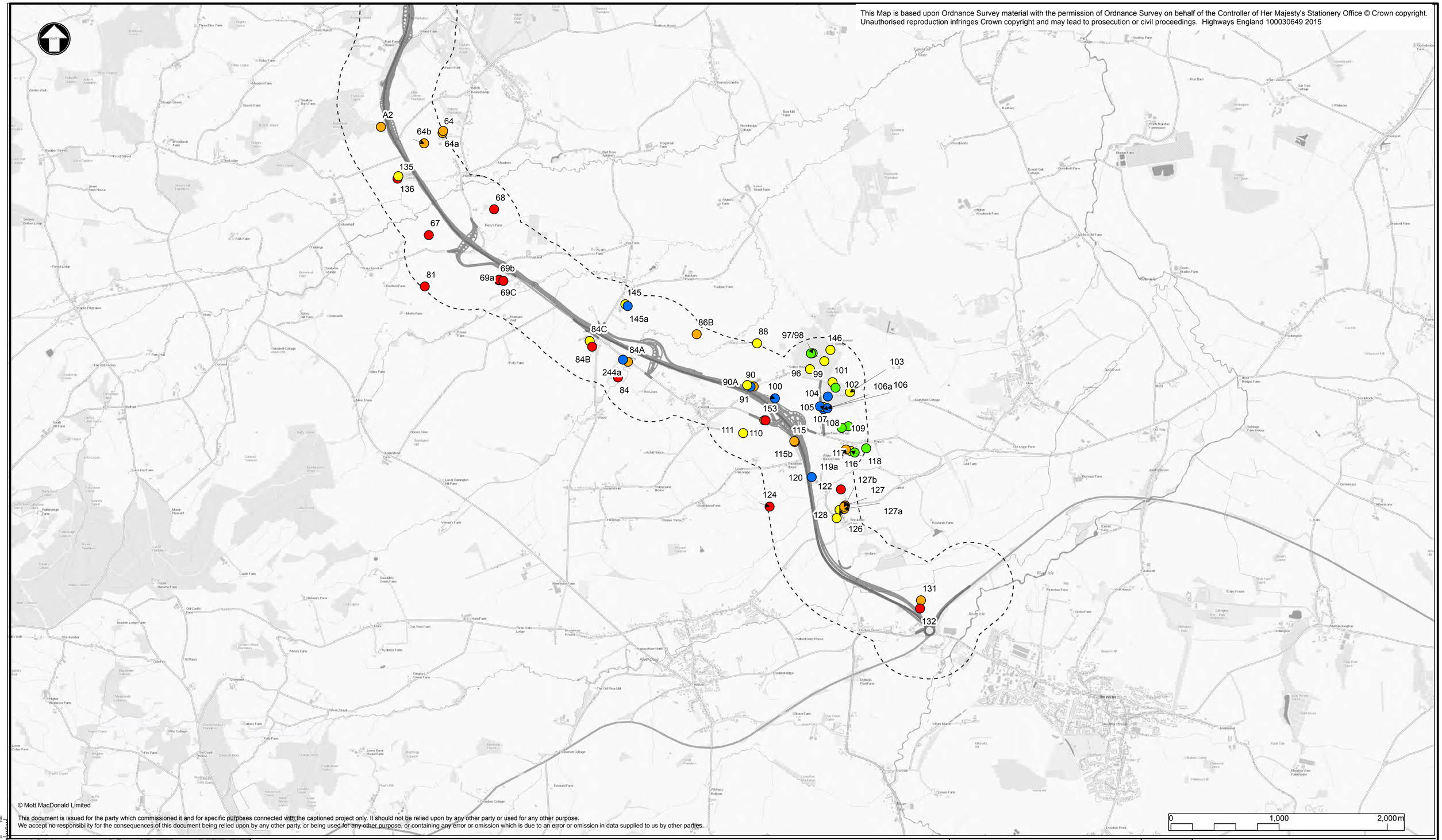
Project Title: A358 Taunton to Southfields

Drawing Title: Great Crested Newt
Habitat Suitability Score Page 1 of 2

Scale	Designed	Drawn	Checked	Approved
NTS	AE	ER	AE	AT
Original Size: A1	Date: 18/11/2020	Date: 18/11/2020	Date: 18/11/2020	Date: 18/11/2020

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0097
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774
Revision: P1



0 1,000 2,000 m

Notes

Pink Modified Scheme, Mott MacDonald (2018)
GCN Historical Records, Somerset Environmental Records (2020)

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Key to symbols

Pink modified scheme option

400m buffer

References drawings

GCN Ponds

HSI Rating

- Excellent
- Good
- Average
- Below average
- Poor

GCN Ditch

HSI Rating

- Average
- Below average

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	18/11/2020	Suitable for Stage Approval	ER	AE	AT

Drawing Status: Suitable for Stage Approval

Suitability: S4

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www.mottmac.com

Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Great Crested Newt Habitat Suitability Score Page 2 of 2

Scale	Designed	Drawn	Checked	Approved
NTS	AE	ER	AE	AT
Original Size	Date	Date	Date	Date
A1	18/11/2020	18/11/2020	18/11/2020	18/11/2020

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0098
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774

Revision: P1

Appendix E: Summary of survey data

Water Course ID	Survey 1 Date	GCN (Y/N)	Total adult count of survey visit	Survey 2 Date	Survey 2 (Y/N)	Total adult count of survey visit	Survey 3 Date	Survey 3 (Y/N)	Total adult count of survey visit	Survey 4 Date	Survey 4 (Y/N)	Total adult count of survey visit	Survey 5 Date	Survey 5 (Y/N)	Total adult count of survey visit	Survey 6 Date	Survey 6 (Y/N)	Total adult count of survey visit
22																		
28																		
29																		
31																		
32																		
33	23.03.2017	N	0	04.04.2017	N	0	24.04.2017	N	0	17.05.2017	N	0						
34																		
35																		
37																		
38	22.3.2017	N	0	05.04.2017	N	0	08.04.2017	N	0	10.5.2017	N	0						
40																		
47																		
51																		
52																		
54	21.03.2017	N	0	10.4.2017	Y	11	24.04.2017	Y	13	04.05.2017	Y	7	11.05.2017	Y	13	31.05.2017	Y	8
55																		
56																		
60																		
61																		
64																		
65																		
67																		
68																		
70																		
72																		
80																		
81																		
82																		
83																		
84																		
85																		
88	23.03.2017	N	0	04.04.2017	N	0	18.04.2017	N	0	08.05.2017	N	0						
90	23.03.2017	N	0	19.04.2017	N	0	09.05.2017	N	0									
91	23.03.2017	N	0	19.04.2017	N	0	09.05.2017	N	0	31.05.2017								
92																		
93																		
94																		
95																		
96																		
96a																		
97 and 98 (joined)																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

106																		
106a																		
107																		
108																		
109																		
110	14.04.2017	N	0	04.05.2017	N	0	16.05.2017	N	0	31.05.2017	N	0						
111	11.04.2017	N	0	04.05.2017	N	0	16.05.2017	N	0	31.05.2017	N	0						
112																		
114																		
115	27.03.2017	N	0	11.05.2017	0	N	18.05.2017	N	0	25.05.2017	N	0						
116																		
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135																		
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137																		
138																		
140																		
145																		
145a																		
146																		
147																		
148																		
149																		
153																		
112b																		
112c																		
115a	27.03.2017	N	0	12.05.2017	N	0	18.05.2017	N	0	25.05.2017	N	0						
115b																		
119a																		
127a																		
127b																		
131a																		
133a																		
244a																		
30a	18.04.2017	N	0	15.05.2017	N	0	30.05.2017	N	0	08.06.2017	N	0						
30b	18.04.2017	N	0	15.05.2017	N	0	30.05.2017	N	0									
31a																		
36a	22.03.2017	N	0	05.04.2017	N	0	18.04.2017	N	0	10.05.2017	N	0						

