



Hallam Land Management Ltd.

North west Bicester

GREAT CRESTED NEWT REPORT

November 2021

FPCR Environment and Design Ltd

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1.0 INTRODUCTION

- 1.1 FPCR Environment and Design Ltd. were commissioned by Hallam Land Management Ltd. to undertake great crested newt *Triturus cristatus* (GCN) surveys in association with an area of land off Bicester Road, Bicester.
- 1.2 A series of aquatic surveys were required in order to establish the extent that this protected species may be affected by the proposed development, and inform any GCN mitigation strategy and the subsequent European Protected Species (EPS) licence or District Level Licence that would be required to enable lawful development. This report provides the details of these surveys and provides an outline mitigation strategy for the maintenance of the favourable conservation status of GCN on site.

Site Location and Context

- 1.3 The land for the proposed development (hereafter referred to as the Site) is situated north west of Bicester town (centred on grid ref: SP569248) with agricultural to the north, west and south beyond the main rail line. To the north there is also some new development, with the established development of Bicester to the east. .
- 1.4 The Site comprises primarily arable farmland with associated field margins, and a number of fields of semi-improved and improved grassland which are subject to grazing or silage production. Other habitats include areas of dense and scattered scrub, and a small area of bare ground. Hedgerows form the predominant boundary habitat and support frequent mature standards.
- 1.5 A watercourse flows eastwards through the southern extent of the Site. Two dry ditches are present in the north, and east of the site. One pond (P10) is present on site. There is also a pooling of water where three wet ditches converge (P17).

2.0 METHODOLOGY

Desk Study

2.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:

- Thames Valley Environmental Records Centre (TVERC)
- Multi Agency Geographic Information for the Countryside (MAGIC) website¹

2.2 Further inspection, using colour 1:25,000 Ordnance Survey (OS) maps and aerial photographs from Bing (<http://www.bing.com/maps>) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider landscape.

2.1 An assessment was made to determine the suitability of each pond within the search area for GCNs using the HSI methodology, as developed by Oldham et al². The HSI provides a measure of the likely suitability of a waterbody for supporting great crested newts. This methodology assesses ponds against ten pre-determined criteria, producing a score that indicates suitability for GCN occupation. Generally, waterbodies with a higher score are more likely to support GCN than those with a lower score and there is a positive correlation between HSI scores and water bodies with newts recorded. Ten separate attributes are assessed for each pond:

- Location (Area A, B or C within the UK);
- Pond Area (size in metres²);
- Permanence (how many times it may dry out in a decade);
- Water quality (invertebrate diversity);
- Shade (percentage of a waterbodies perimeter shaded);
- Fowl (impact of waterfowl if present);
- Fish (impact of fish if present);
- Pond Count (density of ponds within 1km)
- Terrestrial Habitat (quality of surrounding habitat); and
- Macrophytes (percentage of surface area occupied).

2.2 A score is assigned according to the most appropriate criteria level set within each attribute and total score calculated of between 0 and 1. Pond suitability is then determined according to the following scale:

Table 1: HSI Score Scale

HSI score	Pond Suitability
<0.5	Poor
0.5 - 0.59	Below average

¹ www.magic.gov.uk

² Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000) Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155pp

0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

Aquatic Surveys

- 2.3 A total of 10 waterbodies were surveyed following the methods recommended by Natural England as detailed in the Great Crested Newt Mitigation Guidelines (English Nature, 2001). No access was permitted for P5 and P6. P3, P4, and P9 were dry and therefore not surveyed in this period. To determine the presence or absence of great crested newts, four individual survey visits were performed with two of these within the ‘peak’ GCN aquatic survey season (mid-April to mid-May). In the event the presence of GCN was confirmed a further two surveys would be undertaken (with half of the surveys within the ‘peak’ survey period). These additional surveys allow population size-class assessments to be undertaken. Appropriately licensed ecologists from FPCR completed all of these surveys during suitable conditions i.e. when the ambient air temperature exceeded 5°C, with little/no wind or rain. Survey conditions for each occasion are detailed in Table 2.

