Rosefield Solar Farm

Environmental Statement

Volume 4
Appendix 7.5: Great Crested Newt Habitat Suitability Index and eDNA Report (2023)

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

EN010158/APP/6.4
September 2025
Rosefield Energyfarm Limited

Foreword

Survey information contained within **ES Volume 4, Appendix 7.5: Great Crested Newt Habitat Suitability Index and Environmental DNA Report (2023) [EN010158/APP/6.4]** forms part of the Environmental Statement for information only. The great crested newt Habitat Suitability Index and Environmental DNA surveys detailed within this appendix were undertaken in May 2022 and April 2023 and were based on a superseded version of the Order Limits. The results detailed within this appendix were correct at the time of writing; however, this has not impacted the assessment undertaken for great crested newts, with the results of these surveys considered satisfactory to provide a sufficient baseline upon which to base the assessment. Further details are provided within **ES Volume 2, Chapter 7: Biodiversity [EN010158/APP/6.2]**.

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1. Introduction

1.1. Introduction

1.1.1. AECOM was instructed by Rosefield Energyfarm Ltd to undertake ecological surveys to determine the presence or absence of great crested newt *Triturus cristatus* at the proposed Rosefield Solar Farm (the Site).

1.1.2. The surveys undertaken included:

- A desk study to identify all water bodies within 500m of the Site (the survey area) and a review of Ordnance Survey (OS) mapping to determine whether water bodies outside of the Site (but within the survey area) could be scoped in or scoped out of further assessment;
- A Habitat Suitability Index (HSI) survey; and
- An eDNA survey on accessible water bodies, to determine whether great crested newt were present, or likely absent.

1.1.3. The scope of field surveys was restricted to water bodies within ownership of the Claydon Estate (the landowner). No access to any land outside of the ownership of the Claydon Estate was possible.

1.2. Proposed Development

1.2.1. Rosefield Energyfarm Ltd is a proposed new solar energy farm, co-located with battery storage. The proposals include grid infrastructure to connect Rosefield Energyfarm Ltd to the National Grid via underground cable. The proposed generation capacity of the Proposed Development is above 50MW, which means it is a Nationally Significant Infrastructure Project (NSIP) and as such would require a Development Consent Order (DCO).

1.3. Site Description

1.3.1. The Proposed Development is located in three main parcels (referred to hereafter as Parcel 1 (with a sub-Parcel '1a'), Parcel 2 and Parcel 3) located in a triangle of Winslow, Steeple Claydon and Quainton, in the county of Buckinghamshire and in the geographical region of Aylesbury Vale. The Site is in the administrative area of Buckinghamshire Council. The location of the Site is presented in **Figure 1** (**Annex A**).

1.3.2. The Site is located at Ordnance Survey national grid reference SP7024 (Knowl Hill).

1.3.3. Parcel 1 (see **Figure 1** (**Annex A**)) makes up the largest area of the Proposed Development, to the east of Calvert, and consists predominately of arable fields with livestock pasture and woodland blocks. A smaller section, referred to as Parcel 1a, lies to the immediate south of Parcel 1. Parcel 2 contains predominantly arable fields surrounded by woodland blocks. Parcel 3 contains two livestock fields and is located adjacent to the

National Grid East Claydon Substation. The Parcels are surrounded by arable, grassland and woodland.

1.4. Scope of the Report

1.4.1. The objective of the surveys reported in this document, was:

- To identify the presence or likely absence of great crested newt within the survey area;
- To identify water bodies that will, or may, require further survey; and
- To determine whether there are any likely impacts from the Proposed Development on great crested newt.

1.4.2. This report includes the following information:

- Relevant legislation and policy;
- Methodologies for desk and field-based assessments undertaken in 2021, 2022 and 2023;
- Limitations to the surveys undertaken and any assumptions made as a result of incomplete data;
- Survey results; and
- Conclusions and recommendations.

1.4.3. This report is intended for Rosefield Energyfarm Ltd, for future inclusion in detailed ecological assessments that follow.

2. Great Crested Newt Ecology

2.1.1. Great crested newt is one of seven species of amphibian native to Britain and in common with other UK amphibians, they spend the majority of their lives on land, returning to standing water (water bodies and ditches) in the spring in order to breed.

2.2. Effect of Temperature on Activity

2.2.1. Great Crested Newts are ectothermic, meaning that they regulate their temperature through exchange of heat with the external environment. Gaseous exchange (oxygen/carbon dioxide) is achieved largely by absorption through their permeable skins, which must be moist for this purpose. Behaviour and activity are therefore strongly linked to external environmental conditions, especially daily and seasonal cycles. Great crested newts are mainly active at night (usually when temperatures exceed 5°C and following recent rainfall). With the onset of winter frosts, great crested newts hibernate. Activity recommences when the frosts subside (which may be as early as January/February), with adults migrating to breeding water bodies. Peak breeding activity is usually between mid-March and mid-May.

2.3. Reproduction

2.3.1. Breeding takes place within water bodies with males performing a courtship ‘dance’ in order to attract and encourage females to take up a spermatophore (a packet containing sperm). Females deposit eggs (up to 200 per season) on the submerged leaves of aquatic broadleaved plants. Each egg is individually sealed for protection from predators within a folded leaf. Adults begin to leave the water bodies around May but may return in order to feed.

2.3.2. Larvae hatch after three weeks and feed on small aquatic invertebrates and the larvae/eggs of other amphibians for approximately three months. They metamorphose into land-adapted juveniles called efts and begin to emerge from their water bodies around August.

2.4. Habitat Requirements

2.4.1. During their terrestrial phase, great crested newts require a complex habitat structure to provide both food and shelter. These are most commonly provided by broadleaved woodland, rough or tussocky grassland and scrub habitats. They also require a secure area in which to hibernate. Hibernacula generally need to provide a stable temperature, be free from frost and provide protection from flooding and predation (a hibernaculum is a shelter occupied during the winter by a dormant animal). These requirements are commonly met by log/rubble piles, underground crevices or mammal burrows.

2.4.2. For breeding, great crested newts require water bodies that provide suitable protection and food for their developing larvae. Generally, such water bodies should be of relatively good water quality so as to provide a diverse range of invertebrate prey. Unshaded water bodies tend to provide more of the required broadleaf aquatic vegetation, upon which great crested newt eggs can be laid. Water bodies with large fish populations (which can prey on newts) or heavy grazing pressure from waterfowl (which can prey on newts and reduce water quality and egg laying habitat) tend not to support great crested newt. Connectivity between water bodies and good quality terrestrial habitat tend to favour large, viable, populations of great crested newt. In rural landscapes in Britain, such connectivity is often provided by the hedgerow network.

2.5. Great Crested Newt Dispersal

2.5.1. Great crested newts are thought to commonly move between water bodies up to a distance of 250m from each other **[Ref. 15]**, although there are studies showing great crested newt travelling much further than this **[Ref. 16]**. The range of great crested newt may be impacted by a range of factors, including the type and quality of habitat surrounding a breeding water body, the availability of hibernation sites and the presence or absence of barriers to dispersal (*e.g.* large and busy roads with no features that great crested newt could move through).

