Limestone Road,

Burniston, Scarborough

Revised Great Crested Newt Survey and Mitigation Strategy

February 2022

[redacted]

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Report reference	1061g
Revision	1
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Approved by	Andrew Westgarth
Issue date	Rev 1. 1st February 2022

This report is valid for a period of 12 months from the issue date.

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1 Introduction and Background

1.1 Introduction

1.1.1.1 This document has been prepared in relation to the following consented development:

- 18/00505/OL | Outline planning application for residential development (access to be considered) | Land Adjacent To 38 Limestone Road Burniston Scarborough North Yorkshire.

1.1.1.2 Outline planning permission was granted at appeal (Appeal Ref: APP/H2733/W/18/3205993; Decision date: 8 January 2019) for residential development (access and drainage to be considered) at land adjacent to 38 Limestone Road, Burniston, Scarborough YO13 0DG in accordance with the terms of the application, Ref 18/00505/OL, dated 16 February 2018, subject to conditions.

1.1.1.3 Condition 13 of the appeal decision (Appeal Ref: APP/H2733/W/18/3205993) states:

- The details submitted in pursuance of condition 1) shall provide for the implementation of the Great Crested Newt Mitigations Solution specified by sections 8, 9, 10, 11, 12, 13 and 14 (unless appropriately updated by a suitably qualified expired, as may be necessary) of the submitted Great Crested Newt Survey and Mitigation Strategy dated 23 February 2018.

1.1.1.4 This document presents the following:

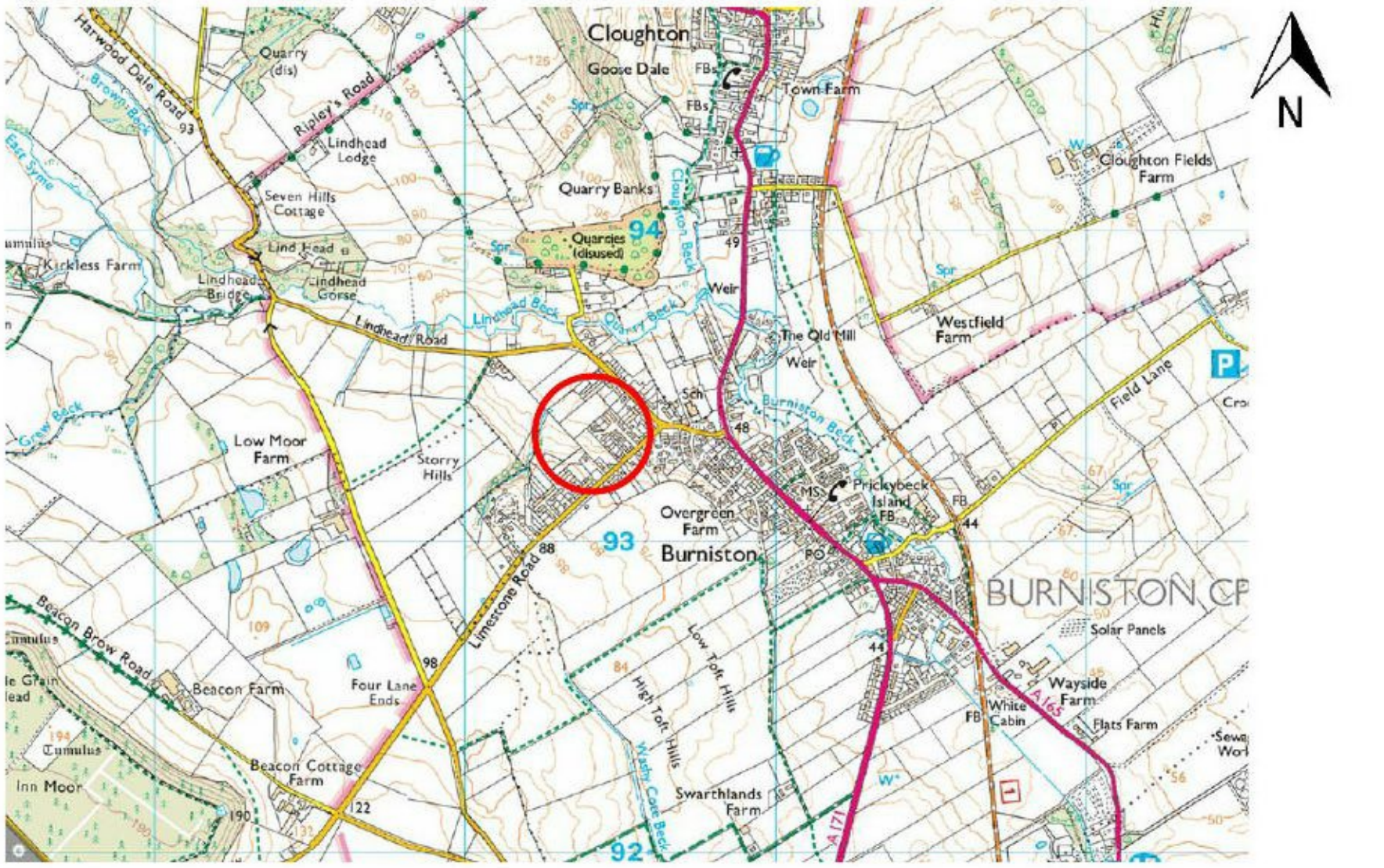
- results of update surveys for Great Crested Newts (GCN) undertaken during May and June 2021; and
- an Updated GCN Mitigation Strategy in relation to the proposed development.

1.1.1.5 The site is located on the north-western edge of the settlement of Burniston at grid reference TA00389334 (see Figures 1 and 2 below). The site extends to approximately 1.15 ha (red line area). The additional area in the client's land ownership (blue line area) extends to and 0.63 bringing the total area to 1.78 ha.

1.1.1.6 The aim of this document is to provide protected species information to inform the proposed development, to ensure legal compliance in relation to GCN and to ensure that the proposed development maintains the favourable conservation status of GCN.

Figure 1. Site location outlined in red; applicant's additional land holding outlined in blue (aerial imagery dated 2018)

Figure 2. Site location



2 Great Crested Newt Legislation and Ecology

2.1 Legislation

2.1.1.1 GCN are fully protected through The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 as European Protected Species (EPS). They also receive some protection through inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

2.1.1.2 It is an offence to deliberately capture, injure or kill a GCN. It is an offence to damage or destroy a breeding site or resting place of a GCN. It is an offence to deliberately disturb a GCN; in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or (b) to affect significantly the local distribution or abundance of the species to which they belong.

2.1.1.3 Under the Wildlife and Countryside Act 1981 (as amended), it is also an offence to intentionally or recklessly disturb a GCN while it is occupying a structure or place which it uses for shelter or protection; or obstruct access to any structure or place which any such animal uses for shelter or protection.

2.1.1.4 The 'appropriate authority' (Natural England in England) has powers to issue licences for various purposes including - (a) scientific or educational purposes… and (e) 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. The appropriate authority shall not grant a licence under this regulation unless they are 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. It is an offence for any person authorised by virtue of a licence to which this paragraph applies to contravene or fail to comply with any condition which the licence requires him to comply with.