Table 2: Survey Conditions

Survey Date	Survey Conditions					
	Wind	Rain	Evening temp (°C)		Morning temp (°C)	
			Air pm	Water pm	Air am	Water am
04/05/2021	2	0	7	10	8	10
06/05/2021	0	0	9	9	9	9
11/05/2021	1	1	11	11	9	9
18/05/2021	0	1	13	11	9	8
01/06/2021	0	0	22	12	12	12
08/06/2021	0	0	21	16	11	16

- 2.4 On each survey occasion three of a possible four different techniques (egg search, sweep net, bottle-trap and torch) were used where possible, unless GCN were confirmed, in which case only two methods (bottle trapping and torching) are required to determine population size class. A summary of each is provided below:

Bottle Trapping

- 2.5 Bottle traps were set within the waterbody in the evening at densities of one trap per two metres of shoreline (where feasible) and left overnight for inspection in the morning. Traps were partially submerged in the water leaving an air bubble in the bottle and secured by a cane marked with a high visibility tape to ensure relocation the following day. Care was taken to ensure that trapping did not occur during excessively warm weather, when the temperature inside the trap could rise considerably, reducing oxygen levels and potentially suffocating the newts.

Sweep Netting

- 2.6 Long handled sweep-nets were used to sample the margins of the pond for GCNs, with approximately 15 minutes of netting per 50m of shoreline.

Torch Light Survey

- 2.7 Torching involved searching the waterbody after dusk using high-powered torches to scan the margins and potential display areas for newts. The perimeter of the pond was walked slowly to record any newts observed. Torch surveys are unsuitable within heavily vegetated and/or turbid ponds or after periods of heavy rain as visibility is diminished.

Egg Searching

- 2.8 Newts lay single eggs on leaves of aquatic plants or other suitable pliable material, after which the material is folded over the egg to protect it. GCN eggs can be distinguished from those of the other newts by their size, shape and colour. Submerged vegetation was examined for newt eggs and folded leaves gently opened to check for eggs. If a GCN egg had been identified, no further leaves would have been examined thereby minimising any further potential disturbance.

Population Size-Class Assessment

- 3.11 Where a population of GCNs was confirmed, a population size-class assessment was completed in accordance with Natural England's standard guidance within the *Great-crested Newt Mitigation Guidelines*. This assessment is based on the highest maximum count of GCNs across connected ponds observed on a single survey occasion (Table 3).

Table 3: Determining Population Size-Class

Population size class	Highest number of observations for one night
Small	0-10 animals
Medium	11-100 animals
Large	>101 animals

Survey Limitations

- 2.9 P5 and P6 were not surveyed as access was not permitted. P3, P4, and P9 were dry when surveys were carried out and so were not surveyed. P5 was located approximately 500m west from the site, with partial barriers between, it lies within 500m of a pond (P7) closer to the site which was surveyed. Publicly available records indicate this pond has supported GCN in 2010. P6 was located around 300m south and lies over 500m from the nearest pond; records from 2010 indicated GCN to be absent. As a result the lack of survey data in 2021 is not considered a constraint.
- 2.10 P10 was surveyed on only five occasions, with the first survey not completed. The peak count recorded at P10 was 10 GCN and it is considered possible that a medium population size-class could have been recorded on the initial survey date.