36b	23.03.2017	N	0	05.04.2017	N	0	18.04.2017	N	0	10.05.2017	N	0					
40a	25.04.2017	N	0	08.05.2017	Y	4	15.05.2017	Y	1	22.05.2017	Y	1	30.05.2017	N	0	12.06.2017	Y	1
55a																		
56a																		
60a																		
60b																		
60c																		
64a																		
64b	15.05.2017	N	0	18.05.2017	N	0	30.05.2017	N	0	06.06.2017	N	0						
69a																		
69b																		
69c																		
69d																		
69e																		
69f																		
84a	27.03.2017	N	0	20.04.2017	N	0	11.05.2017	N	0	24.05.2017	N	0						
84b																		
84c																		
86b	08.05.2017	N	0	17.05.2017	N	0	01.06.2017	N	0	07.06.2017	N	0						
86c																		
90a	23.03.2017	N	0	19.04.2017	N	0	09.05.2017	N	0									
a2	29.03.2017	N	0	04.05.2017	N	0	10.05.2017	N	0	01.06.2017	N	0						
D001	22.03.2017	N	0	04.04.2017	N	0	25.04.2017	N	0	17.05.2017	N	0						
D004																		
D023																		
D028																		
D029																		
D038																		
D039																		
D040																		
D041																		
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D066																		
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D068																		
D069																		
D070																		
D071																		
D072 (OR 113)																		
D074																		
D075																		
D078																		
D079																		
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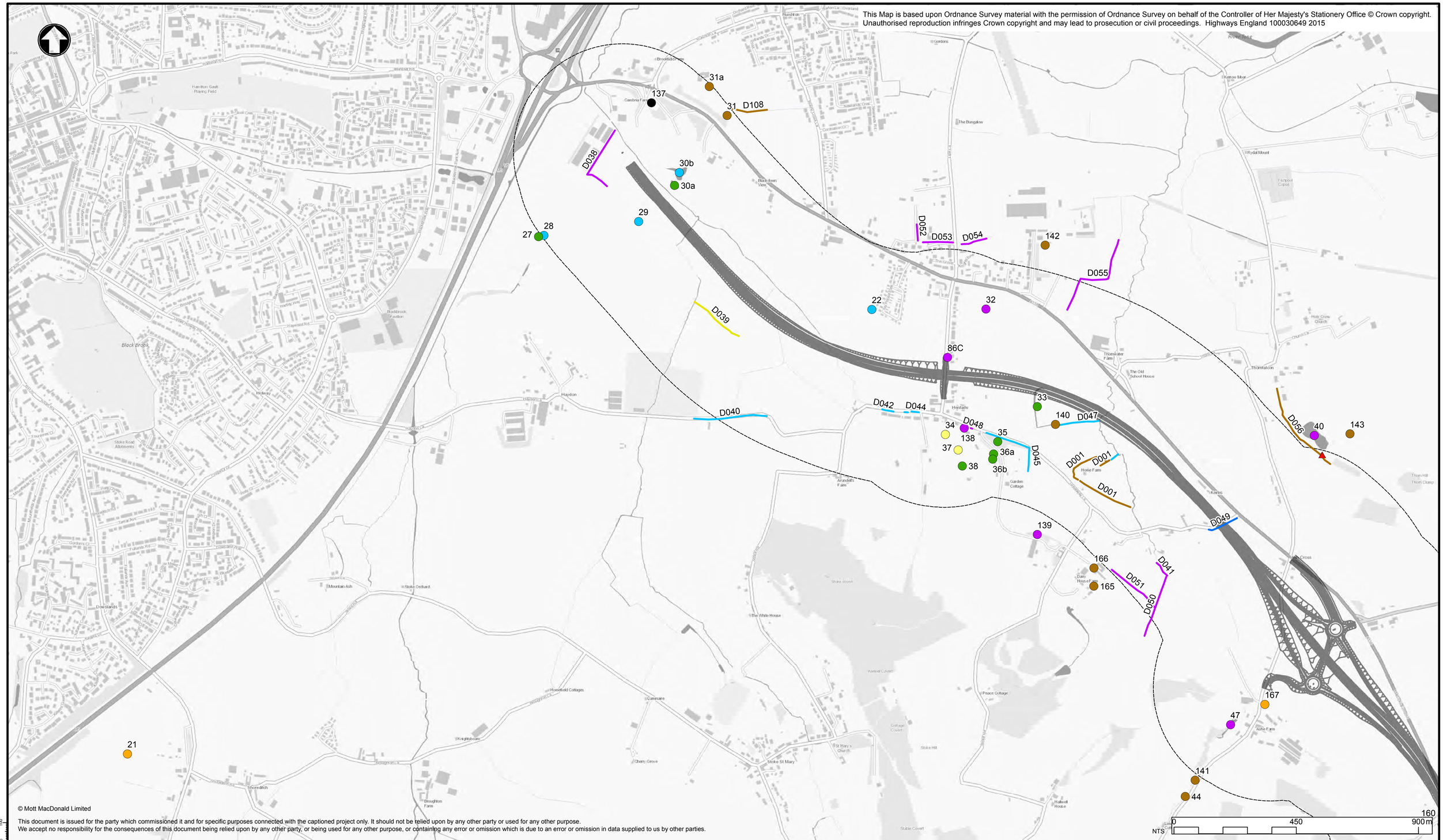
D091																		
D093																		
D095																		
D096																		
D099																		
D100																		
D101																		
D104																		
D106																		
D107																		
D109																		
D110																		
D111																		
D112																		
167																		

Appendix F: Summary of survey data map



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	26/11/2020	Suitable for Stage Approval	ER	AE	AT

Notes

Pink Modified Scheme, Mott MacDonald (2018)
GCN pond survey, Mott MacDonald (2019)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink Modified Scheme Option
- 400m buffer

Population surveys with GCN Present

- GCN present

eDNA surveys with GCN present

Pond survey status

- eDNA negative
- GCN absent
- Pond dry 2017
- Survey incomplete
- Unsuitable habitat
- Isolated pond
- Scoped out

References drawings

Ditch survey status

- eDNA negative
- Dry ditch 2017
- Dry ditch 2019
- Unsuitable habitat
- Scoped out

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Client: highways england

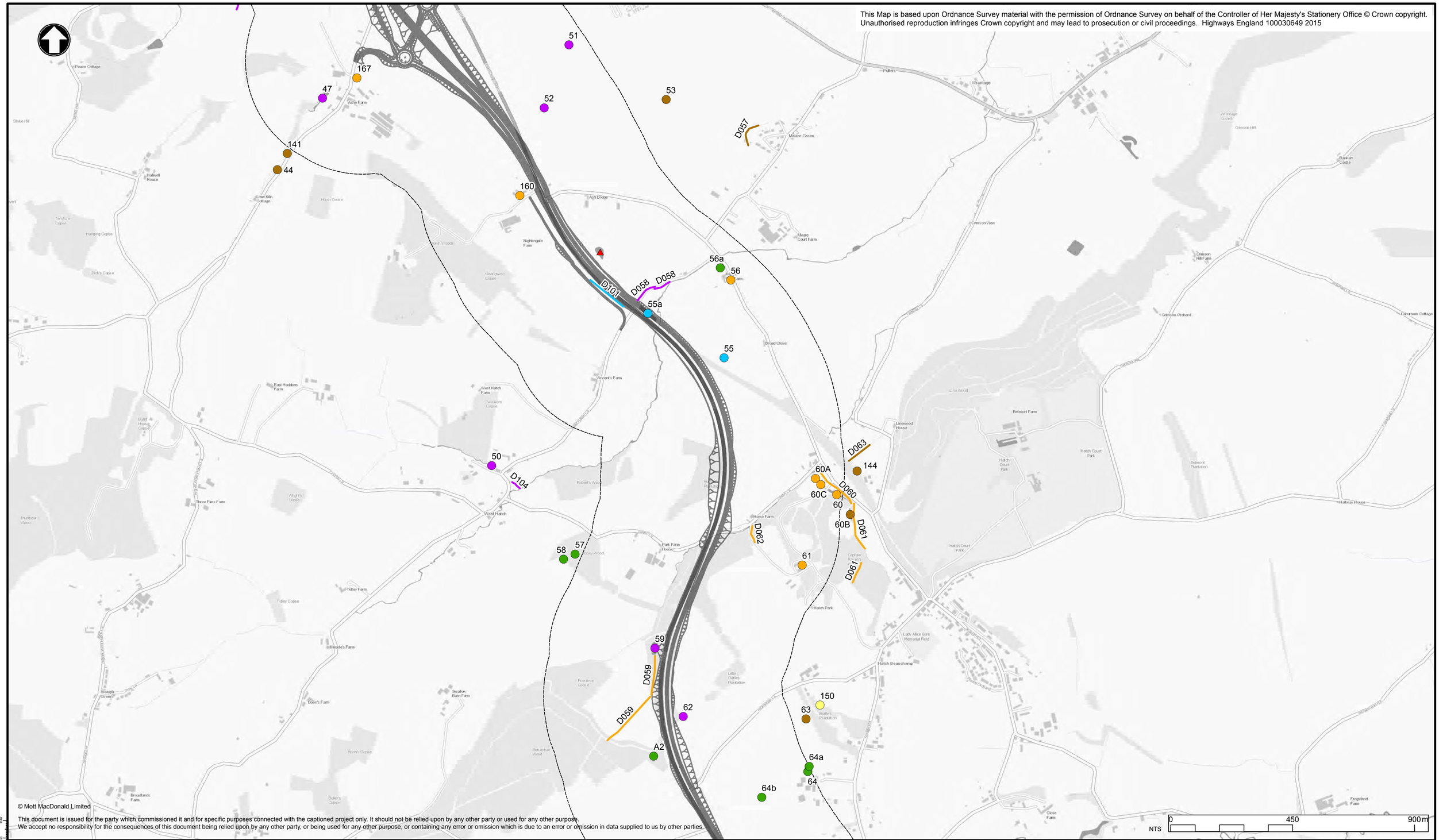
Project Title: A358 Taunton to Southfields

Drawing Title: Great Crested Newt Survey Results
Page 1 of 4

Scale	Designed	Drawn	Checked	Approved
NTS	AE	ER	AE	AT
Original Size	Date	Date	Date	Date
A4	26/11/2020	26/11/2020	26/11/2020	26/11/2020

Drawing Number: HE551508 - MMSJV - EBD - 000 - DR - LB - 0093
(HE PIN | Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 370774
Revision: P1



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	26/11/2020	Suitable for Stage Approval	ER	AE	AT

Notes

Pink Modified Scheme, Mott MacDonald (2018)
GCN pond survey, Mott MacDonald (2019)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink Modified Scheme Option
- 400m buffer

Population surveys with GCN Present

- GCN present

eDNA surveys with GCN present

Pond survey status

- eDNA negative
- GCN absent
- Pond dry 2017
- Survey incomplete
- Unsuitable habitat
- Scoped out

References drawings

Ditch survey status

- Dry ditch 2017
- Survey incomplete
- Unsuitable habitat
- Scoped out

Drawing Status: Suitable for Stage Approval

Suitability: S4

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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Great Crested Newt Survey Results
Page 2 of 4