2.2 Ecology

2.2.1.1 GCN rely on waterbodies for breeding but otherwise they spend much of their lives on land. Most adults reach breeding ponds by mid-March. Adult newts generally leave the breeding ponds from late-May onwards. Once the larvae have completed metamorphosis from aquatic larvae to land-adapted juveniles, they emerge from the pond; generally in August and September. Adults and immature newts spend the winter in places that afford protection from frost and flooding, often underground amongst tree roots, in mammal burrows, or above ground under suitable refuges like deadwood or rubble piles. Hibernation may last from October to February.[1]

2.2.1.2 Whilst on land and outside of the hibernation period, GCN require refuge from extremes of weather, meaning that during the day they will rest in dense vegetation, under refuges, or underground. They will also forage on land, taking a range of invertebrate prey.[1]

2.2.1.3 GCN in a given area often form a meta-population, i.e. a series of sub-populations that are linked by dispersal of individuals. This system often applies to species which depend on habitats which vary in quality over time, and where the distribution of suitable habitats may change. GCN often inhabit ponds that are part of a 'pond cluster', and individuals may move between ponds with varying frequency. This ability to shift between locations is beneficial, for example, if a pond were to become less suitable for breeding through prolonged drought, as GCN may move to newly created or restored ponds. Small, isolated populations based on a single pond are normally less likely to persist in the long term.

2.2.1.4 Though adult newts often return to the same breeding site, they may also move between different ponds both within and between years. Even if other, good quality sites were created nearby it is

[1] English Nature. (2001). Great Crested Newt Mitigation Guidelines. Version: August 2001. ISBN 1 85716 568 3.

likely that a population would remain at the original site, but that some dispersal would occur resulting in breeding in the new ponds.

2.2.1.5 GCN have been found to move over considerable distances (up to 1.3 km from breeding sites). However, the vast majority of newts will inhabit an area much closer to the pond, and the exact distribution and migration patterns of newts on land depends on a variety of factors. The quality of terrestrial habitat near to breeding ponds is important, as are the lack of barriers to dispersal (such as fast-flowing rivers, or very busy roads). The distribution of ponds and hibernation opportunities may also influence movements. Several studies have been conducted which reveal a great deal of variation, but GCN commonly move between ponds that are within around 250 metres of each other.

2.2.1.6 Research[2] has shown that the majority of GCN remain within 100 metres of breeding sites provided suitability terrestrial habitat is present in this area.

2.2.1.7 To summarise habitat requirements, GCN require waterbodies to be able to reproduce effectively, and these are typically ponds. Various types of ponds are used; most commonly medium sized ones, such as field ponds, clay pits, marl pits, moats, large ditches and quarry ponds. Terrestrial habitats are required for feeding, dispersal and hibernation, and typically this would include grassland, scrub, woodland, hedgerows, 'waste ground' or quarry floors. The key factors seem to be the availability of prey species combined with the presence of dense ground vegetation or voids in the substrate to allow refuge; shelters on the surface, such as logs and rocks, are also valuable. GCN often occur in meta-populations, so connections between ponds (and between populations more distant) are also important.

[2] Cresswell, W. and Whitworth, R. 2004. English Nature Research Reports Number 576. An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus. ISSN 0967-876X.

3 Methodology

3.1 Review of Previous Information

3.1.1.1 As part of the current assessment, the following previous documents have been reviewed:

- CBE Consulting. (2015). Update of Phase 1 Habitat Survey and Ecological Appraisal. Land at Limestone Road, Burniston, Near Scarborough. 22nd June 2015 (Report ref. P880/0615).
- CBE Consulting. (2016a). Letter Re: Inspection of land at Limestone Road. 4th April 2016.
- CBE Consulting. (2016b). Letter Re: Flooded Land at Limestone Road. 10th October 2016.
- CBE Consulting. (2017). GCN Proposed Protection Methods. Land adjacent to Limestone Road, Burniston, Yorkshire. 11th May 2017.
- Quants Environmental Ltd (2018). Limestone Road, Burniston, Scarborough. Great Crested Newt Survey and Mitigation Strategy, May 2018.
- Quants Environmental Ltd (2018). Limestone Road, Burniston, Scarborough. Great Crested Newt Surveys, May 2018.
- Quants Environmental Ltd (2018). Limestone Road, Burniston, Scarborough. Additional Survey Information (Bats and Great Crested Newts), June 2018.

3.2 Study Area

3.2.1.1 The GCN Population Size Class Surveys (May-June 2021) covered the pond within the site (Pond P1 as shown on Figure 3). Surveys conducted in 2018 covered all accessible ponds within 500 metres of the site (Ponds P2 – P9 as shown on Figure 3).

3.3 Personnel

3.3.1.1 The GCN surveys were conducted by Toby Fisher CEnv MCIEEM holding Natural England Class Licence Registration No. WML-CL08:2015-16681-CLS-CLS for GCN.

3.4 GCN Population Size Class Surveys (May-June 2021)

3.4.1.1 In accordance with the standard methodology for GCN Population Size Class Surveys[3], six survey visits were undertaken using three different survey techniques on each occasion; bottle trapping, torchlight surveys and egg-searches.

3.4.1.2 The surveys were undertaken using standard methods during suitable weather conditions within the correct season for such surveys (between mid-March and mid-June with at least three of the surveys between mid-April and mid-May).

3.4.1.3 A summary of the survey techniques used is provided below and the survey conditions are presented in Table 1.

3.4.2 Bottle Trapping

3.4.2.1 This method involved setting bottle traps around the margins of the pond at dusk. The check and collection of the traps was undertaken the following morning. The traps were spaced at approximately 2 metre intervals around the margins of the pond. During each survey visit up to 15 traps were placed within the surveyed pond.

3.4.3 Torchlight Survey

3.4.3.1 High powered torches (1 million candle power) were used to conduct nocturnal searches for amphibians within the pond. All torching was conducted in suitable weather conditions i.e., no/little wind and no/little rain.

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[3] English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature. Peterborough. August 2001.

3.4.4 Egg Searches

3.4.4.1 During each survey visit, searches were made for newt eggs on vegetation within the pond.

Table 1. GCN survey dates and weather conditions

Date	Torch survey conditions	Overnight minimum temperature
27th – 28th April 2021	7°C, cloud cover 100%, wind Beaufort scale 1-2, dry	5°C
10th – 11th May 2021	10°C, cloud cover 50%, wind Beaufort scale 1, dry	6°C
12th – 13th May 2021	11°C, cloud cover 80%, wind Beaufort scale 1, dry	7°C
18th – 19th May 2021	10°C, cloud cover 50%, wind Beaufort scale 1, dry	5°C
7th – 8th June 2021	16°C, cloud cover 30%, wind Beaufort scale 0, dry	9°C
8th – 9th June 2021	16°C, cloud cover 30%, wind Beaufort scale 0, dry	10°C

3.4.5 Survey Comments / Limitations

3.4.5.1 All surveys were conducted at the appropriate time of year and during suitable weather conditions. It is noted that the surface area of Pond P1 has varied significantly over the course of various surveys conducted between 2018 and 2021. During surveys in May/June 2018, Pond P1 had drained to become extremely small and shallow; the surface area of Pond P1 in June 2018 was approximately 2 x 2 metres and the pond was less than 100 mm deep.