3. Legislative and Policy Framework

3.1. Relevant Legislative Context

3.1.1. All stages of the great crested newt life cycle as well as their habitat are fully protected under Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended) **[Ref. 17]**. Great crested newt is listed on Schedule 5 of the Wildlife & Countryside Act 1981 **[Ref. 18]**, which affords it protection under Section 9, as amended by the Countryside Rights of Way Act (2000) **[Ref. 19]**. It is also listed on Annex II and VI of the EC Habitats Directive **[Ref. 20]**, is included as a Species of Principal Importance in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 **[Ref. 21]** and is a UK Post-2010 Biodiversity Framework **[Ref. 22]** species listed on the UK Biodiversity Action Plan. In combination, this makes it an offence to:

- deliberately capture, injure or kill a great crested newt;
- deliberately take or destroy their eggs;
- deliberately, intentionally or recklessly disturb an individual; or
- damage, destroy or obstruct access to any structure which a great crested newt used for shelter or protection.

3.1.2. The protection includes both the breeding waterbody itself and the terrestrial habitat used for foraging and hibernation, which may be distant from the waterbody.

3.1.3. The UK is no longer a member of the European Union (EU). EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation. EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as ‘retained EU legislation’.

3.1.4. The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the Conservation of Habitats and Species Regulations 2017 (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

3.2. Protected Species Licencing

3.2.1. Where great crested newt habitat, including their breeding sites and resting places, is present on a site and a development has the potential to cause one or more offences under The Conservation of Habitats and Species Regulations 2017 (as amended) **[Ref. 17]**, a licence is required to allow the development to proceed. This licence allows the development to proceed with exemption from offences, provided works are undertaken

with strict accordance of the terms of the licence. A licence cannot, however, be obtained to provide protection against offences under the Wildlife and Countryside Act, 1981 (as amended) **[Ref. 18]**.

3.2.2. In determining whether to grant a licence, the determining authority must apply the requirements of Regulation 55 of the Regulations **[Ref. 17]**, these being:

- Regulation 55(2) states: "*subject to the provisions of this regulation, the relevant licensing body may grant a licence for the purposes specified in paragraph 2*". The relevant section of paragraph 2 being:
  - (e) "*a licence can be granted for the purposes of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment*".
- Regulation 55(9) states: "*the relevant licensing body must not grant a licence under the regulation unless it is satisfied -*
  - (a) "*that there is no satisfactory alternative*"; and
  - (b) "*that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range*."

3.2.3. A determining authority must also apply these tests when determining a planning/DCO application, where a proposed development is likely to cause an offence under The Conservation of Habitats and Species Regulations 2017 (as amended) **[Ref. 17]**.

3.3. European Protected Species Licence

3.3.1. In order for a European Protected Species Licence to be approved by Natural England for works with great crested newt, it must be demonstrated that the proposed development will minimise any potential impacts upon great crested newt and will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

3.3.2. Offences can be avoided through the implementation of appropriate mitigation that will minimise the potential for any offences to be committed. Mitigation can include the undertaking of vegetation clearance works at an appropriate time of the year and completing works in accordance with methods that will minimise or avoid potential disturbance or destruction of habitats. In such circumstances it is sensible for works to be completed using Reasonable Avoidance Measures (RAMs).

3.4. District Level Licencing

3.4.1. District Level Licencing takes the mitigation needed for the Proposed Development offsite with the developer making a conservation payment to the determining authority (in this case NatureSpace) who oversee the

conservation strategy for great crested newt in the region. They ensure the maintenance of the population over a larger area than the Proposed Development boundary and ensure the favourable conservation status of the species is maintained. The requirements for onsite mitigation are greatly reduced or eliminated.

3.5. Priority Species

3.5.1. The NERC list of Species of Principal Importance **[Ref. 21]** is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act (2006); under Section 40 every public authority (e.g. a local authority or local planning authority) must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

3.5.2. In addition, with regard to those species on the list of Species of Principal Importance listed under Section 41, the Secretary of State must:

- *"(a) take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or*
- *(b) promote the taking by others of such steps."*

3.5.3. The UK Biodiversity Action Plan (UKBAP) was launched in 1994 and established a framework and criteria for identifying species and habitat types of conservation concern. From this list, action plans for priority habitats and species of conservation concern were published and have subsequently been succeeded by the UK Post-2010 Biodiversity Framework (July 2012) **[Ref. 22]**. The UK Post 2010 Development Framework is relevant in the context of Section 40 of the NERC Act 2006, meaning that Priority Species and Habitats are material considerations in planning. These habitats and species are identified as those of conservation concern due to their rarity or a declining population trend.

3.5.4. Great crested newt was added to the UK Biodiversity Action Plan (UKBAP) as a priority species in September 2007 and subsequently was included as a Species of Principal Importance in England under Section 41 of the NERC Act (2006) meaning that they are of material consideration in planning.

3.6. Local Biodiversity Action Plan

3.6.1. The Proposed Development is located in Buckinghamshire. The '*Forward to 2030 Buckinghamshire and Milton Keynes Biodiversity Action Plan*' (BMKBAP) **[Ref. 23]**, sets out measures that will help to reverse the decline of biodiversity within the area, although focus of the work is primarily on habitats. However, the BAP lists UK Priority species that have

been recorded within the county but does not have any species-specific action plans for Buckinghamshire.

4. Methods

4.1.1. This section describes the survey methods used to determine the likelihood of great crested newt presence or absence within the survey area, which included:

- A desk study;
- A Habitat Suitability Index (HSI) survey; and
- eDNA surveys.

4.2. Desk Study

4.2.1. A desk study was completed as part of the Preliminary Ecological Appraisal (PEA) in November 2021. This desk study obtained records of great crested newt within the preceding ten years and within a 2km radius of the Site from Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC).

4.2.2. Furthermore, aerial photographs and OS maps were reviewed as part of the PEA to identify water bodies of potential value to great crested newt within 500m of the Site that were not separated by major barriers to great crested newt dispersal (such as main roads and large rivers). The review of aerial photography and mapping included identifying any key routes of potential habitat connectivity to the Site from outside water bodies (*e.g.* ditches, hedgerows) and significant barriers to great crested newt dispersal (*e.g.* main roads or rivers).

4.3. Field Survey

Habitat Suitability Index (HSI)

4.3.1. The Habitat Suitability Index (HSI) is a measure of habitat suitability, developed by Oldham *et al.* (2000) **[Ref. 24]** for evaluating the suitability of water bodies as habitat for great crested newt. Ten habitat features of the water body are assessed in the field and from these data a suitability index is calculated (**Table 4.1**).

4.3.2. A value is recorded for each parameter and combined to determine an index of breeding suitability for great crested newt (**Table 4.1**). The HSI survey was undertaken in March 2022 and continued June 2023.

Table 4.1: Great crested newt suitability indices and description

Suitability Indices	Suitability Indices Title	Suitability indices Description
(SI1)	Geographic location	Different areas of the UK represent different indices scores.

Suitability Indices	Suitability Indices Title	Suitability indices Description
(SI2)	Water body area	The optimum water body size is between 500 and 750m^2.
(SI3)	Water body permanence	The optimal frequency of drying is one year per decade.
(SI4)	Water quality	The presence of indicator organisms (the same that are used to assess running water) is the water quality indicator.
(SI5)	Water body shading	great crested newt occurrence is significantly reduced above a threshold of 75% shade.
(SI6)	Impact of waterfowl	Waterfowl impact on water body vegetation and water turbidity is a negative indicator for Great Crested Newt.
(SI7)	Occurrence of fish	The effect of fish presence is related to the species. Some species can have negative impacts and Great Crested Newt hardly ever coexist with larger predatory fish species. Other species (depending on conditions) are not detrimental.
(SI8)	Water body density	Water body densities above four water bodies/km2 are taken as optimal.
(SI9)	Terrestrial habitat	In general, scrub, unimproved grassland, woodland (deciduous and coniferous) and gardens are regarded as being suitable terrestrial habitat, unlike improved pasture, arable and hardstanding. The SI9 is the combination between positive factors (suitable habitat) and negative factors (*e.g.* inherent in barriers to movement such as roads). The surrounding habitat is scored according to the extent of high-quality terrestrial newt habitat.
(SI10)	Macrophyte content	The highest occurrence of Great Crested Newt is found in water bodies with emergent vegetation cover between 25% and 50% and submerged vegetation between 50% and 75%.