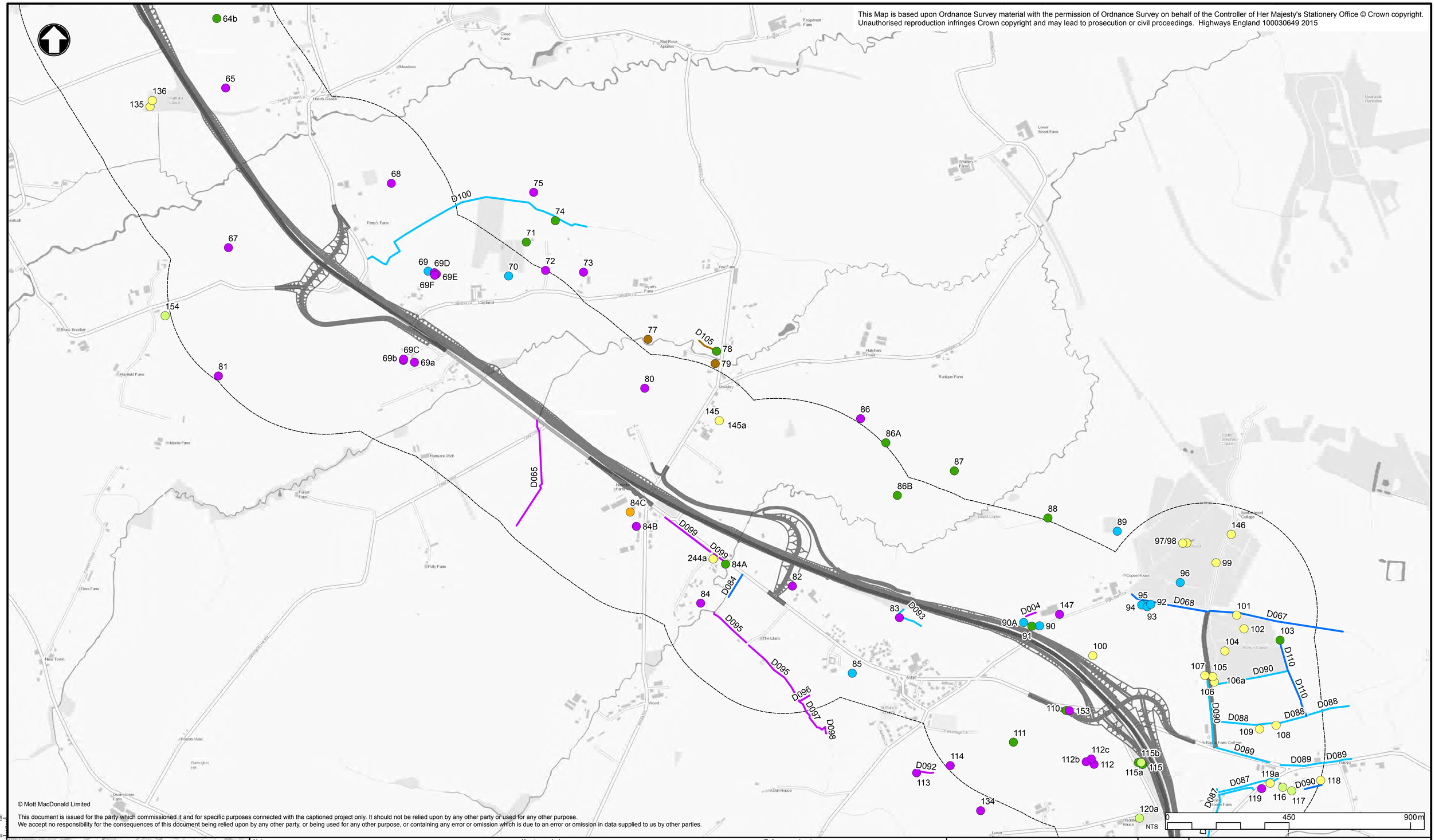
Scale	Designed	Drawn	Checked	Approved
NTS	AE	ER	AE	AT

Original Size	Date	Date	Date	Date
A4	26/11/2020	26/11/2020	26/11/2020	26/11/2020

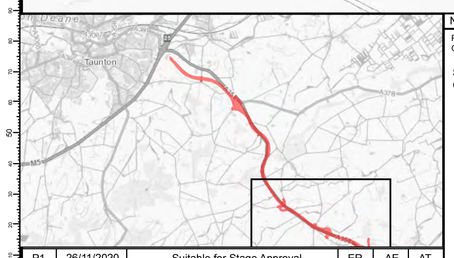
Drawing Number: HE PIN | Originator | Volume
HE551508 - MMSJV - EBD -
000 (Location) - DR (Type) - LB (Role) - 0094 (Number)

Project Ref. No.: 370774

Revision: P1



0 450 900m
NTS



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	26/11/2020	Suitable for Stage Approval	ER	AE	AT

Notes

Pink Modified Scheme, Mott MacDonald (2018)
GCN pond survey, Mott MacDonald (2019)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink Modified Scheme Option
- 400m buffer

eDNA surveys with GCN present

Pond survey status

- eDNA positive
- eDNA negative
- GCN absent
- Pond dry 2017
- Survey incomplete
- Unsuitable habitat
- Scoped out

Ditch survey status

- Dry ditch 2017
- Dry ditch 2019
- Unsuitable habitat
- Scoped out

References drawings

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Client: highways england

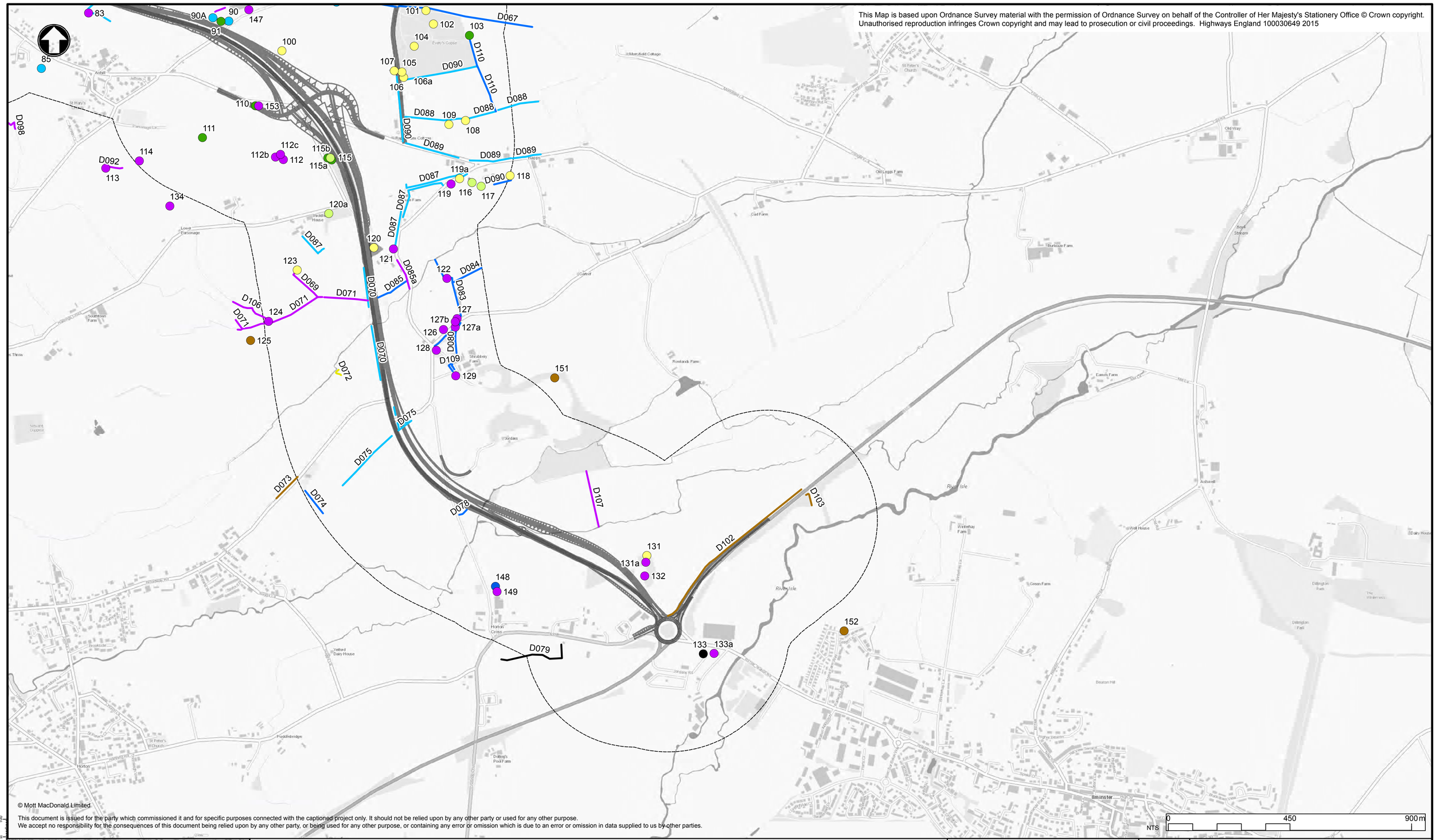
Project Title: A358 Taunton to Southfields

Drawing Title: Great Crested Newt Survey Results
Page 3 of 4

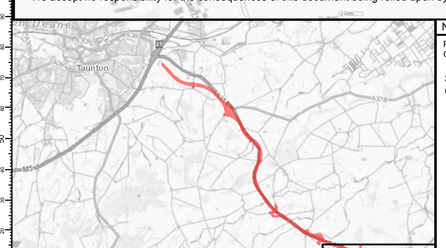
Scale	Designed	Drawn	Checked	Approved
NTS	AE	ER	AE	AT
Original Size	Date	Date	Date	Date
A4	26/11/2020	26/11/2020	26/11/2020	26/11/2020

Drawing Number: HE PIN | Originator | Volume
HE551508 - MMSJV - EBD -
000 - DR - LB - 0095
Location | Type | Role | Number

Project Ref. No.: 370774
Revision: P1



NTS 0 450 900m



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
P1	26/11/2020	Suitable for Stage Approval	ER	AE	AT

Notes

Pink Modified Scheme, Mott MacDonald (2018)
GCN pond survey, Mott MacDonald (2019)

Service Layer Credits: Contains OS data © Crown Copyright and database right 2020

Key to symbols

- Pink Modified Scheme Option
- 400m buffer

eDNA surveys with GCN present

Pond survey status

- eDNA positive
- eDNA negative

- GCN absent
- Pond dry 2017
- Pond dry 2019
- Unsuitable habitat
- Isolated pond
- Scoped out

References drawings

Ditch survey status

- eDNA negative
- Dry ditch 2017
- Dry ditch 2019

- Unsuitable habitat
- Isolated ditch
- Scoped out

Drawing Status: Suitable for Stage Approval
Suitability: S4

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Client: highways england

Project Title: A358 Taunton to Southfields

Drawing Title: Great Crested Newt Survey Results
Page 4 of 4

Scale	Designed	Drawn	Checked	Approved
NTS	AE	ER	AE	AT
Original Size: A4	Date: 26/11/2020	Date: 26/11/2020	Date: 26/11/2020	Date: 26/11/2020

Drawing Number: HE PIN | Originator | Volume | Location | Type | Role | Number
HE551508 - MMSJV - EBD - 000 - DR - LB - 0096

Project Ref. No.: 370774
Revision: P1

Appendix G: Survey proformas

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_38_220317	**Land Parcel Reference**	ST316480	**Date**	22/03/2017	**Visit Number**	1
Pond Ecology ID	33	**Easting (X)**	327286	**Northing (Y)**		123635	
Surveyor(s)	RM & LN						

Weather Conditions (Description)	Calm and cool - recent rain	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	6	**Minimum Overnight Temperature** (°C)	3	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	60

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				Yes	No
	Start time (24 hours)		18:45	**Number of traps used**		20						
	Finish time (24 hours)		19:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	N/A
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	N/A
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_38_040417	**Land Parcel Reference**	ST316480	**Date**	04/04/2017	**Visit Number**	2
Pond Ecology ID	33	**Easting (X)**	327286	**Northing (Y)**		123635	
Surveyor(s)	RM + FS						

Weather Conditions (Description)	Warm dry	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	4	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		20:00	**Number of traps used**		20						
	Finish time (24 hours)		20:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A
Smooth Newt	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A
Palmate Newt	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Water level beginning to drop

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST316480	**Date**	25/04/2017	**Visit Number**	3
Pond Ecology ID	33	**Easting (X)**	327286	**Northing (Y)**		123635	
Surveyor(s)	CW + FS						

Weather Conditions (Description)	No rain, cold.	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	4	**Minimum Overnight Temperature** (°C)	2	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	20

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	21:00		**Number of traps used**	7							
	Finish time (24 hours)	21:30										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	1	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Water levels dropped by approx 2/3 since last survey. See photo

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST316480	**Date**	17/05/2017	**Visit Number**	4
Pond Ecology ID	Pond 33	**Easting (X)**	327286	**Northing (Y)**		123635	
Surveyor(s)	AJ & CK						

Weather Conditions (Description)	overcast	**Cloud Cover**	8	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	12	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**		**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	No			No			No				No	No
	Start time (24 hours)	00:00		**Number of traps used**								
	Finish time (24 hours)											
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Smooth Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Smooth or Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A		
Common Toad	N/A	N/A		
Other Amphibian (state)	N/A	N/A		

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Completley dried up DO NOT SURVEY AGAIN

Photo References

Photos will be added at the weekend when I can upload pictures.