3.4.5.2 At the time of the surveys in May and June 2021, Pond P1 was significantly larger than in 2018 (presumably due to impeded drainage) and had a surface area of approximately 60 x 70 metres (depth unknown but likely at least 0.5 deep in parts). Pond P1 covered the full width of the site and it was therefore not possible for the surveyor to safely navigate around the sides of the pond to access the eastern, northern or southern banks; therefore bottle trapping, torchlight surveys and egg-searches were only undertaken on the western bank of Pond P1. This is considered to be a minor survey limitation.

3.5 Update Assessment of Off-Site Ponds including HSI

3.5.1.1 Based on analysis of aerial imagery and Ordnance Survey mapping, nine waterbodies / potential waterbodies were identified within approximately 500 metres of the site. On 27th April 2021, Toby Fisher CEnv MCIEEM[4] visited all accessible ponds within 500 metres of the site in order to update the habitat assessments of these ponds which were previously undertaken in 2018.

3.5.1.2 All nine waterbodies / potential waterbodies within 500 metres of the site were assessed in terms of their suitability to support GCN using the Habitat Suitability Index (HSI) methodology[5]. HSI provides a measure of habitat suitability for GCN on a scale of 0 (unsuitable habitat) to 1 (optimal habitat) based on ten habitat criteria, all of which are factors thought to affect GCN. In general, ponds with high HSI scores are more likely to support GCN than those with low scores. However, it should be

[4] Natural England Class Licence Registration No. WML- CL08:2015-16681-CLS-CLS (Great Crested Newts).

[5] Oldham R.S., Keeble J, Swan M.J.S. & Jeffcote M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal 10(4), 143-155.

noted that, whilst HSI provides a quantitative indication of the suitability of a pond and hence the likelihood of GCN being present, it does not conclusively determine whether GCN are present or not.

3.5.1.3 The HSI assessment of Ponds P1 and P7 were based on direct observations made on 27th April 2021. Due to access restrictions, the HSI assessments of Ponds P2, P3, P4, P6, P8 & P9 were based on interpretation of aerial imagery only. On 27th April 2021, Pond P5 was found to have been completely filled-in (GCN were previously recorded as present in P5 in 2018).

3.5.1.4 The National Amphibian and Reptile Recording Scheme (NARRS) estimates[6] as a guide that 20% of ponds with a 'below average' categorisation will be occupied by GCN; 55% of ponds with an 'average' categorisation will be occupied by GCN; 79% of ponds with a 'good' categorisation will be occupied by GCN; 93% of ponds with an 'excellent' categorisation will be occupied by GCN.

3.6 Update Site Visit (26th January 2022)

3.6.1.1 An ecological walkover survey of the full site area was undertaken on 26th January 2022 by Toby Fisher CEnv MCIEEM[7]. The aim of the ecological walkover survey to validate the current site conditions (terrestrial and aquatic habitats) with reference to the previous ecological reports. During the site visit, the site plus accessible areas in the vicinity of the site were assessed in terms of their potential value to GCN during their terrestrial and aquatic phases.

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[6] National Amphibian & Reptile Recording Scheme (NARRS) http://www.narrs.org.uk/documents/HSI%20guidance.pdf

[7] Natural England Class Licence Registration No. WML- CL08:2015-16681-CLS-CLS (Great Crested Newts).

4 Review of Previous Reports

4.1 Update of Phase 1 Habitat Survey and Ecological Appraisal (CBE Consulting, June 2015)

4.1.1.1 The updated report by CBE Consulting[8] involved a site survey on 19th June 2015. The report notes that the drainage ditch in the northern part of the 'L' shaped parcel of land (i.e. Pond P1 in Figure 2 below) was flooded by a partially blocked outlet at the time of the survey. The report makes no mention of GCN, potential amphibian habitat, ponds or waterbodies.

4.2 Letter Re. Inspection of Land at Limestone Road (CBE Consulting, April 2016)

4.2.1.1 This letter report by CBE Consulting[9] involved a site survey on 1st April 2016. The letter report notes that, since the previous site visits by CBE Consulting in 2011, 2012 and 2015, "*the field at the northern end of the site area has suffered a breakdown in the drainage system leading to significant flooding of the field area*." CBE Consulting visited the site on 1st April 2016 and provided an overview of the flooding of the northern part of the 'L' shaped landholding.

4.2.1.2 The letter report notes that, during the 2011 and 2012 visits, no flooding was noted in this area and the drainage system appeared to be working well but with some occasional soft rush indicating seasonally boggy ground. The letter report notes that the 2015 site visit had taken place immediately after a period of prolonged rain and that the drainage ditch was flooded but the remainder of the field was still free of any standing water. The letter report concluded that the north field is not an area that has significantly flooded in recent years with long-term standing water but is low lying and quite damp.

4.2.1.3 The letter report includes photos showing the northern field of the site area between 2011 and 2015. Additional photos taken on 1st April 2016 show a large part of the northern field to be flooded; the letter report states that the flooded area is 1 metre deep in the centre.

4.2.1.4 Frogspawn was noted along the western edge of the flooded area and the letter report states "*it is likely that other amphibians will find and colonise this water body if it remains in place over the coming year. However, there are no records of GCN within the area and no evidence of this species was found during the torch survey I carried out when I was present at the site [on 1st April 2016]. Whilst no sightings of Smooth Newt were noted, it is likely this species has found and colonised this water body as they are known to be in the area. This water body is not a permanent pond feature, but a result of flooding.*"

4.2.1.5 The letter report recommended that "*the outfall should be repaired at the earliest opportunity as the flood water has already extended across the northern boundary and is threatening to extend into the gardens adjacent to the southern boundary.*"

4.3 Letter Re: Flooded Land at Limestone Road (CBE Consulting, October 2016)

4.3.1.1 This letter report by CBE Consulting[10] involved a review of the previous reports relating to the site.

4.3.1.2 The letter report states: "*It is my professional opinion that the water body within the northern field area of the site is a result of temporary flooding resulting from the breakdown of the field drainage outfall. This body of water has been collecting for a period of some months subsequent to April 2015… The landowner has taken every reasonable precaution to ensure that the removal of the floodwater can avoid harm to protected species. This included waiting until the most appropriate period of the year before starting to drain the water in order to find the blocked outfall and repair this… This water body is not a permanent feature but a result of flooding. Taking into account the*

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[8] CBE Consulting. (2015). Update of Phase 1 Habitat Survey and Ecological Appraisal. Land at Limestone Road, Burniston, Near Scarborough. 22nd June 2015 (Report ref. P880/0615).

[9] CBE Consulting (2016a). Re: Inspection of Land at Limestone Road. 4th April 2016.