4.3.3. The HSI of a water body is a numerical index which scores water bodies on a scale of between 0 and 1, using a geometric mean of the ten suitability indices, with the following suitability categories for the results:

- <0.5: poor likelihood of presence;
- 0.5 – 0.59: below average likelihood of presence;
- 0.6 – 0.69: average likelihood of presence;
- 0.7 – 0.79: good likelihood of presence; and
- >0.8: excellent likelihood of presence.

4.3.4. Any water body with suitability to support great crested newt and within 250m of the Proposed Development, based on HSI score of below average or greater, was then surveyed using environmental DNA (eDNA) analysis, to determine great crested newt presence or likely absence.

eDNA Laboratory Analysis

4.3.5. Water samples were taken in mid-May 2022 and continued in early June 2023 from suitable water bodies on the Site and were sent off for eDNA analysis to assess the presence or likely absence of great crested newt DNA. This survey methodology is approved by Natural England in their standing advice and it provides evidence of presence or likely absence of great crested newt to assess development projects **[Ref. 26]**.

4.3.6. Field surveys strictly followed the protocol set out in the WC1067 Technical Advice Note **[Ref. 25]** and to prevent contamination of the samples:

- Gloves were worn at all times during the sampling process, and gloves were replaced between sample collection from the waterbody and pipetting into the sterile sub-sample tubes; and
- Samples were collected without entering the water, i.e. The surveyor stood only on the water body bank or water body edges. This prevented disturbance of the substrate to limit cross-contamination.

4.3.7. The field sampling protocol consisted of the following steps for each surveyed water body:

- The location of sub-samples was spaced as evenly as possible around the margin of the water body or watercourse. Sub-samples generally targeted areas with potential egg laying substrate (e.g. vegetation) and open water areas which newts may be using for displaying. Prior to sampling, the water column was mixed by gently using a ladle to stir through the entire water column, whilst avoiding disturbing the sediment on the bed of the water body. Sampling of very shallow water (less than 5-10cm deep) was avoided where possible;
- A new pair of gloves was put on to keep the next stage as uncontaminated as possible;
- Using a clear plastic pipette, approximately 15mL of water were taken from the bag and pipetted into six sterile tubes containing 35mL of

ethanol to preserve the eDNA sample (*i.e.* the tube was filled to the 50mL mark)

- The tube was shaken vigorously for ten seconds to mix the sample and preservative. This is essential to prevent DNA degradation and was also repeated for each of the six conical tubes. Before taking each sample, the water in the bag was shaken to homogenise the sample, as DNA material constantly sinks to the bottom; and
- The box of preserved sub-samples was kept in a fridge and then later returned to ambient temperature in the laboratory for analysis.

4.3.8. Laboratory analysis was consistent with the methods described in Appendix 5 of the WC1067 Technical Advice Note **[Ref. 25]**, including control analysis for inhibition and degradation.

4.3.9. eDNA kits were procured from Surescreen Scientifics (hereafter referred to as Surescreen) and on collection of samples, they were then sent back to Surescreen to be analysed in their laboratory.

4.4. Assumptions and Limitations

Desk Study

4.4.1. The aim of a desk study was to help characterise the baseline context of the Proposed Development and provide valuable background information that would not be captured by a single site survey alone. Information obtained during a desk study was dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for great crested newt does not necessarily mean that this species does not occur in the study area. Likewise, the presence of records of great crested newt does not automatically mean that these still occurred within the area of interest or were relevant in the context of the Proposed Development.

Field Survey

HSI survey

4.4.2. There was no access to four water bodies in 2022 (13, 29, 35, 74) that were off-site. Water body 74 can be scoped out of further assessment (see **Paragraph 5.1.3**), No access was granted to ponds 13, 29 & 35 during the 2023 surveys either. However, given the number of ponds accessed with 2 years of data this is not considered to represent a significant limitation to the survey findings.

4.4.3. During the HSI survey in March 2022, two water bodies (12 and 60) were dry. Therefore, a full HSI assessment could not be undertaken at these locations as a number of suitability indices (*e.g.* water quality) could not be determined. Whilst these dry locations are less likely to support great crested newt (on the assumption that these locations rarely or never hold

water), ponds that dry annually does not automatically mean that they are unsuitable for great crested newt. Furthermore, great crested newt are known to be present in the wider area. These ponds were revisited in 2023 and were found to be holding water; however, one pond (12) was not accessible on health and safety grounds so an eDNA sample could not be obtained. However, this is not considered to be a significant limitation due to the number of ponds accessed.

4.4.4. There is a positive correlation between HSI scores, and the numbers of great crested newts observed in water bodies. In general, high HSI scores are likely to be associated with greater numbers of great crested newts. However, the relationship is not sufficiently strong to allow predictions to be made about the numbers of great crested newts in any particular water body. The HSI for great crested newts is a measure of habitat suitability and is not a substitute for aquatic amphibian surveys. In general, water bodies with high HSI scores are more likely to support great crested newts than those with low HSI scores. However, the system is not sufficiently precise to allow the conclusion that any particular water body with a high suitability score will support great crested newts, or that any waterbody with a low suitability score will not do so.

eDNA Survey

4.4.5. Water body 38 had livestock present in surrounding fields when access was attempted as part of both the 2022 and 2023 surveys, so, due to health and safety protocol, these fields were not entered.

4.4.6. Three water bodies (12, 42 & 60) were surrounded by thick hedgerows, steep banks and barbed wire fences and were not accessible for an eDNA survey, although a HSI survey could be undertaken. Given the presence of great crested newt in surrounding water bodies, it is assumed that these ponds support great crested newt.

4.4.7. Water body 34, although ‘excellent’ on the HSI score in March 2022, is an agricultural reservoir that is drained and, at the time of eDNA survey in May 2022, was full of digestate (fertiliser). The HSI was therefore re-categorised in May 2022 and scored ‘below average’ when changing the water quality to bad and changing the permanence. Therefore, this water body can be scoped out of further assessment as presence of great crested newt is unlikely due to the digestate and agricultural use.

4.4.8. A small number of water bodies (17, 21, & 25) were dry at the time of eDNA survey in May 2022 and June 2023 ponds that dry annually does not automatically mean that they are unsuitable for great crested newt additionally Natural England require evidence that a pond has been dry for three consecutive great crested newt breeding seasons to discount it as unsuitable for great crested newt **[Ref. 13]**. Therefore, they would require further survey in April 2024 to check if each water body holds water and then an updated HSI and further surveys undertaken at that time, as appropriate.

4.4.9. 22, 26 & 37 were dry in 2022 & 2023 as these are ditches, they can be removed from the scope **[Ref. 13]** as per Natural England Guidance. Ditches that do not support any suitable habitat features can be removed from consideration.

4.5. Quality

4.5.1. All surveys were led by an ecologist who held a Natural England great crested newt class survey licence.

4.6. Lifespan of this Report

4.6.1. To support a Natural England Licence application where ponds will be directly impacted by construction survey data is required to be a maximum of 2 years old for ponds with a great crested newt population present.