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST204055_AA1_AA2_38_220317	**Land Parcel Reference**	ST204055	**Date**	22/03/2017	**Visit Number**	1
Pond Ecology ID	38	**Easting (X)**	327019	**Northing (Y)**		123372	
Surveyor(s)	JG +AM						

Weather Conditions (Description)	Calm and cool	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				Yes	Yes
	Start time (24 hours)		18:30	**Number of traps used**		30						
	Finish time (24 hours)		20:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	9	6	1	0	0	0	0	0	0
Palmate Newt	0	0	0	8	29	1	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Central island not reachable

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST204055_AA1_AA2_38_050417	**Land Parcel Reference**	ST204055	**Date**	05/04/2017	**Visit Number**	2
Pond Ecology ID	38	**Easting (X)**	327019	**Northing (Y)**		123372	
Surveyor(s)	DBI + LN						

Weather Conditions (Description)	Warm and dry	**Cloud Cover**	3	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				Yes	No
	Start time (24 hours)	19:50		**Number of traps used**	30							
	Finish time (24 hours)	20:10										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	N/A
Smooth Newt	0	0	0	5	2	2	0	0	0	0	0	N/A
Palmate Newt	0	0	0	31	35	1	1	2	0	0	0	N/A
Smooth or Palmate Newt	0	3	0	0	0	0	0	0	0	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST204055_AA1_AA2_38_180417	**Land Parcel Reference**	ST204055	**Date**	18/04/2017	**Visit Number**	3
Pond Ecology ID	38	**Easting (X)**	327019	**Northing (Y)**		123372	
Surveyor(s)	CW & AM						

Weather Conditions (Description)	cool and some clouds	**Cloud Cover**	3	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		20:40	**Number of traps used**		30						
	Finish time (24 hours)		21:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	3	0	0	4	2	2	N/A	N/A	N/A	0	0	N/A
Palmate Newt	2	0	0	22	23	7	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	3	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST 204055	**Date**	10/05/2017	**Visit Number**	4
Pond Ecology ID	38	**Easting (X)**	327019	**Northing (Y)**		123372	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	hot, clear evening	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	8	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	5	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	yes			Yes			No				Yes	No
	Start time (24 hours)	22:40		**Number of traps used**	30							
	Finish time (24 hours)	23:00										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	0
Smooth Newt	2	4	0	5	0	0	N/A	N/A	N/A	N/A	0	0
Palmate Newt	2	0	0	6	14	0	N/A	N/A	N/A	N/A	0	0
Smooth or Palmate Newt	0	5	0	1	0	0	N/A	N/A	N/A	N/A	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

No refugia to search

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST151582_ST45806	**Date**	21/03/2017	**Visit Number**	1
Pond Ecology ID	54	**Easting (X)**	327388	**Northing (Y)**		122614	
Surveyor(s)	DBI CW						

Weather Conditions (Description)	Rain, mild	**Cloud Cover**	8	**Wind**	2
		Rain	3		
Air Temperature at Time of Torching (°C)	6	**Minimum Overnight Temperature** (°C)	2	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	60

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)	20:00		**Number of traps used**	20							
	Finish time (24 hours)	20:40										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	NO	NO
Common Toad	0	0	NO	NO
Other Amphibian (state)	0	0	NO	NO

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST151582 & ST45806	**Date**	10/04/2017	**Visit Number**	2
Pond Ecology ID	54	**Easting (X)**	327388	**Northing (Y)**		122614	
Surveyor(s)	MC & LN & TJ						

Weather Conditions (Description)	Dry	**Cloud Cover**	2	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	20

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		08:30	**Number of traps used**		20						
	Finish time (24 hours)		08:45									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	11	5	0	0	0	0	N/A	N/A	N/A	N/A	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	0
Palmate Newt	10	5	0	0	0	0	N/A	N/A	N/A	N/A	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	NO	NO
Common Toad	0	0	NO	NO
Other Amphibian (state)	0	0	NO	NO

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID [1]	ST151582_AA1_54_240417	**Land Parcel Reference**	ST151582	**Date**	24/04/2017	**Visit Number**	3
Pond Ecology ID	54	**Easting (X)**	327388	**Northing (Y)**		122614	
Surveyor(s)	CW + FS						

Weather Conditions (Description)	Overcast + light drizzle	**Cloud Cover**	8	**Wind**	2
		Rain	1		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	1	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	21:20		**Number of traps used**	20							
	Finish time (24 hours)	21:45										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	11	1	0	1	2	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	3	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	1	3	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog				
Common Toad				
Other Amphibian (state)				

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Steep banks so waders needed

Photo References [2]

Are further surveys needed?	Yes

[1] Either HS2 ecology code or company specific ecology code (if established)

[2] Photo reference follows file naming convention of ParcelCode_SurveyType_FeatureCode_DateOfSurvey(DDMMYY)_DataFormat+PhotoNumber. The feature code comprises the final six digits of the unique reference code for that waterbody. The data format is P (for Photo). For multiple photos of the same feature enter P1, P2, P3 etc in the DataFormat+PhotoNumber section. Individual photos to be separated with a comma. If no photographs were taken enter N/A in the Photo Reference field. Example of Photo Reference: BM123456_AA1_088004_301015_P1.

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST153469_AH1_06022017_Pond 4	**Land Parcel Reference**	ST45806	**Date**	04/05/2017	**Visit Number**	4
Pond Ecology ID	pond 54	**Easting (X)**	327388	**Northing (Y)**		122614	
Surveyor(s)	RW, DL						

Weather Conditions (Description)	still, mild, cloudy	**Cloud Cover**	4	**Wind**	3
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	90

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	20:50		**Number of traps used**	20							
	Finish time (24 hours)	21:05										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	3	1	0	2	1	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	3	1	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	6	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond water level several feet below the bank, hard to access 90%.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST151582	**Date**	10/05/2017	**Visit Number**	5
Pond Ecology ID	54	**Easting (X)**	327388	**Northing (Y)**		122614	
Surveyor(s)	LB,CK AND LN						

Weather Conditions (Description)	Clear and Cold	**Cloud Cover**	1	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	10	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	10

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		21:45	**Number of traps used**		20						
	Finish time (24 hours)		22:20									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	8	5	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	14	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	15	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Egg searching difficult due to steep banks. Low concentration of bottles in relation to size of pond. Steep banks make it unsafe to deploy bottles.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST 45806	**Date**	31/05/2017	**Visit Number**	6
Pond Ecology ID	54	**Easting (X)**	327388	**Northing (Y)**		122614	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	warm, still night	**Cloud Cover**	2	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	20

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge search**
	Yes			Yes			no				Yes	Yes
	Start time (24 hours)		22:25	**Number of traps used**		20						
	Finish time (24 hours)		22:40									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	6	2 (+2 unknown	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	2	0	0	1	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Central island inaccessible. In addition to recorded newts there were also 5 unidentified small newts.;

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	WS44373_AA1_AA2_88_230317	**Land Parcel Reference**	WS44373	**Date**	23/03/2017	**Visit Number**	1
Pond Ecology ID	88	**Easting (X)**	332712	**Northing (Y)**		117987	
Surveyor(s)	RM & LN						

Weather Conditions (Description)	Calm and cool - recent rain	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	1	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	1	**Pond Margin Inaccessible** (%)	85

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	19:45		**Number of traps used**		10						
	Finish time (24 hours)	20:15										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Difficult to access the majority of the perimeter, could only trap a small section safely.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	WS44373_AA1_AA2_88_230317	**Land Parcel Reference**	WS44373	**Date**	04/04/2017	**Visit Number**	2
Pond Ecology ID	88	**Easting (X)**	332712	**Northing (Y)**		117987	
Surveyor(s)	RM & LN						

Weather Conditions (Description)	warm dry	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	80

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				Yes	No
	Start time (24 hours)		20:20	**Number of traps used**		10						
	Finish time (24 hours)		20:40									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	1	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	2	1	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Difficult to access the majority of the perimeter, could only trap a small section safely.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	18/04/2017	**Visit Number**	3
Pond Ecology ID	88	**Easting (X)**	332712	**Northing (Y)**		117987	
Surveyor(s)	Ashley James and Lucy Newill						

Weather Conditions (Description)	Dry	**Cloud Cover**	4	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	10	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	65

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		21:30	**Number of traps used**		10						
	Finish time (24 hours)		22:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	8	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	WS44373_AA1_AA2_88_080517	**Land Parcel Reference**	WS44373	**Date**	08/05/2017	**Visit Number**	4
Pond Ecology ID	88	**Easting (X)**	332712	**Northing (Y)**		117987	
Surveyor(s)	AM & AJ						

Weather Conditions (Description)	Cool, Clear	**Cloud Cover**	1	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	21:45		**Number of traps used**	10							
	Finish time (24 hours)	21:55										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	1	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	23/03/2017	**Visit Number**	1
Pond Ecology ID	90	**Easting (X)**	332637	**Northing (Y)**		117593	
Surveyor(s)	DBI CW						

Weather Conditions (Description)	Mild and dry	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	
Turbidity	5	**Vegetation Cover**	1	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		18:45	**Number of traps used**		5						
	Finish time (24 hours)		19:15									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	0	0
Common Toad	0	0	0	0
Other Amphibian (state)	0	0	0	0

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Not enough vegetation for egg search

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	19/04/2017	**Visit Number**	2
Pond Ecology ID	90	**Easting (X)**	332637	**Northing (Y)**		117593	
Surveyor(s)	Ashley James and Lucy Newill						

Weather Conditions (Description)	Dry and breezy	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	100

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		20:45	**Number of traps used**		3						
	Finish time (24 hours)		21:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Mosquito Larvae and Algae on the surface. Pond drying up to a small puddle.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	09/05/2017	**Visit Number**	3
Pond Ecology ID	90	**Easting (X)**	332637	**Northing (Y)**		117593	
Surveyor(s)	LN and LB						

Weather Conditions (Description)	Dry and breezy	**Cloud Cover**	3	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	100

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	No			No			No				No	Yes
	Start time (24 hours)	20:45		**Number of traps used**	0							
	Finish time (24 hours)	21:00										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth or Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	N/A	N/A
Common Toad	N/A	N/A	N/A	N/A
Other Amphibian (state)	N/A	N/A	N/A	N/A

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond dried up completely, all usual methods could not be used. A Refuge search was undertaken to compensate.