[10] CBE Consulting (2016b). Re: Flooded Land at Limestone Road. 10th October 2016.

potential for a significant population of GCN to be present was considered to be unlikely for the reasons stated there was not considered to be any requirement to undertake to the flood removal work under a low impact European Protected Species License. Considering that adult GCN leave the water at the end of summer and removal of the floodwater at the end of September and October is the optimum period for such work to be completed in any event, a decision to complete this work now needs to be taken rapidly, prior to any significant rainfall that will potentially place the adjacent land at greater risk."

4.4 GCN Proposed Protection Methods (CBE Consulting, May 2017)

4.4.1.1 This document[11] presented a Precautionary Method Statement for the protection of GCN at the site in relation to the proposed development.

4.5 Biodiversity Officer Consultation Response (July 2017)

4.5.1.1 The consultation response from Scarborough Borough Council's Ecologist and Biodiversity Officer, Tim Burkinshaw, dated 5th July 2017 states: "*I can confirm my view that provision for GCN in relation to this site is not acceptable as it stands. The GCN Precautionary Method Statement is fine so long as one assumes that the only population of GCN is or was associated with the duck pond in the property off-site to the north-west. I do not agree with this interpretation… there needs to be account taken on the substantial ponded flood area present in the north field in 2015/16 which has now been drained. Also, in relation to the reports by public of newts entering gardens adjacent to that flooded area during the pumping out process and the subsequent finding of 3 GCN by the electricity substation, also adjacent to the ponded flood area. Concerns were brought to our attention in Aug 2016 during the pumping out… I understand that the police requested the pumping cease while investigations into the possible use of the waterbody by GCN were made… We received no survey evidence from the applicant assessing the importance to GCN of the flood waterbody before the pumping out and remedial field drains were completed. When I observed it in Aug 2016 the flooded area was a sizeable and well established water body with marginal vegetation and waterbirds using it… The applicant's ecology appraisal observed the domestic pond to the north-west is a poor quality GCN habitat so I find it highly plausible that GCN had moved in to the flooded portion of the field, since it became wetter with temporary ponding of water. My advice is to assume, the absence of evidence to the contrary that this wetland area had become at the least a resting place for GCN and potentially a breeding site and to Condition the creation of a pond and associated habitat as part of the development in mitigation for its loss… It is my opinion that as well as the draining of the ponded floodwater in autumn of 2016 (and the removal of a hedgerow dividing the two fields, noted in July 2015 Ecology Appraisal Update report) should be seen as preparatory work for the development and as such it is reasonable and correct to ask for their loss to be compensated or mitigated. I would ask for a new GCN pond to be created, within 250m of the duck pond to the N-W so that the population there may benefit from it. Also the pond should be associated with some new scrub and rough grass peripheral and connecting to the hedgerows at the northern and western site boundaries. I would recommend that these be accommodated if possible in the proposed 'buffer zone' to the NW of the development site, as they can be kept safe from public disturbance and also ensure that commuting amphibians have no need to cross any roads or expanses of hard standing.*"

4.6 Committee Report (Scarborough Borough Council, August 2017)

4.6.1.1 The Committee Report presented a chronological overview of the ecology matters relating to the development during 2015, 2016 and 2017 followed by the Council's assessment on GCN and their conclusions, as summarised below.

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[11] CBE Consulting. (2017). GCN Proposed Protection Methods. Land Adjacent to Limestone Road, Burniston, Yorkshire. 11th May 2017.

4.6.1.2 2015: The Committee Report notes the "*suggestion made by residents is that the originally submitted ecology report grossly underestimated the value of the area of ponding within the site as habitat for GCN. Representations suggested that the land amounted to good quality GCN habitat and that GCN could be found on the site in or near the floodwater. Conversely, the applicant's originally submitted survey work states that the land's features made it unlikely to be habitat for GCN and suggested that there were no GCN present on the site. It did however identify a pond to the north of the site (in third party ownership) which was likely habitat for GCN.*"

4.6.1.3 2016: The Committee Report notes the applicants drained the site of its standing water in 2016. "*Officers understand that residents reported to the Police and Natural England that this draining was killing GCN and destroying habitat. It is believed that the Police attended the site and that an investigation was undertaken by Natural England. Wildlife crime is a matter for the Police and Natural England. Officers are not aware that any wrongdoing was proven.*"

4.6.1.4 2017: The Committee Report notes: "*With the submission of a revised Flood Risk Assessment and updated Planning Statement, the application was 'made live' again in March 2017. At that point, the applicants maintained their original position that the site was of low value as GCN habitat and that GCN were not present on the land. This position was somewhat undermined when an ecologist working for Northern Powergrid encountered GCN on the site whilst working on an electricity substation on The Limes in the spring of this year [2017]. In light of this evidence, the applicant considered it appropriate to look again at the site and provide further ecological work. Their latest submission again identifies the pond to the north of the site (in third party ownership) as being GCN habitat, and the now drained site as being of negligible GCN potential. This is a reasonable suggestion, given that the site is now a dry field. No significant reference is made to the habitat potential of the drained area of ponding.*"

4.6.1.5 The Assessment of the Council on GCN: The Committee Report notes: "*The Northern Powergrid discovery does suggest that the site may have been GCN habitat before it was drained, and the probability is increased when the presence of the proven habitat on the neighbouring site is taken into account. "The Council's Ecologist has advised that the British Standard relating to ecology surveys in the planning process states that where potential habitat has been destroyed during the course of the consideration of a planning application the Council is right to proceed as if destroyed features were in fact habitat (i.e. it is correct to assume that GCN habitat has been lost), whether or not there documentary evidence of this. With this in mind, it would be reasonable for the Council to add a planning condition requiring the establishment of a high quality GCN habitat within the application site area as appropriate mitigation for the potential loss of habitat resulting from the draining of the site. The Council's Ecologist is advising on the requirements of this condition, and further advice will be given at the meeting.*"

4.6.1.6 Conclusion on the Point of Ecology: *The* Committee Report states: "*Whilst the comments of neighbours are noted with respect to other species protected by law (including breeding birds and badgers), having considered the site's features against the Natural England Standing Advice it seems to Officers that it is very improbable that the site is habitat to other protected species. "With this in mind, and taking into account the fact the site is very unlikely to be habitat for GCN at this time (the site being a dry grass field), Officers consider that the development could be implemented with the applicant first having to apply to Natural England for a European Protected Species License. "The suggested conditional requirements are appropriate mitigation for the potential loss of habitat."*

5 Results

5.1.1.1 See photos at Appendix 1.

5.2 Waterbodies

5.2.1.1 No waterbodies are present within the redline site boundary. Based on analysis of aerial imagery and Ordnance Survey mapping, 9 potential waterbodies have been identified within 500 metres of the site boundary.

5.2.1.2 As described in the previous reports, in Section 4 above and in Figures 4 – 7 below, Pond P1 within the blue line area has varied significantly in terms of its size and nature over recent years. There has been periodic impediment of drainage for a number of years such that the surface area of P1 sometimes extends to approximately 60 x 70 metres but at other times the surface area of standing water here is less than 1-2 square metres.