4.6.2. District licences require less data to apply and as such there is no defined lifespan of data needed to apply. We recommend that great crested surveys are updated at least every 4 years as that is the lifespan Natural England place on great crested newt absence data for ponds.

5. Results

5.1. Desk Study

5.1.1. Several records of great crested newt were returned from the data search, within 2km of the Site and from within the last ten years **[Ref. 27]**. The majority of records were from within the HS2 corridor that runs to the west of the Site.

5.1.2. From the desk study completed in 2021, using maps and aerial photography, 84 water bodies were identified within the survey area (as presented in **Figure 1** (**Annex A**).

5.1.3. The desk study scoped out the need for HSI and/ or eDNA surveys on 30 water bodies for the following reasons:

- distance (>250m) and/ or barriers to dispersal – water bodies 1, 2, 3, 4, 7, 15, 20, 23, 28, 33, 36, 41, 43, 48, 50, 51, 52, 56, 57, 70, 77, 78, 79, 84; or
- barriers to dispersal with limited suitable connecting habitat between these water bodies and the Site – water bodies 11, 14, 19, 40, 46, 69, 74.

5.1.4. The area of the Site boundary increased after the survey scope and access arrangements were agreed in 2023 bringing another 16 waterbodies within 500m of the Proposed Development (waterbodies 85-99 **Figure 1** (**Annex A**)). These waterbodies were not assessed as part of the 2023 surveys and will be considered as part of the 2024 survey scope.

5.1.5. 13 of these 16 waterbodies are over >250m from the Site and so are unlikely to be impacted by the Proposed Development. Therefore, only three of these waterbodies (92, 96 & 97) have been included in the 2024 survey scope (see **Table 5.1**). In addition, waterbodies 4, 5 and 47, previously scoped out, are now located within 250m of the Site also require further survey.

5.2. Field Survey

5.2.1. A breakdown of the surveys undertaken within the survey area and the rationale for these are presented in **Table 5.4**.

2022 Surveys

Habitat Suitability Index

5.2.2. Forty-one water bodies identified within the Site, or where access was permitted within the survey area (see **Figure 1** (**Annex A**)) were subject to surveys to initially check that each water body held water and then a HSI survey where required, was undertaken between 3rd and 4th March 2022. The results of the HSI surveys are presented in **Table 5.2**.

Table 5.2: 2022 HSI results

HSI Score	Water body reference (see Figure 1 (Annex A))
Excellent	34, 62, 75
Good	5, 10, 49, 51, 52
Average	9, 11, 32, 37, 38, 56, 61, 63, 76
Below Average	22, 24, 25, 26, 42, 47, 55
Poor	6, 8, 23, 27, 31, 53, 54, 59, 64, 65, 67, 71, 72, 73, 80, 82, 83

5.2.3. Two water bodies (12 and 60) were dry in March 2022 and a full HSI assessment could not be undertaken (see **Paragraph 4.4.3**).

5.2.4. Furthermore, five water bodies (16, 18, 30, 39 and 45) are presumed to no longer exist as no evidence of a water body was located. These water bodies were scoped out of requiring further assessment.

5.2.5. The results of the HSI survey are presented in **Annex B, Table B-1**.

eDNA Surveys

5.2.6. Of the 41 water bodies that held water in March 2022 and were subject to HSI surveys (see **Table 5.2**), eDNA surveys were undertaken on nine water bodies (9, 10, 24, 32, 49, 61, 62, 63, 75) in mid-May 2022 that were scoped in for further assessment (see **Paragraph 5.2.2**) or where the HSI score was greater than 'poor' (see **Paragraph 4.3.4**). Positive eDNA samples were returned from all nine water bodies.

5.2.7. The results of the eDNA laboratory analysis are presented in **Table 5.3** and included in **Annex C**.

2023 Surveys

Habitat Suitability Index

5.2.8. Fifteen water bodies identified (that were inaccessible or dry in 2022), within the survey area (see **Figure 1** (**Annex A**)) were subject to surveys to initially check that each water body held water and then a HSI survey where required, was undertaken between 6th and 9th June 2023. The results of the HSI surveys are presented in **Table 5.3**.

Table 5.3 2023 HSI Results

HSI Score	Water body reference (see Figure 1 (Annex A))
Excellent	
Good	73
Average	12, 66, 80
Below Average	60, 76
Poor	

5.2.9. Seven waterbodies (17, 21, 22, 25, 26, 37 & 55) were dry in June 2023 and a full HSI assessment could not be undertaken (see **Paragraph 4.4.3**).

5.2.10. Furthermore 1 waterbody (81) is presumed to no longer exist as no evidence of a water body was located. This water body were scoped out of requiring further assessment.

5.2.11. The results of the HSI survey are presented in **Annex B, Table B-1**.

eDNA Surveys

5.2.12. Of the Six water bodies that held water in June 2023 and were subject to HSI surveys (see **Table 5.2)**, eDNA surveys were undertaken on five water bodies (60, 66, 73, 76, & 80) between the 6th and 9th June 2023. Positive eDNA samples were returned from three water bodies (66, 73 & 80).

5.2.13. The results of the eDNA laboratory analysis are presented in **Table 5.4** and included in **Annex C**.

Table 5.4: Summary of great crested newt assessment undertaken for all water bodies

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
1	439m	1	No	No	No	No access. Scoped out during desk study. Large water body with barriers to Great Crested Newt dispersal (HS2 construction) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
2	470m	1	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (HS2 construction) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
3	353m	1	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (HS2 construction) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
4	9m	2	No	No	Yes – survey in 2024	Previously scoped out in 2021 as it was over 250m from the Proposed Development. However, changes to the Site boundary have brought it back within the survey scope. Recommend HSI and eDNA surveys in 2024.
5	Within the site	2	Yes – Good	No	Yes – survey in 2024	Good HSI score but scoped out of further assessment in 2021 as water body was greater than 250m from the Proposed Development. Water bodies 61, 62 and 63 (all in close proximity to water body 5) were positive for great crested newt eDNA.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						Changes to the Proposed Development boundary have now brought this pond within the Proposed Development so it will be directly impacted. GCN likely present in pond and so a population assessment required to quantify the population, determine appropriate mitigation and inform a development (mitigation) licence application.
6	Within the site	2	Yes - Poor	No	No	Poor HSI score, with poor water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
7	413m	2	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body greater than 400m from the Proposed Development.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
8	Within the site	3	Yes - Poor	No	No	Poor HSI score, with poor water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
9	Within the site	1	Yes – Average	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation and inform a development (mitigation) licence application.
10	Within the site	1	Yes – Good	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation and inform a development (mitigation) licence application.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
11	177m	1	Yes - Average	No	No	Average HSI score. However, scoped out of further assessment due to barriers for great crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
12	Within the site	2	Yes (2023) - Average	No	No – Inaccessible on H&S grounds.	Water body dry at the time of survey (March 2022). Resurveyed in 2023 and found to be holding water. Water was not accessible on H&S grounds so no eDNA sample taken. However, given the presence of great crested newt in ponds 61, 62 and 63, it is assumed great crested newt are present in this pond as well.
13	133m	1	No	No	Yes - if access permits	No access to water body due to HS2 works in 2022 & 2023. If access permits, this water body should be checked in spring