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	23/03/2017	**Visit Number**	1
Pond Ecology ID	91	**Easting (X)**	332666	**Northing (Y)**		117575	
Surveyor(s)	DBI CW						

Weather Conditions (Description)	Mild and dry	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	5	**Vegetation Cover**	1	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		18:45	**Number of traps used**		15						
	Finish time (24 hours)		19:15									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	0	0
Common Toad	0	0	0	0
Other Amphibian (state)	0	0	0	0

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Not enough vegetation for egg search

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	19/04/2017	**Visit Number**	2
Pond Ecology ID	91	**Easting (X)**	332670	**Northing (Y)**		117576	
Surveyor(s)	Ashley James and Lucy Newill						

Weather Conditions (Description)	Dry and breezy	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	100

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		20:30	**Number of traps used**		15						
	Finish time (24 hours)		20:45									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Mosquito Larvae and Algae on the surface.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	09/05/2017	**Visit Number**	3
Pond Ecology ID	91	**Easting (X)**	332670	**Northing (Y)**		117576	
Surveyor(s)	Laura Boggeln and Lucy Newill						

Weather Conditions (Description)	Dry	**Cloud Cover**	3	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	12	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	10

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		21:00	**Number of traps used**		15						
	Finish time (24 hours)		21:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	1	1	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	1	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

90 and 90a have dried up (see photos).

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	31/05/2017	**Visit Number**	4
Pond Ecology ID	91	**Easting (X)**	332670	**Northing (Y)**		117576	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	warm, still night	**Cloud Cover**	1	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	5	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	10

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Yes**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)	22:50		**Number of traps used**	D/D/10							
	Finish time (24 hours)	23:00										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	3	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

No suitable egg laying habitat, pond appears drier than last visit.

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS59858	**Date**	12/04/2017	**Visit Number**	1
Pond Ecology ID	Pond 110	**Easting (X)**	332783	**Northing (Y)**		117278	
Surveyor(s)	MC & AM						

Weather Conditions (Description)	Cool and Clear	**Cloud Cover**	3	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	25

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		20:55	**Number of traps used**		10						
	Finish time (24 hours)		21:05									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

No Amphibians recorded. No vegetation from which to conduct an egg serach.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS59858	**Date**	04/05/2017	**Visit Number**	2
Pond Ecology ID	110	**Easting (X)**	332783	**Northing (Y)**		117278	
Surveyor(s)	Ashley James and Lucy Newill						

Weather Conditions (Description)	Dry and breezy	**Cloud Cover**	7	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	9	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				No	Yes
	Start time (24 hours)		21:35	**Number of traps used**		10						
	Finish time (24 hours)		21:45									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog				
Common Toad				
Other Amphibian (state)				

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Torched the edge of the pond as high turbidity the further into the pond.

Photo References

Are further surveys needed?	

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	WS59858	**Land Parcel Reference**	WS59858	**Date**	16/05/2017	**Visit Number**	3
Pond Ecology ID	110	**Easting (X)**	332783	**Northing (Y)**		117277	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	overcast and muggy evening	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	15	**Minimum Overnight Temperature** (°C)	12	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Yes**
	yes			Yes			No				No	Yes
	Start time (24 hours)		22:00	**Number of traps used**		10						
	Finish time (24 hours)		22:10									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	no	no
Common Toad	N/A	N/A	no	no
Other Amphibian (state)	N/A	N/A	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS 59858	**Date**	31/05/2017	**Visit Number**	4
Pond Ecology ID	110	**Easting (X)**	332783	**Northing (Y)**		117277	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	clear, mild night	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	15	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	5	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge search**
	Yes			Yes			no				no	Yes
	Start time (24 hours)		23:30	**Number of traps used**		5						
	Finish time (24 hours)		23:40									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0				0		0
Smooth Newt	0	0	0	0	0	0				0		0
Palmate Newt	0	0	0	0	0	0				0		0
Smooth or Palmate Newt	0	0	0	0	0	0				0		0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog				
Common Toad				
Other Amphibian (state)				

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

No suitable egg laying habitat

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS59858	**Date**	11/04/2017	**Visit Number**	1
Pond Ecology ID	Pond 111	**Easting (X)**	332783	**Northing (Y)**		117278	
Surveyor(s)	MC & AM						

Weather Conditions (Description)	Cool and Clear	**Cloud Cover**	3	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		20:30	**Number of traps used**		15						
	Finish time (24 hours)		20:50									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS59858	**Date**	04/05/2017	**Visit Number**	2
Pond Ecology ID	111	**Easting (X)**	332783	**Northing (Y)**		117278	
Surveyor(s)	Ashley James and Lucy Newill						

Weather Conditions (Description)	Dry and breezy	**Cloud Cover**	7	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	9	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	10

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				No	Yes
	Start time (24 hours)		21:45	**Number of traps used**		15						
	Finish time (24 hours)		22:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	N/A	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	N/A	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	N/A	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	N/A	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/a	N/a	no	no
Common Toad	N/a	N/a	no	no
Other Amphibian (state)	N/a	N/a	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS59858	**Date**	16/05/2017	**Visit Number**	3
Pond Ecology ID	111	**Easting (X)**	332783	**Northing (Y)**		117278	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	overcast and muggy evening	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	15	**Minimum Overnight Temperature** (°C)	12	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	40

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Yes**
	yes			Yes			No				Yes	Yes
	Start time (24 hours)	22:20		**Number of traps used**	15							
	Finish time (24 hours)	22:40										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	no	no
Common Toad	N/A	N/A	no	no
Other Amphibian (state)	N/A	N/A	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS 59858	**Date**	31/05/2017	**Visit Number**	4
Pond Ecology ID	111	**Easting (X)**	332783	**Northing (Y)**		117278	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	clear, mild night	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	15	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge search**
	Yes			Yes			no				Yes	Yes
	Start time (24 hours)	23:20		**Number of traps used**	15							
	Finish time (24 hours)	23:30										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	no	no
Common Toad	N/A	N/A	no	no
Other Amphibian (state)	N/A	N/A	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST107626	**Date**	27/03/2017	**Visit Number**	1
Pond Ecology ID	115	**Easting (X)**	333060	**Northing (Y)**		117087	
Surveyor(s)	D Byett L Newill						

Weather Conditions (Description)	raining	**Cloud Cover**	8	**Wind**	1
		Rain	2		
Air Temperature at Time of Torching (°C)	10	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	75

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		19:37	**Number of traps used**		20						
	Finish time (24 hours)		19:42									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	1	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

no egg search due to healh and safety, too much rubbish in pond. alot of duck weed made torching very hard too see

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	W559859	**Date**	11/05/2017	**Visit Number**	2
Pond Ecology ID	Pond 115	**Easting (X)**	333060	**Northing (Y)**		117087	
Surveyor(s)	AJ & AM						

Weather Conditions (Description)	mild Drizzle	**Cloud Cover**	8	**Wind**	0
		Rain	2		
Air Temperature at Time of Torching (°C)	14	**Minimum Overnight Temperature** (°C)	11	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			yes			Yes				Yes	No
	Start time (24 hours)		21:19	**Number of traps used**		20						
	Finish time (24 hours)		21:29									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	1	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Torching limited due to heavy coverage of duckweed, so netting was conducted as well. Egg searching limited due to litter and potential dangerous objects surrounding pond. Egg search completed where it was safe to do so.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	W559859	**Date**	18/05/2017	**Visit Number**	3
Pond Ecology ID	Pond 115	**Easting (X)**	333060	**Northing (Y)**		117087	
Surveyor(s)	AJ & CK						

Weather Conditions (Description)	overcast	**Cloud Cover**	8	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	5

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			yes			Yes				Yes	No
	Start time (24 hours)		21:40	**Number of traps used**		20						
	Finish time (24 hours)		21:50									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	N/a
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	n/a
Palmate Newt	0	0	0	1	0	0	0	0	0	0	0	n/a
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	n/a

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Torching limited due to heavy coverage of duckweed, so netting was conducted as well. Egg searching limited due to litter and potential dangerous objects surrounding pond. Egg search completed where it was safe to do so.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	W559859	**Date**	25/05/2017	**Visit Number**	4
Pond Ecology ID	Pond 115	**Easting (X)**	333060	**Northing (Y)**		117087	
Surveyor(s)	JD AJ						

Weather Conditions (Description)	mild Drizzle	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	20	**Minimum Overnight Temperature** (°C)	18	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			yes			Yes				Yes	No
	Start time (24 hours)		21:19	**Number of traps used**		20						
	Finish time (24 hours)		21:29									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	1	1	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Torching limited due to heavy coverage of duckweed, so netting was conducted as well. Egg searching limited due to litter and potential dangerous objects surrounding pond. Egg search completed where it was safe to do so. Two Hazel Dormice were observed drinking water/swiming during torching on the

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST107626	**Date**	27/03/2017	**Visit Number**	1
Pond Ecology ID	115a	**Easting (X)**	333043	**Northing (Y)**		117099	
Surveyor(s)	D Byett L Newill						

Weather Conditions (Description)	raining	**Cloud Cover**	8	**Wind**	2
		Rain	2		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	80