Figure 3. Waterbodies within 500 metres of the site (P1 – P9) (image dated 2018)

Figure 4. Aerial image of the site – April 2021

Figure 5. Aerial image of the site – April 2019

Figure 6. Aerial image of the site – July 2018

Figure 7. Aerial image of the site – July 2009

5.3 GCN Population Size Class Surveys

5.3.1.1 During the surveys undertaken in 2021, **one adult male GCN was recorded in Pond P1**. No other evidence of GCN recorded. A maximum count of 1 GCN equates to a 'small' GCN population[1];

however it is noted that several off-site ponds were not accessible for survey and it is possible that a larger meta-population of GCN occurs within and adjacent to the site.

Table 2. GCN Survey Results (2021)

Survey number	1	2	3	4	5	6
Date	27th – 28th April 2021	10th – 11th May 2021	12th – 13th May 2021	18th – 19th May 2021	7th – 8th June 2021	8th – 9th June 2021
Bottle trapping	Zero GCN	3 ♂ smooth newts; Frog and toad tadpoles Zero GCN	6 ♂ smooth newts; Frog and toad tadpoles Zero GCN	2 ♂ smooth newts; 2 ♀ smooth newts; Zero GCN	1 ♀ smooth newts; Frog and toad tadpoles Zero GCN	Zero GCN
Torchlight survey	2 ♂ smooth newts; 1 ♀ smooth newt	3 ♂ smooth newts; 3 ♀ smooth newts; Frog and toad tadpoles	**1 ♂ GCN**; 4 ♂ smooth newts; 6 ♀ smooth newts; Frog and toad tadpoles	1 ♂ smooth newts; 2 ♀ smooth newts; Frog and toad tadpoles	1 ♀ smooth newt; Frog and toad tadpoles	2 ♂ smooth newts; 2 ♀ smooth newts; Frog and toad tadpoles
Egg search	Zero GCN	Zero GCN	Zero GCN	Zero GCN	Zero GCN	Zero GCN
Pond turbidity (0 = clear; 5 = turbid)	1	1	1	2	2	2
Vegetation cover (0 = no veg; 5 = total veg)	3	3	3	3	3	3

5.4 Habitat Suitability Index (HSI)

5.4.1.1 The HSI results for the waterbodies within approximately 500 metres of the development site are shown in Table 1 below. The results indicate that the closest pond to the site (Pond P1) achieved a score of 0.71 (good) and the other pond within 100 metres of the site (Pond P2) scored 0.52 (below average).

5.4.1.2 The pond with the highest HSI score was P8 (0.85 = excellent). All other ponds (P3, P4, P5, P6, P7, P9) scored between 0.62 and 0.66 (average).

5.4.1.3 The HSI results indicate that any of the nine identified waterbodies / potential waterbodies have potential to support GCN, although it is noted that P2 has the lowest suitability to support GCN and P8 has the highest suitability.

Table 3. Habitat Suitability Index (HSI) Scores for Ponds P1 – P5

Date HSI assessment undertaken	27/04/2021	27/04/2021	27/04/2021	27/04/2021	27/04/2021
Pond ref	P1	P2	P3	P4	P5
SI1 - Location	1	1	1	1	n/a
SI2 - Pond area	0.6	1	0.05	0.05	n/a
SI3 - Pond drying	0.5	0.9	1	1	n/a
SI4 - Water quality	1	0.67	0.67	0.67	n/a
SI4 - Shade	1	1	1	1	n/a
SI6 - Fowl	0.67	0.01	1	1	n/a
SI7 - Fish	0.67	0.67	0.67	0.67	n/a
SI8 - Ponds	0.95	0.95	0.9	0.9	n/a
SI9 - Terr'l habitat	1	1	1	1	n/a
SI10 - Macrophytes	0.7	0.4	0.7	0.7	n/a
HSI	0.79	0.52	0.65	0.65	n/a
Categorisation	Good	Below average	Average	Average	n/a

Table 4. Habitat Suitability Index (HSI) Scores for Ponds P6 – P9

Date HSI assessment undertaken	27/04/2021	27/04/2021	27/04/2021	27/04/2021
Pond ref	P6	P7	P8	P9
SI1 - Location	1	1	1	1
SI2 - Pond area	0.05	0.1	1	0.1
SI3 - Pond drying	0.5	0.3	0.9	0.5
SI4 - Water quality	0.67	0.67	0.67	0.67
SI4 - Shade	1	1	1	1
SI6 - Fowl	1	1	0.67	1
SI7 - Fish	0.67	1	0.67	0.67
SI8 - Ponds	0.95	0.95	1	0.9
SI9 - Terr'l habitat	1	1	1	1
SI10 - Macrophytes	0.8	0.8	0.7	0.7
HIS	0.62	0.66	0.85	0.65
Categorisation	Average	Average	Excellent	Average

Table 5. Interpretation of GCN Information

Pond ref.	**Distance from site**	**HSI score**	**Suitability of terrestrial habitats within 100m of pond**	**Barriers to GCN dispersal between pond and the site**	**Notes**
P1	Within blue line area	0.79 (good)	Very good (rough grassland, gardens and hedgerows)	None	Small GCN population present (2021). Three GCN found in substation at edge of P1 in 2017.
P2	20m north-west	0.52 (below average)	Very good (rough grassland, gardens and hedgerows) with arable to north	None	Not accessible for survey – GCN assumed present. P2 is located ~70m west of P1 and ~140m west of substation where 3x GCN were found in 2017. Assumed abundance of ducks limits its suitability for GCN. Genuine potential for GCN to occur in P2 and

Pond ref.	Distance from site	HSI score	Suitability of terrestrial habitats within 100m of pond	Barriers to GCN dispersal between pond and the site	Notes
					also within development site during their terrestrial phase.
P3	125m north-east	0.65 (average)	Very good (rough grassland, gardens and hedgerows) with arable to NW.	None	Small private garden pond. Not accessible for survey – GCN assumed present.
P4	145m north-east	0.65 (average)	Very good (rough grassland, gardens and hedgerows) with arable to NW.	None	Small private garden pond. Large population of carp present – eDNA negative in 2018. GCN absent.
P5	160m north-east	n/a	n/a	None	Filled-in by owner.
P6	275m north-west	0.62 (average)	Moderate (pasture, garden and hedgerows).	None	Small private garden pond. Not accessible for survey.
P7	450m north-west	0.66 (average)	Good (rough pasture, hedgerows and woodland).	None	Small field pond – eDNA negative in 2018. GCN absent.
P8	390m west-south-west	0.85 (excellent)	Good (rough grassland, scrub, woodland and gardens).	Minor (lodges and houses)	Not accessible for survey. Medium-sized pond in field providing excellent potential newt habitat (rough grassland and scrub).
P9	275m south-east	0.65 (average)	Good (gardens, grassland and hedgerows).	Minor (houses and minor road; Limestone Road)	Not accessible for survey. Small pond at rear of houses on edge of large grassland field.