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						2024 for water (and an eDNA sample taken as a minimum, if holding water).
14	225m	1	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (HS2 construction) between the Proposed Development and this water body. Furthermore, water body nearly 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
15	298m	1	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (HS2 construction) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on Great crested newt, if present, will not occur.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
16	109m	1	No	No	No	No obvious water body located and shallow water level in flowing ditch. Therefore, unlikely to support great crested newt and any impacts from the Proposed Development on great crested newt, if present, would not occur.
17	Within the site	1	No	No	Yes	This pond was inaccessible in 2022 and was found to be dry when accessed in 2023. Pond is a widening of a field drain heavily shaded by dense scrub. This pond looks to only hold water after heavy rain. This water body should be checked in spring 2024 for water (and an eDNA sample taken as a minimum, if holding water).
18	Within the site	1	No	No	No	No obvious water body located in March 2022 and presumed to no longer exist. Therefore, scoped out of further assessment.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
19	228m	1	No	No	No	Water body surrounded by arable fields and no access into crop. Pond appeared dry from distant view using binoculars. Scoped out during desk study due to barriers for great crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Furthermore, water body is nearly 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
20	424m	1	No	No	No	Water body was dry at the time of survey and unlikely to support great crested newt. Scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
21	Within the site	1	No	No	Yes	This pond was inaccessible in 2022 and was found to be dry when accessed in 2023. This pond is located in the middle of pasture field, containing rush species in margins and grass species covered most of pond suggesting stays dry most of the year. This water body should be checked in spring 2024 for water (and an eDNA sample taken as a minimum, if holding water).
22	Within the site	1	Yes – Below average (2022) Dry (2023)	No	No	This water body is a section of dry ditch that even when holding water is unlikely to offer suitable habitat for great crested newt. Therefor it can be scoped out of further survey **[Ref. 13]**.
23	357m	1	Yes – Poor	No	No	Poor HSI score. Scoped out of assessment due to barriers for great crested newt

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
24	Within the site	1	Yes – Below average	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation, and inform a development (mitigation) licence application.
25	Within the site	1	Yes – Below average	No	Yes – if holding water in spring 2024	The HSI score was 'below average' and at the time of eDNA survey in May 2022, this water body was dry. When revisited in 2023 this pond was dry so no survey could take place. This water body should be checked in spring 2024 for water (and an eDNA sample taken as a minimum, if holding water).

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
26	Within the site	1	Yes – Below average (2022) Dry (2023)	No	No	This water body is a section of dry ditch that even when holding water is unlikely to offer suitable habitat for great crested newt. Therefore, it can be scoped out of further survey **[Ref. 13]**.
27	Within the site	1	Yes - Poor	No	No	Poor HSI score, with poor water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
28	384m	1	No	No	No	No access. Scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
29	173m	1a	No	No	Yes – if access permits	No access due to HS2 works. If access permits, this water body should be checked in spring 2024 for water (and an eDNA sample taken as a minimum, if holding water).
30	Within the site	1a	No	No	No	No obvious water body located in March 2022 and presumed to no longer exist. Therefore, scoped out of further assessment.
31	190m	1	Yes – Poor	No	No	Poor HSI score. Furthermore, scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
32	Within the site	1	Yes – Average	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						population, determine appropriate mitigation, and inform a development (mitigation) licence application.
33	438m	1	No	No	No	Flowing ditch found, no open area. Scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
34	5m	1	Yes - Excellent	No	No	Whilst the HSI score for this water body was 'excellent', this is an agricultural reservoir that is annually drained and pumped, but at the time of survey contained 'digestate' which would render it unsuitable to support great crested newt.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
35	120m	1a	No	No	Yes – if access permits	No access due to HS2 works. If access permits, this water body should be checked in spring 2024 for water (and an eDNA sample taken as a minimum, if holding water).
36	312m	1a	No	No	No	No access. Scoped out of further assessment due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
37	Within the site	1	Yes – Average (2022) Dry (2023)	No	No	This water body is a section of dry ditch that even when holding water is unlikely to offer suitable habitat for great crested newt. Therefor it can be scoped out of further survey **[Ref. 13]**.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
38	196m	1	Yes - Average	No	Yes – depending on cattle	At the time of eDNA survey in May 2022, livestock (cattle) were in the adjacent field and access was prevented from this water body on reasons of H&S. Revisited in 2023 and cattle still present preventing access. However, the landowner reported that this water body does support great crested newt.
39	Within the site	1a	No	No	No	No obvious water body located in March 2022 and presumed to no longer exist. Therefore, scoped out of further assessment.
40	245m	1	No	No	No	No obvious access route to water body. However, scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Furthermore, water body nearly 250m from the Proposed Development. Therefore, any impacts from the Proposed

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						Development on great crested newt, if present, will not occur.
41	406m	1a	No	No	No	No access. However, scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
42	17m	1	Yes – Below average	No	No – Inaccessible on H&S grounds	Whilst a HSI survey could be undertaken, there was no access to the margins of the water body (water body is surrounded by a barbed wire fence and thick hedge) and therefore no eDNA survey could be undertaken. Owing to the presence of great crested newt in nearby ponds, it is assumed that great crested newt is present in this pond.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
43	301m	1a	No	No	No	No access. However, scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body approximately 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
44	22m	1	No	No	No	Flowing ditch, no pond located, does not offer any suitable habitat for great crested newt. Therefore, it can be scoped out of further survey **[Ref. 13]**.
45	232m	1a	No	No	No	No obvious pond within flowing, shallow ditch, does not offer any suitable habitat for great crested newt. Therefore, it can be scoped out of further survey **[Ref. 13]**.
46	218m	1	No	No	No	No access. However, scoped out of assessment due to barriers for great

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						crested newt dispersal (intensively managed arable farmland and a busy 'A' road) between the Proposed Development and this water body. Furthermore, water body nearly 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
47	138m	1	Yes – Below average	No	Yes – Survey required in 2024	Previously scoped out in 2021 as it was over 250m from the Proposed Development. However, changes to the site boundary have brought it back within the survey scope. Recommend HSI and eDNA surveys in 2024.
48	314m	1a	No	No	No	No obvious water body within flowing, shallow ditch. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
49	53m	Cable route	Yes - Good	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation, and inform a development (mitigation) licence application.
50	314m	2	No	No	No	No access due to livestock. However, scoped out of assessment due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
51	299m	2	Yes – Good	No	No	Good HSI score. However, scoped out of further assessment as water body is greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
52	305m	2	Yes – Below average	No	No	Below Average HSI score, however scoped out of further assessment as water body is greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
53	156m	2	Yes – Poor	No	No	Poor HSI score, with moderate water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
54	188m	2	Yes – Poor	No	No	Poor HSI score as water body close to drying out and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
55	20m	2	Yes – Below average	No	Yes – if holding water	The HSI score was 'below average' and at the time of eDNA survey in May 2022, this