3.0 LEGISLATIVE AND PLANNING POLICY CONTEXT

- 3.1 GCN are afforded full legal protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended). The purpose of the legislation is to maintain and restore protected species to a situation where their populations are favourable.
- 3.2 Under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 it is illegal to:

- Deliberately capture, injure or kill any wild animal of a EPS;
- Deliberately disturb wild animals of an EPS (affecting ability to survive, breed or rear young) – disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young;
- Deliberately disturb wild animals of an EPS (impairing ability to migrate or hibernate) – disturbance of animals includes in particular any disturbance which is likely to impair their ability in the case of hibernating or migratory species to hibernate or migrate;
- Deliberately disturb wild animals of an EPS (affecting local distribution and abundance) – disturbance of animals includes in particular any disturbance which is likely to affect significantly the local distribution or abundance of the species to which they belong;
- Deliberately disturb wild animals of an EPS (whilst occupying a structure or place used for shelter or protection) – intentionally or recklessly disturb any wild animal while it is occupying a structure or place which it uses for shelter or protection; and
- Damage or destroy a breeding site or resting place an EPS.

3.3 Under the Wildlife and Countryside Act 1981 (as amended) it is illegal to:

- Recklessly or intentionally kill, injure or take any wild animals included in Schedule 5;
- Recklessly or intentionally damage or destroy, or obstruct access to any structure or place which any wild animal included in Schedule 5 uses for shelter or protection; and
- Recklessly or intentionally disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.

3.4 Where GCN are present, and impacts upon them arising from activities such as development cannot be avoided, a EPS Licence from Natural England is required in order to allow proposals to derogate from the legislation (licences cannot be obtained to provide protection against offences under the Wildlife & Countryside Act 1981 (as amended)). As part of the application process a number of ‘Tests’ have to be met by the application. Natural England have provided guidance³ regarding these ‘Tests’, which state:

“In determining whether or not to grant a licence Natural England must apply the requirements of Regulation 53 of the Regulations and, in particular, the three tests set out in sub-paragraphs (2)(e), (9)(a) and (9)(b)⁶.

*(1) **Regulation 53(2)(e)** states: 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”.*

*(2) **Regulation 53(9)(a)** states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”.*

³ Natural England. (2010). *Natural England Guidance Note: European Protected Species and the Planning Process – Natural England’s Application of the ‘Three Tests’ to Licence Applications.* [online]. Available at: <http://publications.naturalengland.org.uk/publication/113030> [Accessed 17/11/2017].

(3) **Regulation 53(9)(b)** states: *the appropriate authority shall not grant a licence unless they are satisfied “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.”*

3.5 Additional guidance by Natural England⁴ defines conservation status as follows:

“Conservation status is defined as “the sum of the influences acting on the species concerned that may affect the long term distribution and abundance of its population within its territory”. It is assessed as favourable when:

- *population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats, and;*
- *The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and;*
- *There is, or will probably continue to be, a sufficiently large habitat to maintain its populations on a long term basis.”*

3.6 It must be noted that Regulation 53 has now been replaced by Regulation 55 within the Conservation of Habitats and Species Regulations 2017 (which has replaced the 2010 (as amended) Regulations), however, the terminology present remains unaltered and this advice is still considered appropriate. These tests must not only reach agreement with Natural England when assessing a Licence application they must also be assessed by the planning authority when determining a planning application.

3.7 The impact that this legislation has on the Planning system is also outlined in Government Circular 06/2005⁵ This states:

‘The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species’ protection provisions affecting the site concerned’.

3.8 GCN are also included on the list of species which are of principal importance for the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act. The S41 list is used to guide decision-makers, including local planning authorities, in implementing their duty under section 40 of the Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

3.9 European Protected Species are a material consideration within the planning process to ensure impacts on these species are minimised and mitigated for as necessary. The National Planning Policy Framework (NPPF)⁶ sets out principles which ensure that development will not result in

⁴ Natural England. (2013). *European Protected Species: Mitigation Licensing – How to get a licence*. [online]. Available at: <http://publications.naturalengland.org.uk/publication/4727870517673984> [Accessed 17/11/2017]

⁵ ODPM. (2005). *Government Circular: Biodiversity and Geological Conservation*. [online]. London: ODPM & DEFRA Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf [Accessed 17/11/2017]