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)			**Number of traps used**		10						
	Finish time (24 hours)											
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	4	0	0	1	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

no suitable material for egg laying. And haealth and safety as likely to have rubbish in pond

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST107626	**Date**	12/05/2017	**Visit Number**	2
Pond Ecology ID	Pond 115A	**Easting (X)**	333043	**Northing (Y)**		117099	
Surveyor(s)	AJ AM & LN (Morning)						

Weather Conditions (Description)	Mild drizzle	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	14	**Minimum Overnight Temperature** (°C)	11	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		21:31	**Number of traps used**		10						
	Finish time (24 hours)		21:41									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	1	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	1	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

No vegetation suitable for egg search so Netting used instead.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST107626	**Date**	18/05/2017	**Visit Number**	3
Pond Ecology ID	Pond 115A	**Easting (X)**	333043	**Northing (Y)**		117099	
Surveyor(s)	AJ&CK						

Weather Conditions (Description)	Overcast Mild	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		21:50	**Number of traps used**		10						
	Finish time (24 hours)		22:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	n/a	n/a
Smooth Newt	0	0	0	0	0	0	0	0	0	0	n/a	n/a
Palmate Newt	0	0	0	0	0	0	0	0	0	0	n/a	n/a
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	n/a	n/a

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

No vegetation suitable for egg search so Netting used instead.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST107626	**Date**	25/05/2017	**Visit Number**	4
Pond Ecology ID	Pond 115A	**Easting (X)**	333043	**Northing (Y)**		117099	
Surveyor(s)	JD AJ						

Weather Conditions (Description)	Hot, Dry and clear	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	20	**Minimum Overnight Temperature** (°C)	18	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		21:55	**Number of traps used**		10						
	Finish time (24 hours)		22:05									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	1	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	2	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

No vegetation suitable for egg search so Netting used instead.

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	_AA1_AA2_30a_030417	**Land Parcel Reference**	Park and Ride	**Date**	18/04/2017	**Visit Number**	1
Pond Ecology ID	30a	**Easting (X)**	325948	**Northing (Y)**		124410	
Surveyor(s)	RM & LN						

Weather Conditions (Description)	Dry, calm, cool	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	5

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		19:50	**Number of traps used**		30						
	Finish time (24 hours)		20:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	2	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	5	1	0	14	6	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Newts seem to be mainly concentrated in the northern edge of this pond. Nothing seen or caught elsewhere.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	Park and ride	**Date**	15/05/2017	**Visit Number**	2
Pond Ecology ID	Pond 30A	**Easting (X)**	325948	**Northing (Y)**		124410	
Surveyor(s)	AJ & CK						

Weather Conditions (Description)	Light rain overcast	**Cloud Cover**	8	**Wind**	2
		Rain	2		
Air Temperature at Time of Torching (°C)	15	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			yes			No				Yes	No
	Start time (24 hours)		23:00	**Number of traps used**		30						
	Finish time (24 hours)		23:10									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	3	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	6	0	0	3	3	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	31	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	no
Common Toad	0	0	Yes	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	Park and Ride	**Date**	30/05/2017	**Visit Number**	3
Pond Ecology ID	30a	**Easting (X)**	325948	**Northing (Y)**		124410	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	muggy, dry evening	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	5	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge search**
	yes			yes			no				Yes	no
	Start time (24 hours)	22:40		**Number of traps used**		23						
	Finish time (24 hours)	23:00										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	2	0	0	2	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	5	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	Yes	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	Park and Ride	**Date**	08/06/2017	**Visit Number**	4
Pond Ecology ID	30a	**Easting (X)**	325948	**Northing (Y)**		124410	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	overcast	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	5	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge search**
	yes			yes			no				Yes	no
	Start time (24 hours)	22:40		**Number of traps used**	23							
	Finish time (24 hours)	23:00										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	3	0	0	1	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	5	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	Yes	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	_AA1_AA2_30b_030417	**Land Parcel Reference**	Park and Ride	**Date**	18/04/2017	**Visit Number**	1
Pond Ecology ID	30b	**Easting (X)**	325969	**Northing (Y)**		124451	
Surveyor(s)	RM & LN						

Weather Conditions (Description)	Dry, calm, cool	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	3	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	5

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				Yes	Yes
	Start time (24 hours)		19:50	**Number of traps used**								
	Finish time (24 hours)		20:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Smooth Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Smooth or Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Very dry and heavily inundated with vegetation. Too shallow to trap. Likely to be virtually dry soon. Would recommend only torching in future, until it runs dry.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	Park and ride	**Date**	15/05/2017	**Visit Number**	2
Pond Ecology ID	Pond 30B	**Easting (X)**	325969	**Northing (Y)**		124451	
Surveyor(s)	AJ & CK						

Weather Conditions (Description)	Light rain overcast	**Cloud Cover**	8	**Wind**	2
		Rain	2		
Air Temperature at Time of Torching (°C)	15	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			yes			No				Yes	No
	Start time (24 hours)		23:10	**Number of traps used**		5						
	Finish time (24 hours)		23:20									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	no
Common Toad	0	0	Yes	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Very dry pond majority unable to bottle as there is less than an inch of water, due to it being densly covered with reeds.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	Park and Ride	**Date**	30/05/2017	**Visit Number**	3
Pond Ecology ID	30b	**Easting (X)**	325969	**Northing (Y)**		124410	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	muggy, dry evening	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	5	**Pond Margin Inaccessible** (%)	10

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	No			No								
	Start time (24 hours)		22:40	**Number of traps used**			no				No	Yes
	Finish time (24 hours)		23:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth or Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	no	no
Common Toad	N/A	N/A	no	no
Other Amphibian (state)	N/A	N/A	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

DRY- To dry to survey

Are further surveys needed?

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_36a_220317	**Land Parcel Reference**	ST316480	**Date**	22/03/2017	**Visit Number**	1
Pond Ecology ID	36a	**Easting (X)**	327138	**Northing (Y)**		123398	
Surveyor(s)	JG +AM						

Weather Conditions (Description)	Calm and cool	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		18:30	**Number of traps used**		10						
	Finish time (24 hours)		20:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	1	3	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Water level dropped overnight, limited potential for bottle traps. Not enough water to net

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_36a_050417	**Land Parcel Reference**	ST316480	**Date**	05/04/2017	**Visit Number**	2
Pond Ecology ID	36a	**Easting (X)**	327138	**Northing (Y)**		123398	
Surveyor(s)	DBI + LN						

Weather Conditions (Description)	Warm and dry	**Cloud Cover**	3	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		20:20	**Number of traps used**		10						
	Finish time (24 hours)		20:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_36a_180417	**Land Parcel Reference**	ST316480	**Date**	18/04/2017	**Visit Number**	3
Pond Ecology ID	36a	**Easting (X)**	327138	**Northing (Y)**		123398	
Surveyor(s)	CW & AM						

Weather Conditions (Description)	partially cloudy, cool	**Cloud Cover**	1	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		20:20	**Number of traps used**		10						
	Finish time (24 hours)		20:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	3	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST 316480	**Date**	10/05/2017	**Visit Number**	4
Pond Ecology ID	36a	**Easting (X)**	327138	**Northing (Y)**		123398	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	hot, clear evening	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	8	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	yes			Yes			No				Yes	Yes
	Start time (24 hours)	22:10		**Number of traps used**	10							
	Finish time (24 hours)	22:25										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	1	3	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	1	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	2	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_36b_220317	**Land Parcel Reference**	ST316480	**Date**	22/03/2017	**Visit Number**	1
Pond Ecology ID	36b	**Easting (X)**	327124	**Northing (Y)**		123368	
Surveyor(s)	JG +AM						

Weather Conditions (Description)	Calm and cool	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				Yes	Yes
	Start time (24 hours)	20:00		**Number of traps used**	0							
	Finish time (24 hours)	20:30										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	3	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

To shallow to bottle trap

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_36b_050417	**Land Parcel Reference**	ST316480	**Date**	05/04/2017	**Visit Number**	2
Pond Ecology ID	36b	**Easting (X)**	327124	**Northing (Y)**		123368	
Surveyor(s)	DBI + LN						

Weather Conditions (Description)	Warm and dry	**Cloud Cover**	3	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				Yes	Yes
	Start time (24 hours)	20:30		**Number of traps used**	0							
	Finish time (24 hours)	21:00										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

To shallow to bottle trap

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_36b_180417	**Land Parcel Reference**	ST316480	**Date**	18/04/2017	**Visit Number**	3
Pond Ecology ID	36b	**Easting (X)**	327124	**Northing (Y)**		123368	
Surveyor(s)	CW & AM						

Weather Conditions (Description)	partially cloudy, cool	**Cloud Cover**	1	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				Yes	Yes
	Start time (24 hours)	20:30		**Number of traps used**	0							
	Finish time (24 hours)	20:45										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	2	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

To shallow to bottle trap

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST 316480	**Date**	10/05/2017	**Visit Number**	4
Pond Ecology ID	36b	**Easting (X)**	327124	**Northing (Y)**		123368	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	hot, clear evening	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	8	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	yes			No			No				Yes	Yes
	Start time (24 hours)	21:55		**Number of traps used**	0							
	Finish time (24 hours)	22:10										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	2	1	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	3	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

To shallow to bottle trap

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST208124	**Date**	25/04/2017	**Visit Number**	1
Pond Ecology ID	40a	**Easting (X)**	328340	**Northing (Y)**		123416	
Surveyor(s)	CW + FS						

Weather Conditions (Description)	Cold and clear, no rain	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	4	**Minimum Overnight Temperature** (°C)	2	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	1	**Pond Margin Inaccessible** (%)	40

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		21:40	**Number of traps used**		13						
	Finish time (24 hours)		22:05									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	3	0	0	0	2	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	1	0	0	0	1	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	11	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond is lined so bottles can only be placed in small earth banks. BE CAREFUL NOT TO PUNCTURE POND LINING. Angry goose also present but not vicious

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST208124	**Date**	08/05/2017	**Visit Number**	2
Pond Ecology ID	40a	**Easting (X)**	328340	**Northing (Y)**		123416	
Surveyor(s)	LB, CK and JD						

Weather Conditions (Description)	Mild and Cloudy	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	2	**Pond Margin Inaccessible** (%)	40