5.5 Terrestrial Habitats

5.5.1.1 See photos at Appendix 1. All parts of the red line site boundary (proposed development site) provide suitable terrestrial habitats for GCN. The red line site area is dominated by rank un-grazed former sheep pasture comprising Yorkshire Fog *Holcus lanatus*, Common Bent *Agrostis capillaris*, Meadow Foxtail *Alopecurus pratensis*, Cock's-Foot *Dactylis glomerata*, Sorrel *Rumex acetosa*, Creeping Buttercup *Ranunculus repens* and Hogweed *Heracleum sphondylium*. Additionally there are two derelict buildings and dilapidated trailers along with boundary features comprising fences, trees, hedgerows and scrub.

5.5.1.2 The habitats throughout the red line and blue line site areas provide potentially suitable terrestrial habitats for foraging and dispersal of GCN. Features such as grassland, hedgerows, fence lines and buildings within the site could provide refugia for GCN throughout the year.

5.5.1.3 There are no major barriers to dispersal between the development site and Ponds P1 – P9, although the presence of houses, minor roads and associated walls represent some minor barriers to dispersal particularly to the south-east of the site.

5.6 Interpretation

5.6.1.1 Surveys in 2021 confirmed the presence of a small population of GCN in Pond P1.

5.6.1.2 Given the relatively high number of ponds within 500 metres of the site (several of which are located on private land and were not accessible for survey), the generally average-to-good HSI scores and the absence of major barriers to GCN dispersal, it is considered likely that there is an extant meta-population of GCN in the immediate vicinity of the site and that several of the nine identified ponds may be used by GCN for breeding purposes on a regular basis. Therefore, GCN may use the site itself for foraging, resting or sheltering their terrestrial phase.

5.6.1.3 It is known that GCN are likely absent from Ponds P4, P5 and P7.

5.6.1.4 On a precautionary basis it is considered that, in addition to P1, GCN could be present in Ponds P2, P3, P6, P8 and P9.

6 Impact Assessment

6.1 Impacts in the Absence of Mitigation

6.1.1.1 In the absence of mitigation measures, the development could have adverse effects on GCN through: the killing/injuring and/or disturbance of GCN in terrestrial habitats; permanent habitat loss; habitat fragmentation; and/or entrapment of GCN in drains or gully pots.

6.1.2 Construction Phase

6.1.2.1 During the construction phase, the development could result in the following impacts:

- Killing/injuring and/or disturbance of GCN occurring in terrestrial habitats within the site.
- Direct loss of GCN terrestrial habitat (approximately 1.15 hectares in total; of which approximately 0.72 hectares is within 100 metres of a GCN breeding site (P1 / P2); and approximately 0.43 hectares is 100-200 metres from a GCN breeding site (P1 / P2).
- Habitat fragmentation, i.e. GCN could be prevented from dispersing across the site between habitats on either side of the site.
- Reduced water quality in Pond P1 through silt-laden run-off from the construction site.

6.1.3 Post-Construction Phase

6.1.3.1 After the construction phase, the completed development could result in the following impacts:

- Killing or injuring of GCN by vehicular traffic on new road / driveways within the site.
- Entrapment of GCN in drains or gully pots within the site.
- Habitat fragmentation, i.e. GCN could be prevented from dispersing across the site due to the presence of new buildings and walls etc.
- Reduced water quality in Pond P1 through pollution-laden run-off from roads and driveways.

6.2 Mitigation Measures and Licensing

6.2.1.1 Proposed mitigation measures are presented in the GCN Mitigation Strategy presented in Appendix 2. Standard and proven mitigation measures will be employed to ensure that GCN are not harmed during the construction or post-construction phases.

6.2.1.2 The details of the mitigation measures will form part of an application to Natural England for a European Protected Species Mitigation (EPSM) licence in respect of GCN for the development.

6.2.1.3 Before issuing an EPSM licence, Natural England will need to be satisfied that the following '3 tests' are met:

1. That the action is for the purpose of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature;
2. that there is no satisfactory alternative; and
3. that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

6.2.1.4 'Test 1' was covered separately through the planning appeal.

6.2.1.5 Regarding 'test 2', the following 'alternatives' have been considered:

- Do nothing.
    - The 'do nothing' option would mean a failure to meet the local housing need on a sustainable site, avoiding all the social and economic benefits that will flow.
- Relocation of the development to avoid habitats used by GCN.

- There is a limited availability of suitable development sites in the area. No satisfactory alternative sites have been identified. Alternative sites may also contain habitats used by GCN.

6.2.1.6 Regarding 'test 3', it is considered that the development will not be detrimental to the maintenance of the favourable conservation status of GCN in their natural range. The rationale for this conclusion is summarised below:

- Pond P1 supports a 'small' population of GCN. Besides P1 there are 7 ponds within 500 metres of the site and it is likely that a meta-population of GCN utilises several of these ponds during most years. Pond P1 is considered to be of low conservation value in terms of GCN.
- The development will not affect any aquatic habitats (i.e. ponds).
- The development will not affect habitats within approximately 10 metres of a GCN breeding pond.
- Standard mitigation measures will be employed to exclude GCN from the development footprint prior to the start of ground works and for the duration of ground works, thereby avoiding the killing or injuring of GCN.
- Suitable terrestrial and aquatic habitats for GCN will be retained within the blue line area and within the applicant's landholding. Subsequently these habitats will be managed so as to maintain suitable habitat in the future.

6.2.1.7 Given the implementation of the measures described above and the consideration of the 3 tests, it is considered likely that Natural England will be likely to grant an EPSM licence for the development.

6.3 Residual Impacts

6.3.1.1 Given the mitigation measures presented in Appendix 2 (including standard measures to exclude GCN from the development footprint, terrestrial habitats and hibernacula); the overall effect of the finished development is likely to be neutral or slightly positive for GCN.

Appendix 1. Photographs

Photo 1. Looking north-west across the site (Jan 2022)