⁶ Ministry of Housing, Communities and Local Government. (2021). *National Planning Policy Framework*. [Online]. London: Ministry of Housing, Communities and Local Government. Available from: [National Planning Policy Framework \(publishing.service.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/96433/nppf-2021.pdf) [Accessed 06/09/2021]

significant harm to biodiversity and geological conservation interests and wherever possible, alternatives are sought. Where proposals cannot reasonably be located elsewhere, the NPPF considers that adequate mitigation measures should be put in place, and where mitigation is not sufficiently adequate to prevent significant harm, compensation measures should be sought. Networks of habitats are viewed by the NPPF as a valuable resource, linking sites of importance and providing routes or stepping stones for migration, dispersal and genetic exchange of species in the wider context. Such networks should be protected from development and where possible, strengthened or integrated within it.

4.0 RESULTS

Desk Study

- 4.1 Full details of the desk study are provided in the separate ecological appraisal (FPCR 2021). In summary two records of GCN were located within 1km of the site boundary with the closest record being located approximately 300m east of the Site at Bure Park LNR and over 500m west of the Site within Ardley Cutting and Quarry SSSI.
- 4.2 Records within the public domain associated with the NW Bicester Strategic Masterplan development indicate the presence of great crested newts within two ponds to the south of the Site at Himley Farm between 950m and 1.2km from the Site where a medium population was recorded in 2010/2011. Small populations were recorded at this time in ponds P2, P5 and P9 all located in and around Bucknell over 250m to the west and partially separated from the Site. A further small population was recorded in P7, approximately 240m to the west, with direct connections to the Site.

Pond Descriptions

- 4.3 Descriptions of the ponds surveyed are provided in Table 4.

Table 4: Pond Descriptions

Pond Ref.	Location	Description	
P1	SP565258	P1 was located approximately 200m north-west of the site, within a small number of trees adjacent to a field. It measured approximately 40m by 10m. The pond was shaded on one side by the adjacent trees. There was some limited emergent and marginal vegetation.	

Pond Ref.	Location	Description	
P2	SP563258	P2 is located approximately 375m north west of the site within a garden. It was a large pond measuring approximately 80m by 30m. It was surrounded by scrub and trees including willow which provided shade. There was some emergent and marginal vegetation including yellow iris <i>Iris pseudacorus</i> , water mint <i>Mentha aquatica</i> , and marsh marigold <i>Caltha palustris</i> .	
P3	SP563257	P3 was a depression in a field approximately 300m north of site. It was dry for the duration of the survey period.	
P4	SP563256	P4 was a depression in a field approximately 290m north of site. It was dry for the duration of the survey period.	

Pond Ref.	Location	Description	
P7	SP562251	P7 was located in a depression in a field along a woodland edge, approximately 175m west of site. It was approximately 20m by 15m. The majority of the pond was covered in common grass species and was absent of aquatic and marginal vegetation.	
P8	SP563258	P8 was a garden pond located approximately 400m north-west of the site. It measured approximately 5m by 5m, located within a garden adjacent to a field. The majority of the pond surface was covered with emergent vegetation including water violet <i>Hottonia palustris</i> . Blanket weed was also present. Scrub and trees on the bank provided some shade.	
P9	SP563258	P9 was an ornamental garden pond approximately 400m north-west of the site. It was dry for the duration of the survey period.	

Pond Ref.	Location	Description	
P10	SP568247	P10 was located on site at the edge of a field within an area of scrub including willow. It was approximately 15m by 10m. The majority of the pond was shaded by the surrounding scrub. There was very limited aquatic and marginal vegetation.	
P11	SP566256	P11 was located at the edge of a field approximately 150m north-west of the site. It was approximately 20m by 10m. It had scrub on the banks which provided moderate shade. There was limited aquatic vegetation.	