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
					in spring 2024	water body was dry. It was also dry when revisited in 2023. This water body should be checked in spring 2024 for water (and an eDNA sample taken as a minimum, if holding water).
56	296m	1	Yes - Average	No	No	Average HSI score. However, scoped out of further assessment as water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
57	381m	2	No	No	No	No pond located and scoped out of further assessment as water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
58	Within the Site	2	No	No	No	No pond located and assumed to be dry. scoped out of further assessment.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
59	163m	2	Yes – Poor	No	No	Poor HSI score with bad water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
60	128m	2	Yes – Below Average	Yes (A)	No	Surveyed in 2023 and great crested newt were found to be absent. No further survey needed.
61	Within site boundary	2	Yes – Average	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation, and inform a development (mitigation) licence application.
62	Within site boundary	2	Yes – Excellent	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation, and inform a development (mitigation) licence application.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
63	Within site boundary	2	Yes – Average	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation, and inform a development (mitigation) licence application.
64	73m	2	Yes – Poor	No	No	Poor HSI score with bad water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
65	36m	2	Yes – Poor	No	No	Poor HSI score with moderate water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
66	160m	2	Yes - Average	Yes (P)	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation, and inform a development (mitigation) licence application.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
67	27m	2	Yes - Poor	No	No	Poor HSI score with bad water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
68	Within site boundary	2	No	No	Yes – Survey required in 2024	Not surveyed in 2022 & 2023, due to water body location within farm buildings, located adjacent to residential properties. Previously scoped out during desk study due to barriers for great crested newt dispersal (intensively managed farmland and surrounding agricultural activity) between the Proposed Development and this water body. Furthermore, water body was greater than 250m from the Proposed Development. However, changes to the Site boundary have brought this pond back into scope, as it is now within the Site boundary, so surveys will be required in 2024.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
69	225m	2	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body nearly 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
70	296m	2	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body greater than 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
71	12m	2	Yes – Poor	No	No	No access but surveyed from within the Site boundary. HSI poor and therefore scoped out of further assessment.
72	93m	2	Yes - Poor	No	No	Poor HSI score with poor water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
73	264m	2	Yes – Good	Yes (P) 2023	No	GCN present however pond is located approximately 250 from the Proposed Development and is separated by intensively managed farmland. Therefore, the Proposed Development is unlikely to impact the great crested newt population present in this waterbody.
74	237m	2	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						Furthermore, water body nearly 250m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
75	114m	Cable Route	Yes - Excellent	Yes (P)	Yes	Great crested newt eggs observed during eDNA survey and positive eDNA results. Population assessment required to quantify the population, determine appropriate mitigation and inform a development (mitigation) licence application.
76	Within site boundary	3	Yes – Below Average	Yes (A) 2023	No	eDNA survey found to be negative in 2023, therefore great crested newt considered to be absent. No further survey needed.
77	447m	Cable Route	No	No	No	No access. Scoped out during desk study due to barriers for GCN dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						greater than 400m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
78	459m	2	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body greater than 400m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
79	438m	2	No	No	No	No access. Scoped out during desk study due to barriers for great crested newt dispersal (intensively managed arable farmland) between the Proposed Development and this water body. Furthermore, water body greater than 400m from the Proposed Development.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
						Therefore, any impacts from the Proposed Development on great crested newt, if present, will not occur.
80	Within site boundary	3	Yes - Average	Yes (P) 2023	Yes	Great crested newt present. Population assessment required to quantify the population, determine appropriate mitigation, and inform a development (mitigation) licence application.
81	475m	3	No	No	No	No obvious water body located. However, scoped out of further assessment as water body (if present) greater than 450m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt would not occur.
82	184m	3	Yes - Poor	No	No	Poor HSI score with poor water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.

Water body number (see Figure 1 (Annex A) for location)	Distance from Site (metres)	Closest Proposed Development Area to water body	HSI Assessment undertaken? (HSI score: excellent, good, average, below average, poor)	eDNA analysis undertaken? (Great Crested Newt - P = present; A = absent)	Further surveys (population assessment / eDNA) required?	Supporting comments
83	186m	3	Yes - Poor	No	No	Poor HSI score with poor water quality and little to no aquatic macrophytes (see **Table B-1** in **Annex B**). Very unlikely to support a great crested newt population scoped out of further survey.
84	433m	3	No	No	No	No access. Scoped out during desk study as water body greater than 400m from the Proposed Development. Therefore, any impacts from the Proposed Development on great crested newt occurring in this pond, if present, will not occur.

6. Conclusions & Recommendations

6.1.1. Great crested newt are confirmed to be present within the Site in 12 ponds, as such a licence will be required for the Proposed Development as the construction of the Proposed Development will impact this species.

6.1.2. Two licencing routes are available in this instance. An application can be made to Natural England for a European protected species mitigation licence. In this instance full population data will need to be obtained for all ponds that support a great crested newt population that will be impacted by the Proposed Development. A detailed mitigation strategy would need to be drawn up including a trapping/translocation strategy for the Proposed Development and on-site compensation of any ponds/habitat lost to the Proposed Development to ensure the Proposed Development does not permanently impact the population of great crested newts present on site. All survey recommendations made below would be to support a Natural England Licence application.

6.1.3. Alternatively, a district licence application could be made to NatureSpace. This application process requires less survey information, and an application could be made with the current level of survey information obtained. District Licences take the mitigation offsite with NatureSpace providing compensation offsite and the developer paying a compensation payment. The exact figure of this payment would be determined by NatureSpace on a case by case basis after an application has been made. Some trapping/translocation of animals may still be needed in this case, but the exact level would be determined by NatureSpace once they have made their assessment.

6.1.4. The desk study identified 84 water bodies within 500m of the Site. Of the 84 water bodies, 31 were scoped out of requiring any further survey for the reasons outlined in **Table 5.4**. Five water bodies were not surveyed for HSI or eDNA, due to a restriction on access. Following changes to the site boundary a further 16 water bodies are also located within 500m of the Site; however, only three have been identified for further survey (**Table 6.5**).

6.1.5. Forty-one water bodies within the survey area were surveyed for their suitability to support great crested newt (HSI survey) in March 2022 and water samples were collected from nine water bodies in May 2022. All nine water bodies were positive for great crested newt eDNA and confirmed presence of great crested newt. These water bodies will require population assessment surveys in Spring 2024. In addition, two waterbodies were found to be dry and five were found to no longer exist, so no further survey was undertaken.

6.1.6. Fifteen waterbodies were surveyed for their suitability to support great crested newt (HSI survey) in June 2023 and water samples were collected from five water bodies in June 2023. Three of these waterbodies were positive for great crested newt eDNA and confirmed presence of great

crested newt. These water bodies will require population assessment surveys in Spring 2024.

6.1.7. The desk and field-based surveys completed in 2022 & 2023 identified twenty-six water bodies within the survey area (500m from the Site) that require further survey in spring 2024, either because there was no access, they were dry, they were not surveyed for other reasons (*e.g.* H&S) or that eDNA samples were positive for the presence of great crested newt. As a minimum, any such water bodies should be checked in mid-April 2024 for their water levels and an eDNA sample taken at that time. Further surveys, such as population assessment surveys, may follow and would be dependent on the results of the eDNA surveys. A summary of the recommended further surveys for each water body 'scoped in' is presented in **Table 6.5**.

6.1.8. Ponds 42 & 66 could not be surveyed, and presence of great crested newt has been assumed owing to the presence of great crested newt in nearby ponds.

Table 6.5: Recommended further survey in spring 2024 to support a Natural England Mitigation Licence

Water body number (see Figure 1 (Annex A) for location)	Supporting comments
13, 29, 35	Access should be sought to water body and water body should be checked in mid-April 2024 for water and, as a minimum an eDNA sample should be taken if holding water. Further surveys (population assessment) may be required, dependent on the eDNA results.
17, 25, & 55	Water body should be checked in mid-April 2024 for water and, as a minimum a HSI and an eDNA sample should be taken if holding water. Further surveys (population assessment) may be required, dependent on the eDNA results.
68	Previously scoped out as being over 250m from the site boundary, however the changes to the site boundary mean this pond is now located within the site boundary. Access should be sought to water body and water body should be checked in mid-April 2024 for water and, as a minimum an eDNA sample should be taken if holding water. Further surveys (population assessment) may be required, dependent on the eDNA results.
38	Access in mid-April 2024 prior to cattle grazing field to take an eDNA sample. Further surveys (population assessment) may be required, dependent on the eDNA results.