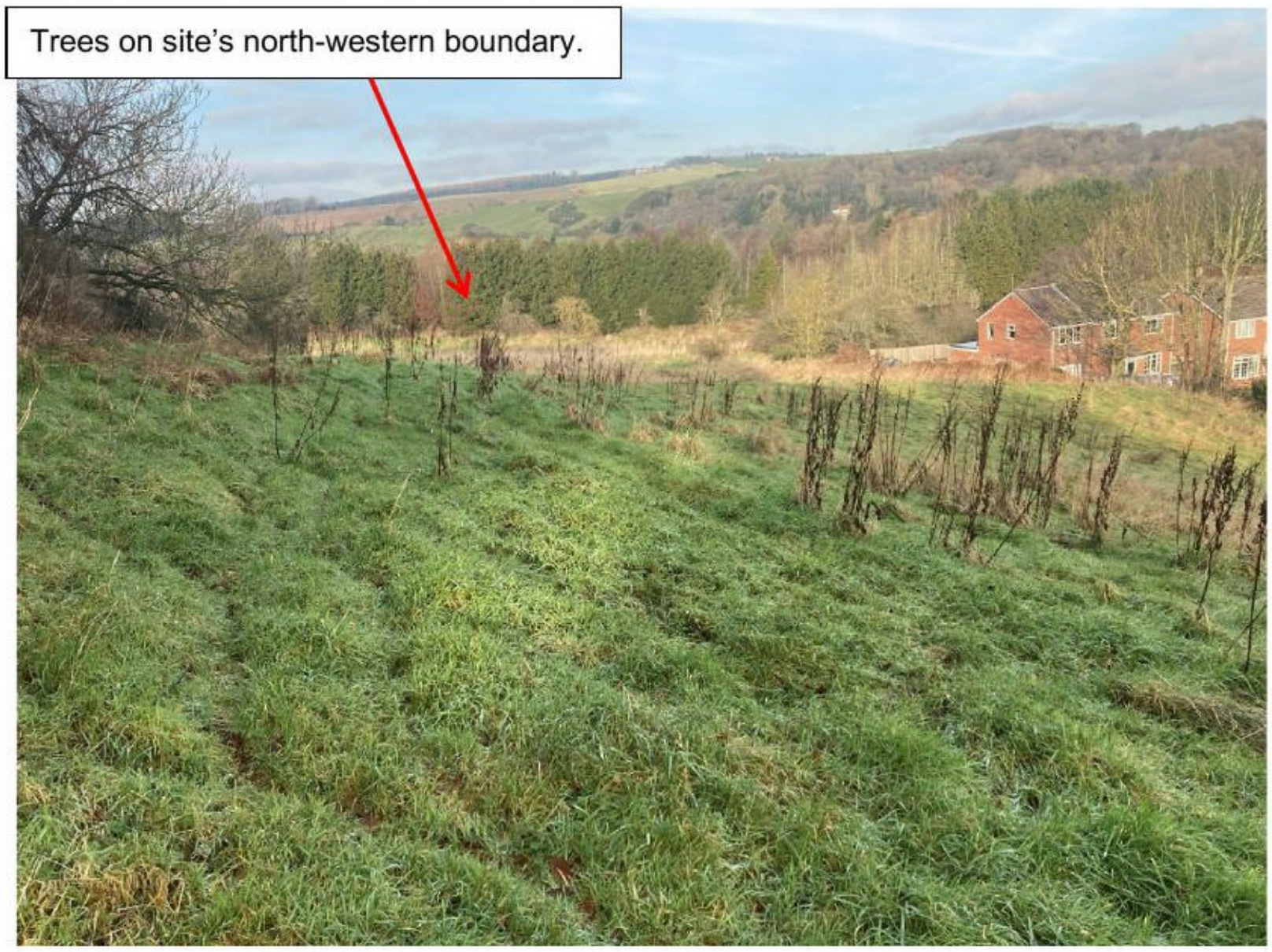

Photo 2. Looking east-north-east across site to Pond P1 (Jan 2022)

Photo 3. Looking north-east across Pond P1 (Jan 2022)

Photo 4. Looking north-east across Pond P1 (2018)

Photo 5. Looking north-west across Pond P1 (2018)

Photo 6. Looking west from Pond P1 (2018)

Appendix 2. GCN Mitigation Strategy

1. Aims and Objectives

The aims and objectives of this strategy are to produce a GCN Mitigation Strategy to comply with the GCN Mitigation Guidelines[12] and current government guidance.

The GCN Mitigation Strategy presented below will form the basis of an application to Natural England for a European Protected Species Mitigation (EPSM) licence for GCN in respect of development. This Strategy is presented in a format based on the current EPSM GCN Method Statement Licence Application[13].

The EPSM GCN licence from Natural England will be a legal document based on the information which is current at the time of the licence being granted. The licence must be obtained before the start of ground works on the site. Natural England will only grant a licence once planning permission has been granted and once all wildlife-related planning conditions that are capable of being discharged before the start of works have been discharged. Natural England aims to process licence applications in 30 working days.

2. Baseline Survey Information and Interpretation

Pond P1 supports a 'small' population of GCN (max count 1 in 2021). Several off-site ponds have been inaccessible for survey and it is possible that GCN occur in other ponds within 500 metres of the site.

Pond P1 appears to be fairly recent in origin and appears to have fluctuated significantly in terms of its size and depth over recent years.

In terms of terrestrial habitats, the entire development site provides potentially suitable terrestrial habitat for GCN, i.e. rank grassland with derelict buildings small areas of scrub and field boundary habitats.

Habitat Suitability Index (HSI) information for all ponds within 500 metres of the site is presented in Tables 3 and 4 of this report. HSI scores are not a reliable indicator of GCN population size; however, the HSI scores for the surveyed ponds indicates that, besides P1, seven further ponds within 500 metres could potentially support GCN.

Barriers to GCN dispersal in the vicinity of the site are generally minor. Therefore, it is possible that there may be movements of individuals between all eight ponds, giving an overall meta-population.

3. Impact Assessment

Breakdown of terrestrial impacts				
	Permanent		Temporary	
	Habitat type	Area lost (ha)	Habitat type	Area damaged (ha)
	Grassland	1.15	Grassland	0
	Total Loss	1.15	Total Damage	0

[12] English Nature (2001). Great Crested Newt Mitigation Guidelines. Peterborough.

[13] Template for Method Statement to support application for licence under Regulation 53(2)e of The Conservation of Habitats and Species Regulations 2017 (as amended) in respect of Great Crested Newts Triturus cristatus. Form WML-A14-2 (Version April 2020).

Core, intermediate and distant terrestrial impacts		
	Permanent	Temporary
	Area lost (ha)	Area damaged (ha)
Core (<50m from pond)	0.32	0
Intermediate (50-250m from pond)	0.83	0
Distant (>250m from pond)	0	0
Total (ha)	1.15	0

Aquatic impacts				
	Permanent		Temporary	
	Number lost	Area lost (m^2)	Number damaged	Area damaged (m^2)
GCN Ponds	0	0	0	0
Other Ponds	0	0	0	0
Total	0	0	0	0

4. Pre- and mid-development Impacts

Vegetation clearance throughout the development site has the potential to kill and injure GCN. Minor negative impact on population. There may be potential for silt-laden run-off from the construction site to adversely affect the water quality in Pond P1.

5. Long-term Impacts

Construction of houses and roads within the development site will result in the permanent loss of terrestrial habitat (grassland) and has the potential to kill and injure GCN. Minor negative impact on population.

6. Post-development Interference Impacts

Minor risk of fish and invasive plant introduction to Pond P1.

Minor risk of GCN becoming trapped in drains and gully pots on new internal roads and driveways.

Minor negative impact on population.

There may be potential for pollution-laden run-off from roads and driveways to adversely affect the water quality in Pond P1.

7. Other Impacts

None predicted.

8. The Mitigation Solution

8a. Exclusion of GCN from Development Site

Standard measures will be used to exclude GCN from the development site prior to the start of ground works. The figure at Appendix 3 shows the proposed layout of exclusion fencing. Pitfall traps and artificial refugia (e.g. carpet tiles) will be placed at 10 metre intervals along the inside of all exclusion fencing (i.e. pitfall traps and carpet tiles alternately positioned 5 metres apart). Drift fencing will be included within the development area, with pitfall traps and artificial refugia placed on both sides of the drift fencing in the same layout as per the exclusion fencing.