Pond Ref.	Location	Description	
P12	SP568255	<p>P12 was a large garden pond located approximately 30m north-west of the site. It was approximately 100m by 50m, surrounded by amenity grassland and trees. Adjacent trees and scrub provided a little shade. There was some limited emergent and marginal vegetation as well as algae.</p>	
P13	SP564257	<p>P13 was a depression at the edge of a field approximately 300m north-west of the site. It was approximately 20m by 10m. It had limited vegetation, mostly common grass species, and little to no aquatic vegetation. The adjacent trees provided shade.</p>	

Pond Ref.	Location	Description	
P16	SP571258	P16 was located approximately 35m north of the site at the edge of a field within an area of scrub. It was approximately 30m by 10m. The surrounding scrub provided shade over the pond. There was considerable coverage of emergent vegetation.	
P17	SP570243	P17 is located towards the south of the site at the point where three wet ditches converge, creating a pooling of water. There is a steady flow of water through the pond. It measured approximately 20m by 2m. The majority of the pond is shaded by the surrounding woodland. There was little to no aquatic vegetation.	

Habitat Suitability Index (HSI) Assessment

- 4.4 Table 5 provides a summary of the HSI assessment for each of the ponds. Detailed HSI results are provided in Appendix A.

Table 5: HSI Scores for Ponds P1-13

Pond	HSI Score	Predicted Presence	HSI Category
P1	0.88	93%	Excellent
P2	0.82	93%	Excellent
P3	0.00	N/A	Dry
P4	0.00	N/A	Dry
P7	0.86	93%	Excellent
P8	0.82	93%	Excellent

P9	0.00	N/A	Dry
P10	0.73	79%	Good
P11	0.87	93%	Excellent
P12	0.79	79%	Good
P13	0.79	79%	Good
P16	0.94	93%	Excellent
P17	0.63	55%	Average

Aquatic Surveys

- 4.5 Results have identified a peak count of 10 in P10 on site and a peak count of 16 across the offsite ponds.
- 4.6 GCN were recorded during surveys 1-6 in ponds P2, P7, P8, P10 and P13. Eggs were recorded in P13 during the survey period. Table 6 summarises the results of aquatic surveys the full results of which are provided in Appendix B. GCN numbers are in bold, with peak counts underlined.

Table 6: Summary of Aquatic Survey Results - GCN

	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Survey 6
	04/05/2021	06/05/2021	11/05/2021	18/05/2021	01/06/2021	08/06/2021
P10	Not surveyed	<u>10</u>	5	7	5	1
P17	0	0	0	0	0	0
Total Onsite	-	10	5	7	5	1
P1	0	0	0	0	0	0
P2	5	2	6	1	6	<u>9</u>
P3	DRY					
P4	DRY					
P7	0	0	1	1	1	<u>3</u>
P8	0	1	0	<u>2</u>	1	1
P9	DRY					
P11	0	0	0	0	0	0
P12	0	0	0	0	0	0
P13	0	0	0	<u>6</u>	<u>6</u>	3
P16	0	0	0	0	0	-
Total Offsite	5	3	7	10	14	16

- 4.7 A small population of smooth newts *Lissotriton vulgaris* were recorded in association with P10 onsite (peak count of 2) and a small population in the offsite ponds P1, P2, P7, P8, and P13 (peak count of 10). In addition, small numbers of common toad and common frog were recorded within pond 11 and pond 12.

5.0 DISCUSSION & RECOMMENDATIONS

- 5.1 On-site terrestrial habitats, comprised predominantly arable land with some improved grassland, and were considered to provide poor terrestrial habitat for GCN, although some suitable terrestrial habitat for GCN occurs in the in the form of small woodland/scrub areas, hedgerows, and field margins. The hedgerows provided connectivity with other suitable terrestrial habitat areas outside the site boundary.