Water body number (see Figure 1 (Annex A) for location)	Supporting comments
9, 10 ,24, 32, 49, 61, 62, 63, 66, 73, 75 & 80	Population assessment (comprising six visits) between mid-April and June 2024.
4, 5, 47, 92, 96 & 97	Changes in the Site boundary have brought these ponds within 250m of the Proposed Development where they were previously scoped out. HSI an eDNA surveys should be undertaken as a minimum in 2024. Further surveys (population assessment) may be required, dependent on the eDNA results.

7. References

Ref. 1 Natural England (2004) An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt. http://publications.naturalengland.org.uk/publication/134002

Ref. 2 English Nature. 2001. Great Crested Newt Mitigation Guidelines. English Nature, Peterborough

Ref. 3 HMSO. 2018. Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London.

Ref. 4 HMSO. 1981. The Wildlife & Countryside Act 1981. HMSO, London.

Ref. 5 HMSO. 2000. Countryside and Rights of Way Act 2000. HMSO, London.

Ref. 6 European Commission. (1992). Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. EC, Brussels.

Ref. 7 HMSO. 2006. The Natural Environment and Rural Communities Act. HMSO, London.

Ref. 8 JNCC, UK Post-2010 Biodiversity Framework. 2012. Available at http://jncc.defra.gov.uk/page-6189 (Accessed July 2022)

Ref. 9 Forward to 2030: Biodiversity Action Plan for Buckinghamshire and Milton Keynes. Available at: https://bucksmknep.co.uk/forward-to-2030/

Ref. 10 Oldham, R.S., Keeble, J., Swan, M.J.S., and Jeffcote, M. 2000. Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal, 10, 143-155.

Ref. 11 Biggs, J., Ewald N., Valentini, A., Gaboriaud C., Griffiths, R.A., Foster, J., Wilkinson, J., Arnett, A., Williams, P. and Dunn, F. 2014. Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067. Freshwater Habitats Trust: Oxford.

Ref. 12 Natural England Standing Advice: https://www.gov.uk/guidance/great-crested-newts-advice-for-making-planning-decisions

Ref. 13 Natural England: Ecologists: how to provide pond and waterbody data for district level licensing https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes-for-developers/ecologists-how-to-provide-pond-and-waterbody-data-for-district-level-licensing last accessed 06/10/2023

Ref. 14 AECOM (2022) Rosefield Solar Farm: Preliminary Ecological Appraisal

Ref. 15 Natural England (2004) An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt. http://publications.naturalengland.org.uk/publication/134002

Ref. 16 English Nature. 2001. Great Crested Newt Mitigation Guidelines. English Nature, Peterborough.

Ref. 17 HMSO. 2018. Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London.

Ref. 18 HMSO. 1981. The Wildlife & Countryside Act 1981. HMSO, London.

Ref. 19 HMSO. 2000. Countryside and Rights of Way Act 2000. HMSO, London.

Ref. 20 European Commission. (1992). Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. EC, Brussels.

Ref. 21 HMSO. 2006. The Natural Environment and Rural Communities Act. HMSO, London.

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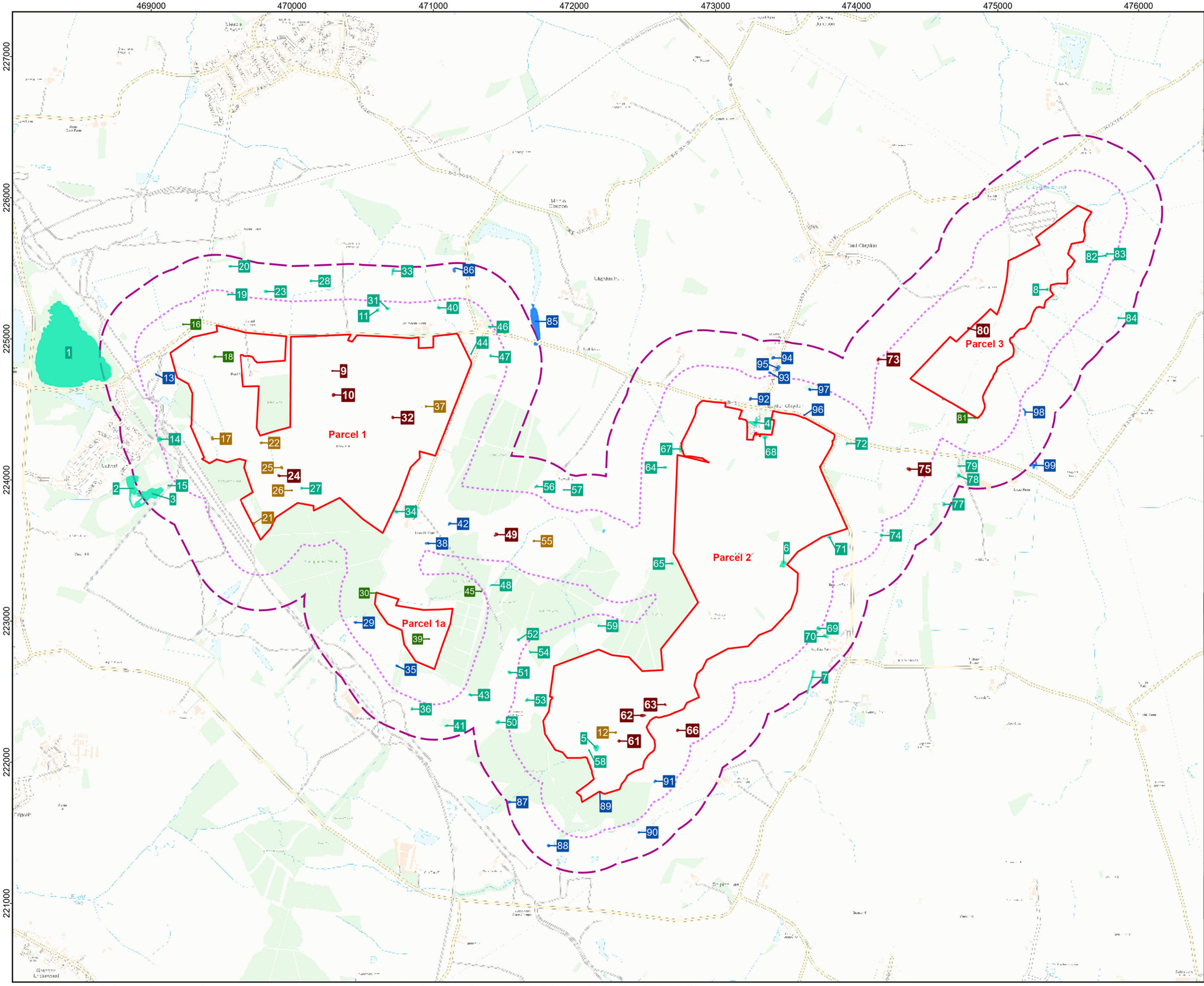
Ref. 26 Natural England Standing Advice: https://www.gov.uk/guidance/great-crested-newts-advice-for-making-planning-decisions

Ref. 27 AECOM (2022) Rosefield Solar Farm: Preliminary Ecological Appraisal.

Annex A: Figures



LEGEND:

- Site Boundary
- 250m site buffer
- 500m site buffer

Great Crested Newt 2022 & 2023 Survey Results

- Positive eDNA
- Negative eDNA
- Ponds scoped out
- Ponds with no access
- Dry ponds
- No longer exist

NOTES:
Contains Ordnance Survey Data © Crown Copyright and database right 2024.

Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Rev	Date	Description	Drn	Chk	App
00	25/04/2024	Final	HW	BF	NS

Rosefield Solar Farm

Rosefield Solar Farm

DOCUMENT:
ROSEFIELD SOLAR FARM

TITLE:
Great Crested Newt 2022 & 2023 Survey Results

FIGURE NUMBER:
Figure 1

0 0.5 1
Kilometers

Scale: 1:25,000 @ A3

REV 00

Path: W:\Active Projects\Custodian Energy Solar Farm\GIS\Reformat\01_Maps\Custodian_GCN_SurveyResults.aprxMap

Annex B : HSI Scores

Table B-1: Habitat Suitability Index scores for water bodies assessed

Water body Reference (see Figure 1 (Annex A))	Water body Area (m2)	Water body Drying	Quality	Shade (%)	Fowl	Fish	Water bodies within 1km	Terrestrial Habitat	Macrophytes (%)	HSI Score
5	500	Rarely	Poor	60	Absent	Absent	1	Good	20	0.77
6	1047	Sometimes	Bad	80	Absent	Absent	0	Moderate	<1	<0.50
8	100	Sometimes	Poor	0-10	Minor	Absent	0	Moderate	<1	<0.50
9	95	Rarely	Moderate	5	Absent	Absent	1	Good	5	0.63
10	275	Rarely	Moderate	30	Absent	Absent	1	Good	20	0.78
11	115	Sometimes	Moderate	70	Absent	Absent	2	Good	10	0.66
12	Dry in March 2022									
16	No pond located in this area									
18	No pond located in this area									
19	Pond location appeared dry, scoped out for other reasons									

Water body Reference (see Figure 1 (Annex A))	Water body Area (m2)	Water body Drying	Quality	Shade (%)	Fowl	Fish	Water bodies within 1km	Terrestrial Habitat	Macrophytes (%)	HSI Score
20	Pond location dry									
22	50	Annually	Good	80	Absent	Absent	5	Good	60	0.58
23	105	Annually	Poor	80	Absent	Absent	3	Good	0	<0.50
24	45	Annually	Moderate	60	Absent	Absent	5	Good	50	0.53
25	80	Annually	Good	90	Absent	Absent	5	Good	10	0.51
26	25	Annually	Good	30	Absent	Absent	5	Good	70	0.53
27	30	Annually	Poor	90	Minor	Absent	5	Good	0	<0.50
30	No pond located in this area									
31	40	Annually	Poor	50	Absent	Absent	2	Good	0	<0.50
32	110	Sometimes	Good	90	Absent	Absent	1	Good	0-10	0.61
33	Flowing ditch, no pond									

Water body Reference (see Figure 1 (Annex A))	Water body Area (m2)	Water body Drying	Quality	Shade (%)	Fowl	Fish	Water bodies within 1km	Terrestrial Habitat	Macrophytes (%)	HSI Score
34	545	Rarely	Moderate	10	Minor	Absent	2	Good	0-10	0.80
37	155	Annually	Good	70	Absent	Absent	1	Good	60	0.63
38	45	Sometimes	Good	60	Absent	Absent	3	Good	70	0.66
39	No pond located in this area									
42	50	Sometimes	Moderate	80	Absent	Absent	3	Good	10	0.55
44	Flowing ditch, no pond									
45	Flowing ditch, no pond									
47	92	Annually	Moderate	10	Absent	Absent	2	Good	<10	0.53
48	Flowing ditch, no pond									
49	150	Rarely	Moderate	20	Absent	Absent	2	Good	20	0.76
51	105	Rarely	Good	30	Absent	Absent	2	Good	20	0.76

Water body Reference (see Figure 1 (Annex A))	Water body Area (m2)	Water body Drying	Quality	Shade (%)	Fowl	Fish	Water bodies within 1km	Terrestrial Habitat	Macrophytes (%)	HSI Score
52	60	Annually	Moderate	20	Absent	Absent	2	Good	<10	0.52
53	135	Never	Moderate	50	Absent	Absent	3	Moderate	<1	<0.50
54	50	Annually	Good	100	Absent	Absent	2	Moderate	0	<0.50
55	50	Sometimes	Moderate	80	Absent	Absent	1	Good	10	0.53
56	55	Sometimes	Moderate	60	Absent	Absent	2	Good	30	0.65
57	Pond location dry									
58	Pond location dry									
59	55	Sometimes	Bad	70	Absent	Absent	0	Moderate	0	<0.50
60										
61	25	Sometimes	Good	30	Absent	Absent	4	Good	70	0.67
62	350	Rarely	Good	10	Minor	Absent	4	Good	20	0.84

Water body Reference (see Figure 1 (Annex A))	Water body Area (m2)	Water body Drying	Quality	Shade (%)	Fowl	Fish	Water bodies within 1km	Terrestrial Habitat	Macrophytes (%)	HSI Score
63	100	Sometimes	Good	70	Minor	Absent	4	Moderate	10	0.64
64	80	Annually	Bad	90	Absent	Absent	1	Good	0	<0.50
65	130	Rarely	Moderate	100	Absent	Absent	0	Moderate	10	0.50
66										
67	390	Sometimes	Poor	90	Absent	Absent	1	Good	0	<0.50
71	65	Rarely	Moderate	100	Absent	Absent	0	Moderate	<1	<0.50
72	70	Annually	Poor	100	Minor	Absent	1	Moderate	0	<0.50
73	46	Rarely	Moderate	100	Absent	Absent	0	Good	<1	<0.50
75	220	Never	Good	60%	Absent	Absent	5	Moderate	30%	0.81
76	45	Rarely	Moderate	50	Absent	Absent	1	Good	50	0.65
80	70	Never	Poor	0-10	Minor	Absent	0	Good	<10	<0.50

Water body Reference (see Figure 1 (Annex A))	Water body Area (m2)	Water body Drying	Quality	Shade (%)	Fowl	Fish	Water bodies within 1km	Terrestrial Habitat	Macrophytes (%)	HSI Score
82	45	Rarely	Poor	100	Absent	Absent	1	Moderate	<1	<0.50
83	30	Rarely	Poor	100	Absent	Absent	1	Moderate	<1	<0.50

HSI Score colour coding – Dark green: Excellent likelihood of Great Crested Newt present; Light green – Good likelihood of Great Crested Newt present; Yellow – Average likelihood of Great Crested Newt present; Orange – Below average likelihood of Great Crested Newt present; and Red – Poor likelihood of Great Crested Newt present.

Annex C: eDNA results

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 27/05/2022
Date Reported: 09/06/2022
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
1445	10 Custodian	SP 7029 2460	Pass	Pass	Pass	Positive	11
1451	49 Custodian	SP 7144 2361	Pass	Pass	Pass	Positive	7
1453	32 Custodian	SP 7070 2444	Pass	Pass	Pass	Positive	1
1455	63 Custodian	SP 7264 2240	Pass	Pass	Pass	Positive	12
1459	62 Custodian	SP 7248 2233	Pass	Pass	Pass	Positive	12
1462	75 Custodian	SP 7436 2408	Pass	Pass	Pass	Positive	12
1466	61 Custodian	SP 7231 2214	Pass	Pass	Pass	Positive	12
1468	24 Custodian	SP 6990 2403	Pass	Pass	Pass	Positive	12
3246	9 Custodian	SP 7028 2477	Pass	Pass	Pass	Positive	12

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

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Solar Farm

rosefieldsolarfarm.co.uk

Application Document Ref: EN010158/APP/6.4
Planning Inspectorate Scheme Ref: EN010158