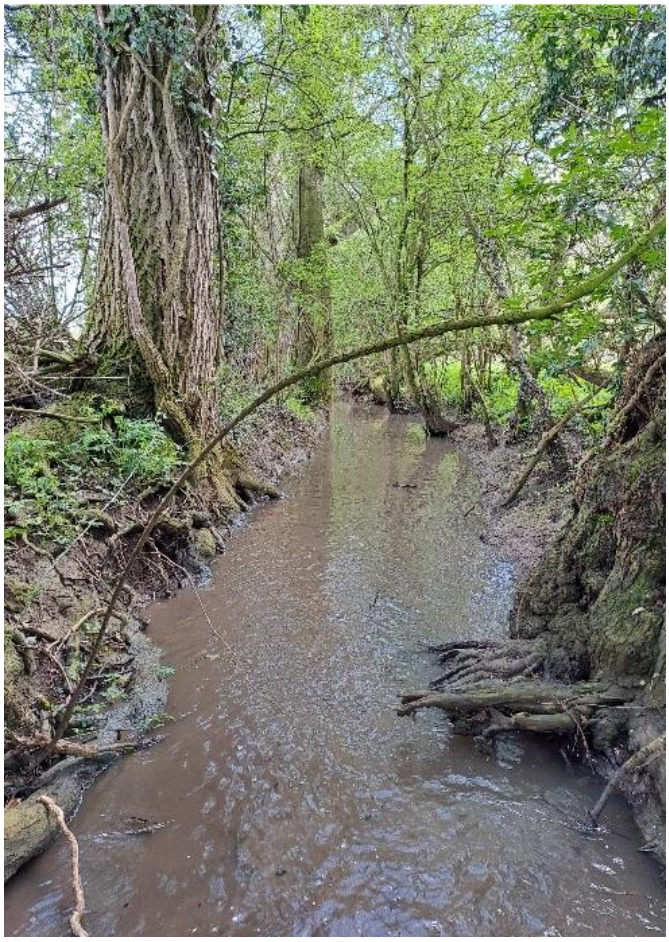

Tadmarton Road

Bloxham, Banbury

Protected Species Report: Amphibians

Prepared For: Gladman Developments

Document Reference: 9731.02.005

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Version 1.0

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The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

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Executive Summary

Introduction	▸ The site is located at Tadmarton Road, Bloxham, Banbury. ▸ A total of 2 ponds were located on site with a further 11 ponds located within a 500m buffer. All on-site and off-site ponds were subject to Habitat Suitability Assessments. All on-site ponds and 10 of the 11 off-site ponds were subject to eDNA surveys. ▸ There are proposals for residential development at the site.
Surveys Undertaken	▸ The desk study was completed January 2023. ▸ Aquatic Habitat Suitability Index (HSI) Assessments took place 6th January 2023 for Pond P2; 19th – 20th April 2023 for Ponds P1, P3 – P6 and P9 – P13; and on 26th May 2023 for Ponds P7 and P8. ▸ eDNA sampling was undertaken at Ponds P1, P3, P5, P9, P10, P12 and P13 on 19th and 20th April 2023. eDNA sampling was undertaken at Pond P7 on 26th May 2023. ▸ eDNA sampling was not undertaken at Pond P2 as it has been filled in at the time of survey. Ponds P4, P6 and P11 were not surveyed as they were dry. Access was not granted to survey Pond P8 by eDNA. ▸ A Phase 1 habitat survey was also undertaken on 6th January 2023, with an updated habitat survey undertaken on 12th April 2023.
Results	▸ HSI assessment results confirmed ponds ranged from having Poor to Excellent suitability to support great crested newts (GCN). ▸ eDNA testing returned positive results for P5, P7 and P10. The ponds are located between 280m and 334m from the site. ▸ Suitable habitat for GCN is present on site, ponds, hedgerows, scattered and dense scrub, tall ruderal vegetation and scattered trees.
Further requirements	▸ Works over 250m from a GCN breeding pond are not considered licensable. Works between 250m and 500m of a GCN breeding pond, which is not separated from the site by a significant barrier to amphibian dispersal, should be conducted under a Precautionary Working Measures Method Statement (PWMS). ▸ A 250m buffer and 500m has been applied to Ponds P5, P7 and P10, which are returned positive for GCN. The entire redline site boundary falls within the 250m to 500m buffer. Any clearance of suitable habitat for GCN on site should therefore be done under a Precautionary Working Measures Method Statement (PWMS). ▸ If GCN are found on site during site clearance under the PWMS, works must stop and a licence must be applied for. It this case, it will be possible to register the site under the Nature Space GCN District Level Licencing (DLL) Scheme. Works must then not continue until the licence has been granted.

This Executive Summary is not a substitute for the full report. Refer to the full text of this report for further detail.

1.0 Introduction

Project Context

1.1 The Environment Partnership (TEP) was commissioned by Gladman Developments Ltd in March 2023 to undertake Habitat Suitability Index (HSI) assessments and eDNA sampling at ponds within the site and within a 500m buffer of the site located at Tadmarton Road, Bloxham, Banbury (hereafter referred to as 'the site'). The site is located at grid reference SP 42049 35945 and is approximately 4.4ha in area.