- 5.2 Surveys confirmed the presence of GCN in the onsite pond P10 as well as the offsite ponds P2, P7, P8, and P13, two of which P2 and P7 had previously supported GCN in 2010. All surveys were conducted in May and June with at least three of the six carried out within the peak period as per the guidelines, except for P10 which only had five surveys completed.
- 5.3 Based on the survey information, a small population of GCN exists in P10 on site. However, this pond was subject to five rather than six surveys, only two of which were within peak season. A peak count of 10 GCN was recorded at this pond, representing the upper limit of this population size class. It is therefore considered possible that a count above this could have been recorded during the initial survey not undertaken, and that a medium population at the lowest end of the size class could therefore be present at this pond and for the purposes of mitigation should be assumed.
- 5.4 The onsite pond P10 is over 500m away from the offsite ponds and there is very limited suitable terrestrial habitat other than hedgerow bases that connects them, with managed farmland of limited suitability for GCN between. As such it is considered probable that the populations of GCN are separate and form two different populations. With a total peak count of 16 GCN on one occasion across the off-site ponds surveyed, a medium population has been confirmed as present within ponds in and around Bucknell.
- 5.5 The presence of GCN within P10 is a statutory constraint to the development. The presence of GCN within both P7 and P13 also present potential statutory constraints as GCN from these could be using suitable on site habitats (largely hedgerow bases) where they fall up to 500m of the ponds. The presence of closer and more suitable terrestrial habitat around P13 is likely to reduce the value of the Site to GCN in P13. P7 lies around 250m from the Site boundary and has direct connections along hedgerow bases and as such GCN from this pond could use the suitable habitats (within the Site).
- 5.6 GCN within ponds P2 and P8 are almost 500m from the Site and with at least partial barriers to dispersal, as such are considered unlikely to utilise the Site's habitats.
- 5.7 Potential impacts from the proposals would include killing/injuring of GCN during earthworks/demolition, entrapment of GCN in excavations and loss of terrestrial habitat. Given the proximity of GCN ponds to the site and proposed development area there is risk of an offence occurring in the absence of mitigation. It is therefore considered that a licence will be required in order to comply with the relevant legislation. Licences can be obtained either as a site level from Natural England, or at a district level, from NatureSpace. It is generally considered likely that the use of a site level licence is likely to remain appropriate at this Site, given the extent of likely impacts to suitable habitats and the ability to provide mitigation on Site within the green infrastructure which will help connect P10 to ponds to its west.
- 5.8 In order for a European Protected Species Licence to be approved by Natural England it must be demonstrated that the proposals will minimise any potential impacts upon the species in question (in this case GCN) and that the favourable conservation status of this species is maintained. The following section, based on guidelines within the Great Crested Newt Mitigation Guidelines⁷, provides some details of the mitigation/compensation that is likely to be required.

⁷ English Nature (2001) Great Crested Newt Mitigation Guidelines, English Nature, Peterborough.

Mitigation Measures

- 5.9 Where ponds (either GCN or non-GCN) can be retained within development proposals they should be incorporated into a scheme which provides habitat connectivity to the wider landscape. As such design proposals include the retention of P10 and immediately surrounding trees and scrub habitats within a green corridor which will link to a main area of green space proposed to be located on the western side of the site.
- 5.10 No aquatic habitat in which GCN has been recorded will be destroyed. Proposals will lead to only small losses of suitable terrestrial habitat within 500m of the pond in the form of hedgerows field margins and some improved grassland which could also be used for movement, none of which would lead to the fragmentation or isolation of the pond from retained or new terrestrial and aquatic habitat on and off site.
- 5.11 A new swale will run down the proposed green corridor from P10 and attenuation ponds will be created nearby. The ponds should be designed to have some suitability for GCN although will not be specifically designed for GCN. In addition to these it is recommended that separate wildlife ponds are created in the open green space which should be designed primarily to provide suitable aquatic habitat for GCN, these will provide stepping-stone habitats to off-site ponds in the wider area to more effectively link the two populations. New GCN and amphibian friendly habitats will be created within the adjoining green spaces, including scrub and woodland edge habitat, tussocky grassland areas, wet grassland with hedgerows providing movement corridors. Enhancements should also be made to the onsite pond to increase the suitability for GCN. These may include the thinning of over-shading vegetation and the removal of silt and leaf litter.
- 5.12 Prior to the commencement of works a Natural England European Protected Species Licence will be necessary, under which a trapping and translocation operation would be used to remove any GCN from areas of works.
- 5.13 A GCN Mitigation Strategy for the Site will be developed to provide the details of all above mitigation, including timings and methods for exclusion of GCN from sensitive working areas, and details of habitat creation and enhancement to ensure that appropriate mitigation measures are in place during works and that post-development the site provides suitable terrestrial and aquatic habitat for GCN. It is therefore considered that as a result of the mitigation and enhancement proposals the favourable conservation status of great crested newts will not only be maintained but enhanced within the local area.