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	22:20		**Number of traps used**	15							
	Finish time (24 hours)	22:30										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	1	3	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	2	0	0	2	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	11	0	0	0	0	N/A	N/A	N/A	0	Yes	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	No
Common Toad	0	0	No	No
Other Amphibian (state)	Yellow bellied Toad Torched	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Large number of palmate/smooth eggs. Limitation- because pond was lined could only put traps in side where GCN were not observed whilst torching.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST208124	**Date**	15/05/2017	**Visit Number**	3
Pond Ecology ID	Pond 40a	**Easting (X)**	328340	**Northing (Y)**		123416	
Surveyor(s)	AJ&CK						

Weather Conditions (Description)	Overcast Mild	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	22:30		**Number of traps used**	13							
	Finish time (24 hours)	22:45										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	1	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	3	0	0	N/A	N/A	N/A	0	4	N/A
Palmate Newt	2	0	0	0	0	0	N/A	N/A	N/A	0	4	N/A
Smooth or Palmate Newt	0	14	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST208124	**Date**	22/05/2017	**Visit Number**	4
Pond Ecology ID	Pond 40a	**Easting (X)**	328340	**Northing (Y)**		123416	
Surveyor(s)	AJ&CK						

Weather Conditions (Description)	Overcast Mild	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	22:30		**Number of traps used**	13							
	Finish time (24 hours)	22:45										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	1	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	3	0	0	N/A	N/A	N/A	0	4	N/A
Palmate Newt	2	0	0	0	0	0	N/A	N/A	N/A	0	4	N/A
Smooth or Palmate Newt	0	14	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST 208037 ST208124	**Date**	30/05/2017	**Visit Number**	5
Pond Ecology ID	40a	**Easting (X)**	328340	**Northing (Y)**		123416	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	muggy, dry evening	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	10

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Rrefuge search**
	Yes			Yes			no				Yes	No
	Start time (24 hours)		22:20	**Number of traps used**		10						
	Finish time (24 hours)		22:40									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Palmate Newt	3	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Bottle trapped where possible due to lining of the pond. No suitable refugia. Extreme east end of the pond was inaccessible

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST208124	**Date**	12/06/2017	**Visit Number**	6
Pond Ecology ID	40a	**Easting (X)**	328340	**Northing (Y)**		123416	
Surveyor(s)	MC & JS						

Weather Conditions (Description)	Warm, some cloud	**Cloud Cover**	1	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	19	**Minimum Overnight Temperature** (°C)	16	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	80

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)	22:10		**Number of traps used**	7							
	Finish time (24 hours)	22:34										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	1	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	1	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	1	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond is lined so bottles can only be placed in a small percentage of the pond.

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST208124	**Date**	06/06/2017	**Visit Number**	N/A
Pond Ecology ID	40a	**Easting (X)**	328340	**Northing (Y)**		123416	
Surveyor(s)	DB + LN						

Weather Conditions (Description)	Dry and windy	**Cloud Cover**	1	**Wind**	3
		Rain	0		
Air Temperature at Time of Torching (°C)	12	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	40

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		21:30	**Number of traps used**		13						
	Finish time (24 hours)		21:45									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	2	1	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	3	2	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	Yes	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	U00042	**Date**	15/05/2017	**Visit Number**	1
Pond Ecology ID	64 B	**Easting (X)**	329641	**Northing (Y)**		119826	
Surveyor(s)	JD DB						
Weather Conditions (Description)	Warm and Dry	**Cloud Cover**	8	**Wind**		1	
		Rain	0				
Air Temperature at Time of Torching (°C)	14	**Minimum Overnight Temperature (°C)**	14	**Torch Power**		1,000,000	
Turbidity	2	**Vegetation Cover**	1	**Pond Margin Inaccessible (%)**		0	

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	no
	Start time (24 hours)		21:30	**Number of traps used**		10						
	Finish time (24 hours)		21:40									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	2	0	3	3	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	1	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	1	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle trap, egg search)

Too much blanket weed to net and shallow.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	U00042	**Date**	18/05/2017	**Visit Number**	2
Pond Ecology ID	64b	**Easting (X)**	329648	**Northing (Y)**		119842	
Surveyor(s)	JG+AS						

Weather Conditions (Description)	Muggy, still evening	**Cloud Cover**	7	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	12	**Minimum Overnight Temperature** (°C)	8	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	5	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		22:00	**Number of traps used**		10						
	Finish time (24 hours)		22:10									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	1	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	2	0	0	5	1	0	N/A	N/A	N/A	0	0	1 female
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

N/A

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	U00042	**Date**	30/05/2017	**Visit Number**	3
Pond Ecology ID	Pond 64B	**Easting (X)**	329648	**Northing (Y)**		119842	
Surveyor(s)	JD&AJ						

Weather Conditions (Description)	Overcast Humid	**Cloud Cover**	8	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	3	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	22:00		**Number of traps used**	10							
	Finish time (24 hours)	22:10										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	2	0	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	3	0	0	0	0	N/A	N/A	N/A	0	15	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	U00042	**Date**	06/06/2017	**Visit Number**	4
Pond Ecology ID	64b	**Easting (X)**	329648	**Northing (Y)**		119842	
Surveyor(s)	DB + LN						

Weather Conditions (Description)	Dry and windy	**Cloud Cover**	1	**Wind**	3
		Rain	0		
Air Temperature at Time of Torching (°C)	12	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	5	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		22:10	**Number of traps used**		10						
	Finish time (24 hours)		22:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	1	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	1	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Photo References

N/A

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST130779	**Date**	27/03/2017	**Visit Number**	1
Pond Ecology ID	84a	**Easting (X)**	331492	**Northing (Y)**		117813	
Surveyor(s)	DByett Lnewill						

Weather Conditions (Description)	calm and clear	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			Yes				Yes	No
	Start time (24 hours)		19:35	**Number of traps used**		0						
	Finish time (24 hours)		19:37									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	0	0	0	0	0	N/A
Smooth Newt	0	0	0	N/A	N/A	N/A	0	0	0	0	0	N/A
Palmate Newt	1	2	0	N/A	N/A	N/A	1	0	0	0	0	N/A
Smooth or Palmate Newt	0	0	0	N/A	N/A	N/A	0	0	0	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

pond lined

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST130779	**Date**	20/04/2017	**Visit Number**	2
Pond Ecology ID	84a	**Easting (X)**	331492	**Northing (Y)**		117813	
Surveyor(s)	CW & AM						

Weather Conditions (Description)	calm and clear	**Cloud Cover**	8	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	5	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				Yes	Yes
	Start time (24 hours)		21:00	**Number of traps used**		0						
	Finish time (24 hours)		21:08									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	0	0	0	0	0	0
Smooth Newt	1	0	0	N/A	N/A	N/A	0	0	0	0	0	0
Palmate Newt	3	0	0	N/A	N/A	N/A	0	0	0	0	0	0
Smooth or Palmate Newt	0	2	0	N/A	N/A	N/A	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

pond lined - no bottle traps and no netting conducted as both harmfull to homeowner's small garden pond, which is almost completely covered by an ornamental plant. Refuge seach undertaken to compensate

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	Unknown	**Date**	11/05/2017	**Visit Number**	3
Pond Ecology ID	Pond 84a	**Easting (X)**	331492	**Northing (Y)**		117813	
Surveyor(s)	AJ & AM						

Weather Conditions (Description)	Clear and mild	**Cloud Cover**	8	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	14	**Minimum Overnight Temperature** (°C)	8	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				Yes	Yes
	Start time (24 hours)		21:19	**Number of traps used**		0						
	Finish time (24 hours)		21:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Palmate Newt	0	1	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Too destructive to net as it is a garden pond. No bottle trapping as pond is lined. Refuge search undertaken to compensate

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST130779	**Date**	24/05/2017	**Visit Number**	4
Pond Ecology ID	Pond 84A	**Easting (X)**	331492	**Northing (Y)**		117813	
Surveyor(s)	JD&AJ						

Weather Conditions (Description)	Warm mild clear	**Cloud Cover**	0	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	16	**Minimum Overnight Temperature** (°C)	14	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				yes	Yes
	Start time (24 hours)		21:40	**Number of traps used**		None						
	Finish time (24 hours)		21:50									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Smooth Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Smooth or Palmate Newt	0	1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	1	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond lined so cant use bottle traps and netting deemed to destructive to garden pond. Refuge search undertaken to compensate

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	08/05/2017	**Visit Number**	1
Pond Ecology ID	86b	**Easting (X)**	332163	**Northing (Y)**		118040	
Surveyor(s)	AM & AJ						

Weather Conditions (Description)	Cool, Clear	**Cloud Cover**	1	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)	22:30		**Number of traps used**	5							
	Finish time (24 hours)	22:40										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Difficult to access far side of pond.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY							
Ecology ID		**Land Parcel Reference**	WS 44373	**Date**	17/05/2017	**Visit Number**	2
Pond Ecology ID	86b	**Easting (X)**	332163	**Northing (Y)**		118040	
Surveyor(s)	JG + AS						

Weather Conditions (Description)	clear, still evening	**Cloud Cover**	3	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	12	**Minimum Overnight Temperature** (°C)	9	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Yes**
	yes			yes			no				Yes	yes
	Start time (24 hours)		21:50	**Number of traps used**		7						
	Finish time (24 hours)		22:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog				
Common Toad				
Other Amphibian (state)				

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	01/06/2017	**Visit Number**	3
Pond Ecology ID	86b	**Easting (X)**		**Northing (Y)**			
Surveyor(s)	JD AJ						

Weather Conditions (Description)	Hot and Dry	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	14	**Minimum Overnight Temperature (°C)**	12	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible (%)**	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	yes			yes			no				yes	
	Start time (24 hours)			**Number of traps used**		10						
	Finish time (24 hours)											
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method)		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Larvae**		
Great Crested Newt	0	0	0	0	0	0					0	
Smooth Newt	0	0	0	0	0	0					0	
Palmate Newt	0	0	0	1	1	0					0	
Smooth or Palmate Newt	0	9	0	0	0	0					0	

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog				
Common Toad				
Other Amphibian (state)				

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond was only accessed from one side due to dense vegetation. Water was very turbid.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS 44373	**Date**	07/06/2017	**Visit Number**	4
Pond Ecology ID	86b	**Easting (X)**	332163	**Northing (Y)**		118040	
Surveyor(s)	DB + LN						

Weather Conditions (Description)	Dry and windy	**Cloud Cover**	8	**Wind**	3
		Rain	0		
Air Temperature at Time of Torching (°C)	14	**Minimum Overnight Temperature** (°C)	12	**Torch Power**	1,000,000
Turbidity	5	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	60

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Yes**
	yes			yes			Yes				No	No
	Start time (24 hours)	21:15		**Number of traps used**	10							
	Finish time (24 hours)	21:30										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	N/A	N/A
Smooth Newt	0	0	0	0	0	0	0	0	0	0	N/A	N/A
Palmate Newt	0	0	0	1	1	0	0	0	0	0	N/A	N/A
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	N/A	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Badger seen running near to pond.