All fencing will be maintained in a good condition under the direction of a GCN licensed ecologist for the total construction period. No permanent exclusion fencing is proposed.

Fencing will be installed prior to any construction works and removed at the end of construction under the direct supervision of a GCN licensed ecologist. Where necessary, finger-tip searches will be undertaken by a GCN licensed ecologist, e.g. removal of dense vegetation following the trapping period.

8b. Trapping Programme

A minimum 30-day trapping programme will be undertaken at the site. Trapping period to be reviewed during the programme based on captures, timings and weather conditions.

Trapping will be undertaken by experienced ecologists during suitable weather conditions. If unsuitable conditions occur, trapping will cease until suitable trapping conditions re-occur. Unsuitable weather conditions will not contribute to the total trapping period and this may mean that the overall trapping period extends beyond 30 days. Trapping will be completed between 1st March and 31st October (subject to weather conditions).

Standard measures including the use of lidded traps, floats, vegetation cover and small mammal exit provision will be used to ensure best practice. The trapping programme will continue until there have been 5 clear days with no GCN caught, during suitable conditions.

Any amphibians trapped within the site will be released in the receptor site shown in Appendix 3.

8c. Pollution Control

During the construction phase, pollution will be controlled through standard procedures which will be detailed in a Construction Environment Management Plan (CEMP), e.g. bunding and silt-traps.

During the post-construction phase, pollution will be controlled through standard measures detailed separately in the drainage scheme including a pollution-trap.

9. GCN Receptor Site

The GCN receptor site is shown in Appendix 3. The receptor site extends to approximately 0.15 hectares and comprises rank grassland with scrub. The receptor site currently provides good quality terrestrial habitat for GCN. The receptor site is owned and managed by the applicant.

9a. Existing GCN Status at Receptor Site

The GCN receptor site is immediately adjacent to Pond P1 and approximately 60 metres from pond P2. The GCN receptor site currently provides good quality terrestrial habitat for GCN, i.e. rank grassland with Hawthorn scrub. It is possible that GCN will be currently present at the receptor site.

10. Habitat Creation, Restoration and/or Enhancement

Pond P1 currently provides good quality habitat for GCN and other amphibians; P1 will be retained in situ. There are no plans to drain P1.

Within the receptor terrestrial habitat adjacent to P1, two GCN hibernacula will be created in accordance with the design in the GCN Mitigation Guidelines[1]; this will be positioned adjacent to P1 within existing rank grassland. The existing rank grassland within the receptor site will be managed through minimum-intervention such that its value as GCN terrestrial habitat will increase over time through natural successional processes such as establishment of grass tussocks, scrub, leaf litter and small mammal holes.

Aquatic habitat	Impacts			Compensation		
	Effect	Number	Total Area (m2)	Measure	Number	Total Area (m2)
GCN ponds	Lost	0	0	Created	0	0
	Damaged	0	0	Restored / reinstated / enhanced	0	0

Terrestrial habitat	Impacts		Compensation	
	Area lost (ha)		Area gained (ha)	
	Permanent	Temporary	Created	Restored / reinstated / enhanced
Core	0.32	0	0	0.15
Intermediate	0.83	0	0	0
Distant	0	0	0	0
Totals	1.15	0	0	0.15

11. Integration with Roads and Other Hard Landscapes

To reduce the likelihood of GCN and other amphibians becoming trapped within drains or gully pots, the following measures will be adopted:

- All gully pots will be installed at least 50 mm away from kerbs.
- Where possible, gully pots will sit against a drop kerb (i.e. a wildlife friendly kerb which amphibians are able to climb over) thereby minimising the risk of GCN entrapment.

12. GCN Population Monitoring

GCN population monitoring will be undertaken at Pond P1. Monitoring will be undertaken in each of Years 2 and 5 after the start of construction. The population monitoring results will be provided to Natural England, the Local Planning Authority and the local biological records centre (North and East Yorkshire Ecological Data Centre).

13. Site Maintenance

Site maintenance will involve checking the condition of the habitats within the blue line area (i.e. Pond P1 and adjacent terrestrial habitats) during each GCN Population Monitoring survey (i.e. in Years 2 and 5). Site maintenance will involve:

a) checking Pond P1 for fish presence (and if appropriate removing fish through appropriate methods);
b) checking for invasive aquatic plants, and removing such species through appropriate methods; and
c) checking the pond condition, and undertaking remedial action as required, e.g. if the pond fails to hold sufficient water, it may be necessary to modify the drainage and/or install an appropriate pond-liner.

14. Provisional Work Schedule

Activity	Provisional Timing	Comments
Obtain EPSM licence from Natural England	May 2022	Licence application to be informed by the surveys which were undertaken in Spring 2021.
Install GCN exclusion fencing, drift fencing, pitfall traps and artificial refugia	May 2022	To be undertaken in accordance with current guidelines[12]. Suitably Qualified Ecologist to supervise the works including finger-tip searches immediately prior to installation of fencing and pitfall traps.
GCN trapping period	May-June 2022	To be undertaken in accordance with current guidelines[12]. Minimum 30 day trapping period. All amphibians will be released in the receptor area shown in Appendix 3.
Create hibernacula adjacent to Pond P1	June 2022	To be undertaken in accordance with current guidelines[12]. Under the supervision and direction of a Suitably Qualified Ecologist.
Remove drift fencing	June 2022	Under the direct supervision of a Suitably Qualified Ecologist.
Maintain exclusion fencing for duration of construction period	June 2022 – June 2023	To maintain the integrity and effectiveness of the fencing, repairs will be undertaken promptly as necessary, e.g. any tears will be repaired and any vegetation growing close to the fencing will be cut to prevent amphibians being able to climb over the fence.
Remove exclusion fencing	June 2023	Under the direct supervision of a Suitably Qualified Ecologist.
GCN population size class monitoring	April-May 2024	To be undertaken by a Natural England licence holder. Results to be provided to Natural England, the LPA and NEYEDC.
GCN population size class monitoring	April-May 2027	To be undertaken by a Natural England licence holder. Results to be provided to Natural England, the LPA and NEYEDC.
Remedial action as required	As required	If required: remove fish through appropriate methods; remove invasive aquatic plants; and undertake other remedial action as required.

Appendix 3. GCN Exclusion, Receptor and Habitat Creation Plan

Key:

- Development site boundary
- Blue line area (GCN mitigation and receptor area)
- Pond P1 (extent of surface water on 26th January 2022)
- GCN exclusion fencing
- GCN drift fencing
- Proposed GCN hibernacula (2 in total)
- GCN Receptor site (grassland and scrub)

Appendix 4. GCN Impact Assessment Map

Key:

- Development site boundary
- Blue line area (GCN mitigation and receptor area)
- 50 metre buffer from Pond P1
- 50 metre buffer from Pond P2