Other Amphibians

- 5.14 All common amphibian species are protected from sale by the Wildlife and Countryside Act 1981 (as amended).
- 5.15 Habitat creation will enhance the value of the Site for other amphibians generally in the local area, including recorded during surveys, including smooth newts, common frogs and common toads.

APPENDIX A – HSI SCORES

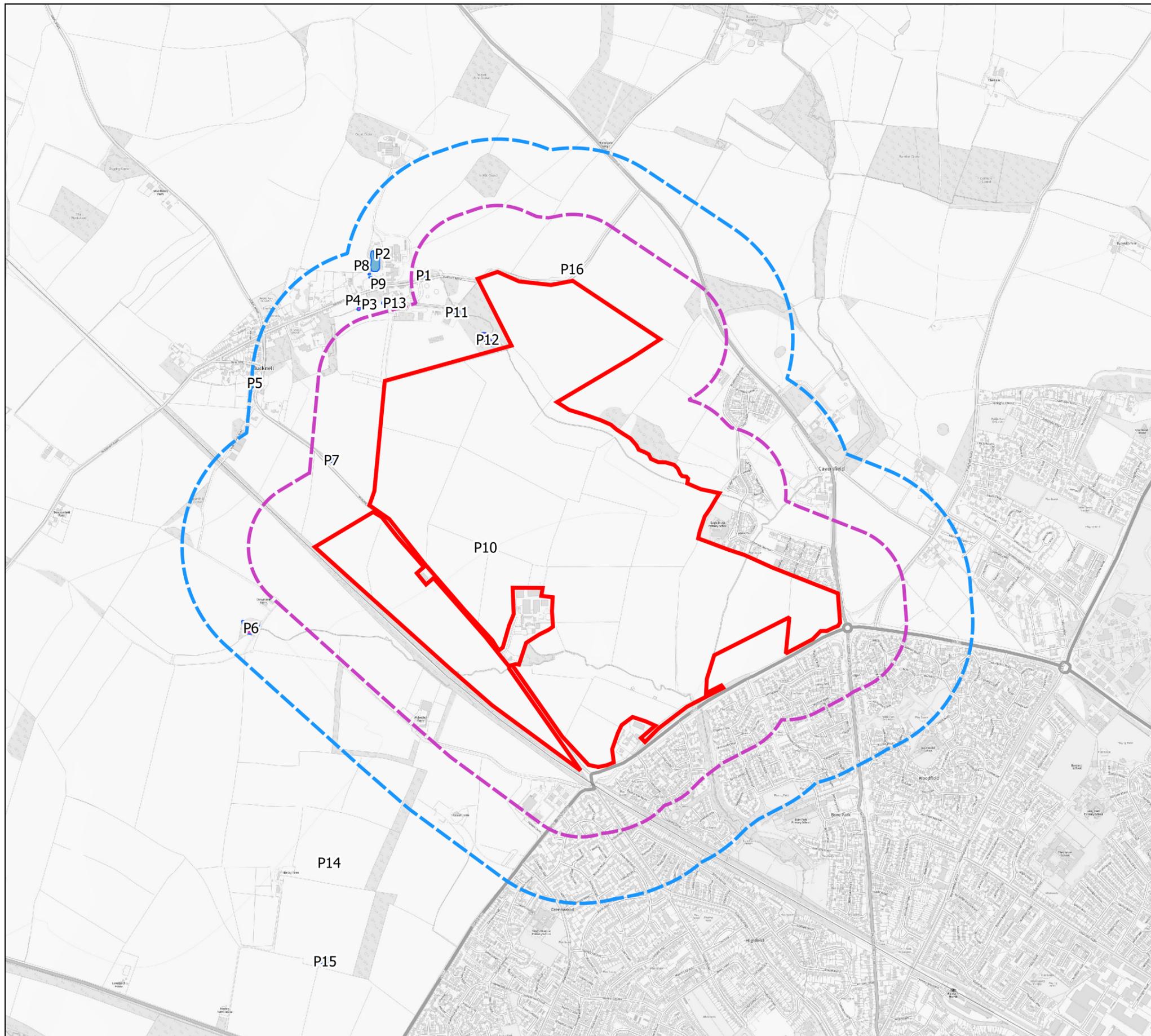
Pond	SI -1		SI -2		SI -3		SI -4		SI -5		SI -6		SI -7		SI -8		SI -9		SI -10		HSI score	Pond suitability	Predicted presence	
	geographical location		pond area		pond drying		water quality		shade (perimeter)		fowl		fish		ponds		terrestrial habitat		macrophytes					
	Field result (A,B,C)	SI score	Field result (m2)	SI score	Field result	SI score	Field result	SI score	Field result (% cover)	SI score	Field result	SI score	Field result	SI score										
P1	A-optimal	1	500	1	Never	0.9	Moderate	0.67	20	1	Absent	1	Absent	1			Good	1	15	0.5	0.88	Excellent	93%	
P2	A-optimal	1	2100	0.784	Never	0.9	Good	1	50	1	Minor	0.67	Possible	0.67			Good	1	15	0.5	0.82	Excellent	93%	
P3	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	0.00	Dry	N/A
P4	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	0.00	Dry	N/A