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	23/03/2017	**Visit Number**	1
Pond Ecology ID	90a	**Easting (X)**	332621	**Northing (Y)**		117606	
Surveyor(s)	DBI CW						

Weather Conditions (Description)	Mild and dry	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	9	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	5	**Vegetation Cover**	1	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	No
	Start time (24 hours)		18:45	**Number of traps used**		13						
	Finish time (24 hours)		19:15									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	0	0
Common Toad	0	0	0	0
Other Amphibian (state)	0	0	0	0

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Not enough vegetation for egg search

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373	**Date**	19/04/2017	**Visit Number**	2
Pond Ecology ID	90A	**Easting (X)**	332621	**Northing (Y)**		117606	
Surveyor(s)	Ashley James and Lucy Newill						

Weather Conditions (Description)	Dry and Breezy	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	7	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	100

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	No
	Start time (24 hours)		20:30	**Number of traps used**		7						
	Finish time (24 hours)		21:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	N/A
Smooth or Palmate Newt	0	2	0	0	0	0	N/A	N/A	N/A	0	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Mosquito Larvae and algae scum covering the top of the pond. Ponds drying up, recommended to put in 13 bottles but could only fit 7.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	WS44373 2	**Date**	09/05/2017	**Visit Number**	
Pond Ecology ID	90A	**Easting (X)**	332621	**Northing (Y)**		117606	
Surveyor(s)	LN and LB						

Weather Conditions (Description)	Dry and Breezy	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	8	**Minimum Overnight Temperature** (°C)	5	**Torch Power**	1,000,000
Turbidity	4	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	100

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	No			No			No				No	Yes
	Start time (24 hours)		20:30	**Number of traps used**		0						
	Finish time (24 hours)		21:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth or Palmate Newt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	N/A	N/A
Common Toad	N/A	N/A	N/A	N/A
Other Amphibian (state)	N/A	N/A	N/A	N/A

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond complete dry, usual methods could not be used, refuge search undertaken to compensate.

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST283143	**Date**	29/03/2017	**Visit Number**	1
Pond Ecology ID	PondA2	**Easting (X)**	329259	**Northing (Y)**		119941	
Surveyor(s)	D Byett L Newill						

Weather Conditions (Description)	some guests but clear	**Cloud Cover**	8	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	13	**Minimum Overnight Temperature** (°C)	11	**Torch Power**	1,000,000
Turbidity	2	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				Yes	No
	Start time (24 hours)	21:38		**Number of traps used**	15							
	Finish time (24 hours)	21:42										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	18	14	0	2	2	0	3	1	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

no live vegetation, though check dead leaf where possible

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST283142	**Date**	04/05/2017	**Visit Number**	2
Pond Ecology ID	A2	**Easting (X)**	329259	**Northing (Y)**		119941	
Surveyor(s)	Ashley James and Lucy Newill						

Weather Conditions (Description)	Dry and breezy	**Cloud Cover**	7	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	9	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			No				Yes	Yes
	Start time (24 hours)		20:30	**Number of traps used**		10						
	Finish time (24 hours)		21:30									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Palmate Newt	3	5	0	6	4	0	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	N/A	N/A
Common Toad	N/A	N/A	N/A	N/A
Other Amphibian (state)	N/A	N/A	N/A	N/A

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

8 unknown palmates-too quick in torch light. 10 bottles as the pond has dried up even more, so reduced bottle traps due to depth.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST283142 3	**Date**	10/05/2017	**Visit Number**	
Pond Ecology ID	A2	**Easting (X)**	329259	**Northing (Y)**		119941	
Surveyor(s)	AM and AJ						

Weather Conditions (Description)	Dry and clear	**Cloud Cover**	0	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	11	**Minimum Overnight Temperature** (°C)	6	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	30

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			Yes			Yes				No	Yes
	Start time (24 hours)		22:15	**Number of traps used**		10						
	Finish time (24 hours)		22:25									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Newt	0	0	0	0	0	0	0	0	0	0	0	0
Palmate Newt	3	4	0	1	2	0	0	0	0	0	0	0
Smooth or Palmate Newt	0	0	0	0	0	0	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	no	no
Common Toad	0	0	no	no
Other Amphibian (state)	0	0	no	no

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Pond reduced in size. One pregnant female torched and handled by AJ, Pond partially dried up so only 10 traps possible. Deep mud.

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST283142	**Date**	01/06/2017	**Visit Number**	4
Pond Ecology ID	A2	**Easting (X)**	329259	**Northing (Y)**		119941	
Surveyor(s)	JD AJ						
Weather Conditions (Description)	Hot and Dry	**Cloud Cover**	0	**Wind**		0	
		Rain	0				
Air Temperature at Time of Torching (°C)	14	**Minimum Overnight Temperature (°C)**	12	**Torch Power**		1,000,000	
Turbidity	2	**Vegetation Cover**	0	**Pond Margin Inaccessible (%)**		0	

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	yes			yes			no				yes	no
	Start time (24 hours)			**Number of traps used**		10						
	Finish time (24 hours)											
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Smooth Newt	0	0	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A
Palmate Newt	3	6	0	1	2	0	N/A	N/A	N/A	N/A	0	N/A
Smooth or Palmate Newt	0	9	0	0	0	0	N/A	N/A	N/A	N/A	0	N/A

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	N/A	N/A
Common Toad	N/A	N/A	N/A	N/A
Other Amphibian (state)	N/A	N/A	N/A	N/A

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

The pond is partially dried up.

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_38_220317	**Land Parcel Reference**	ST304833	**Date**	22/03/2017	**Visit Number**	1
Pond Ecology ID	D001	**Easting (X)**	327524	**Northing (Y)**		123274	
Surveyor(s)	RM & LN						

Weather Conditions (Description)	Calm and cool - recent rain	**Cloud Cover**	0	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	6	**Minimum Overnight Temperature** (°C)	3	**Torch Power**	1,000,000
Turbidity	0	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	5

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				No	Yes
	Start time (24 hours)		19:45	**Number of traps used**		N/A						
	Finish time (24 hours)		20:00									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Palmate Newt	1	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Smooth or Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Very low water level could not bottle trap

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_38_040417	**Land Parcel Reference**	ST304833	**Date**	04/04/2017	**Visit Number**	2
Pond Ecology ID	D001	**Easting (X)**	327524	**Northing (Y)**		123274	
Surveyor(s)	RM & FS						

Weather Conditions (Description)	warm dry	**Cloud Cover**	2	**Wind**	0
		Rain	0		
Air Temperature at Time of Torching (°C)	10	**Minimum Overnight Temperature** (°C)	4	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	0	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			yes				yes	No
	Start time (24 hours)	20:45		**Number of traps used**								
	Finish time (24 hours)	21:00										
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	0	0	0	0	0	0
Smooth Newt	0	0	0	N/A	N/A	N/A	0	0	0	0	0	0
Palmate Newt	0	0	0	N/A	N/A	N/A	0	0	0	0	0	0
Smooth or Palmate Newt	0	1	0	N/A	N/A	N/A	0	0	0	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Very low water level - too low to trap

Photo References

Are further surveys needed?	Yes

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID	ST316480_AA1_AA2_38_040417	**Land Parcel Reference**	ST304833	**Date**	25/04/2017	**Visit Number**	3
Pond Ecology ID	D001	**Easting (X)**	327524	**Northing (Y)**		123274	
Surveyor(s)	CW & FS						

Weather Conditions (Description)	cold, dry	**Cloud Cover**	4	**Wind**	1
		Rain	0		
Air Temperature at Time of Torching (°C)	5	**Minimum Overnight Temperature** (°C)	2	**Torch Power**	1,000,000
Turbidity	3	**Vegetation Cover**	4	**Pond Margin Inaccessible** (%)	50

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	Yes			No			No				yes	Yes
	Start time (24 hours)		20:40	**Number of traps used**								
	Finish time (24 hours)		20:50									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Smooth Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
Smooth or Palmate Newt	0	1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	0	0	No	No
Common Toad	0	0	No	No
Other Amphibian (state)	0	0	No	No

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Netting not possible because water was too shallow.

Photo References

Are further surveys needed?	No

AA1/AA2 - Great Crested Newt Pond Survey Proforma

AA1 AMPHIBIAN POND SURVEY

Ecology ID		**Land Parcel Reference**	ST304833	**Date**	17/05/2017	**Visit Number**	4
Pond Ecology ID	P35	**Easting (X)**	327524	**Northing (Y)**		123274	
Surveyor(s)	AJ & CK						

Weather Conditions (Description)	overcast	**Cloud Cover**	8	**Wind**	2
		Rain	0		
Air Temperature at Time of Torching (°C)	12	**Minimum Overnight Temperature** (°C)	10	**Torch Power**	1,000,000
Turbidity	1	**Vegetation Cover**	1	**Pond Margin Inaccessible** (%)	0

Survey Methods Used	**Torching**			**Bottle-trapping**			**Netting**				**Egg Search**	**Refuge Search**
	yes			No			No				Yes	Yes
	Start time (24 hours)		21:40	**Number of traps used**								
	Finish time (24 hours)		21:50									
Species	**Sex/life stage**			**Sex/life stage**			**Sex/life stage**			(using any method) **Larvae**		
	Male	**Female**	**Immature**	**Male**	**Female**	**Immature**	**Male**	**Female**	**Immature**			
Great Crested Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Smooth Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Smooth or Palmate Newt	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0

Species	**Adults**	**Juveniles**	**Tadpoles**	**Spawn**
Common Frog	N/A	N/A	N/A	N/A
Common Toad	N/A	N/A	N/A	N/A
Other Amphibian (state)	N/A	N/A	N/A	N/A

Comments (incl. justification for deviation from torch, bottle-trap, egg search)

Ditch virtually dried up small pockets of water torched too shallow to bottle and net.

Photo References

Photos will be added at the weekend when I can upload pictures.

Are further surveys needed?	No