P7	A-optimal	1	400	0.8	Never	0.9	Moderate	0.67	35	1	Minor	0.67	Absent	1			Moderate	0.67	75	1	0.86	Excellent	93%	
P8	A-optimal	1	100	0.2	Rarely	1	Good	1	5	1	Absent	1	Absent	1			Good	1	40	0.7	0.82	Excellent	93%	
P9	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	0.00	Dry	N/A
P10	A-optimal	1	150	0.3	Never	0.9	Moderate	0.67	80	0.6	Absent	1	Absent	1			Good	1	10	0.4	0.73	Good	79%	
P11	A-optimal	1	400	0.8	Never	0.9	Moderate	0.67	45	1	Absent	1	Absent	1			Good	1	20	0.5	0.87	Excellent	93%	
P12	A-optimal	1	5000	0.338	Never	0.9	Good	1	20	1	Absent	1	Possible	0.67			Good	1	15	0.5	0.79	Good	79%	
P13	A-optimal	1	200	0.4	Rarely	1	Moderate	0.67	40	1	Minor	0.67	Absent	1			Good	1	20	0.5	0.79	Good	79%	
P16	A-optimal	1	600	1	Never	0.9	Moderate	0.67	50	1	Absent	1	Absent	1			Good	1	60	0.9	0.94	Excellent	93%	
P17	A-optimal	1	100	0.2	Rarely	1	Poor	0.33	90	0.4	Absent	1	Absent	1			Good	1	5	0.4	0.63	Average	55%	

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Key

-  Site Boundary
-  Ponds (with ref)
-  250m Site Buffer
-  500m Site Buffer



client
Hallam Land Management

project
Bicester

drawing title
Pond Location Plan

scale
1:15000

drawn
AMS / JD

issue
27/4/2021

drawing / figure number
Figure 3

rev
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