1.2 Along with the aquatic Habitat Suitability Index (HSI) assessment and eDNA sampling, the site has also undergone a Phase 1 habitat survey.

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Figure 1: Location of Scheme, ponds within 500m and relevant barriers to amphibian dispersal

1.3 The surveys are required to support an outline application for residential development.

Ecological Context

1.4 Two ponds are present within the site development footprint. A further 11 ponds are identified within 500m of the Scheme boundary.

1.5 A Phase 1 habitat survey was completed at the site on 6th January 2023 and was updated on 12th April 2023. The site is dominated by land under agricultural use including arable fields with a minor provision of semi-improved grassland. Hedgerows are present along field boundaries and a short section of stream within semi-natural broadleaved woodland grazes the southern site boundary. Former quarry workings bisect the site encompassing a small section of running water, a large pond, dense scrub, and scattered trees. Wet ditches, tall ruderal vegetation, and scattered scrub habitats were also found within the site.

1.6 Tadmarton Road forms the north-eastern site boundary, a working farm is located directly to the northwest of the site, and the eastern boundary abuts a new housing development and associated public open space beyond which lies the village of Bloxham. Rural land under agricultural use extends in all other directions.

Legal Protection

1.7 All British amphibian species receive legal protection in the United Kingdom though the degree to which different species are protected varies. Great crested newts (GCN) *Triturus cristatus*, natterjack toad *Epidalea calamita* and pool frog *Pelophylax lessonae* and their habitats (places used for breeding and shelter) receive the highest level of protection in the UK under the combination of the Wildlife and Countryside Act 1981 as amended and the Conservation of Habitats and Species Regulations 2017 as amended. While natterjacks and pool frogs have restricted distributions within the UK, GCN are relatively widespread.

1.8 Licences to allow derogation from the protection afforded to GCN (and NT and PF) may be granted under the provisions of the 2017 Regulations.

1.9 Further information relating to legal protection afforded to native amphibian species is presented in Annex A.

1.10 GCN, natterjack and common toads *Bufo bufo* and the pool frog are listed as Species of Principle Importance (SPI). Section 40 of the Natural Environment and Rural Communities Act 2006 imposes a Duty upon public authorities to conserve biodiversity. Commonly referred to as the 'biodiversity duty', this includes local planning authorities in their decision making for planning applications or other plans or projects which may affect SPI.

Survey Rationale

Survey Guidance

1.11 Amphibian survey follows best practice and published guidance, including:

- Habitat Suitability Index (HSI) Assessment (ARGUK, 2010)[1]
- Great crested newt mitigation guidelines (English Nature, 2001)[2]
- Great crested newt conservation habitat (Froglife, 2001)[3]

Survey Design and Scope

1.12 The surveys were designed to determine whether or not great crested newts (GCN) *Triturus cristatus* are present within the site boundaries or in ponds within ranging distance of the site.

1.13 Both ponds within the Tadmarton Road site (Ponds P1 and P2) and all 11 ponds located within 500m of the site boundary (Ponds P3 – P13) were subject to survey.

1.14 All ponds were subject to Habitat Suitability Index (HSI) Assessments. Ponds P1, P3, P5, P7, P9, P10, P12 and P13 were subject to environmental DNA (eDNA) survey. eDNA sampling was not undertaken at Pond P2 as it had been filled in at the time of survey. Ponds P4, P6 and P11 were not surveyed as they were dry. Access was not granted to survey Pond P8 for eDNA.

1.15 Table 1 sets out the rationale for ponds with potential influence (500m) of the Scheme.

Table 1: Survey Rationale

Waterbody ID	Distance & Direction	Description and Survey Rationale	Scoped In
P1	On-site	A large pond within the former quarry workings area of the site. Has potential to support amphibians.	Yes
P2	On-site	A moderate sized pond within the former quarry workings area of the site. Had potential to support amphibians before it was filled in.	Yes
P3	178m North	A small pond located within a pastoral field. Has potential to support amphibians.	Yes
P4	176m Northeast	A small pond located within a pastoral field. Has potential to support amphibians, although was dry at the time of survey.	Yes
P5	334m Northeast	A small to medium sized pond in a fenced off area within a field. Has potential to support amphibians.	Yes
P6	250m Northeast	A former field pond. Very little evidence of the area being a pond was found at the time of survey. It was considered possible that the depression holds water during periods of high rainfall, and therefore has potential to support amphibians. Pond was dry at the time of survey.	Yes
P7	280m East	A small wildlife pond in the grounds of a school. Has potential to support amphibians.	Yes

[1] ARG UK Advice Note 5 (May 2010) Great Crested Newt Habitat Suitability Index

[2] English Nature (2001) Great Crested Newt Mitigation Guidelines (Version August 2001), English Nature, Peterborough

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

Waterbody ID	Distance & Direction	Description and Survey Rationale	Scoped In
P8	92m East	A large pond within the biodiversity mitigation area of the adjacent recent residential development. Could be viewed from a distance to undertake a Habitat Suitability Index (HSI) assessment, not accessible for eDNA survey. Has potential to support amphibians.	Yes
P9	275m South	A moderate sized pond within some woodland at the edge of fields. Has potential to support amphibians.	Yes
P10	280m West	A moderate sized pond at the edge of an arable field. Has potential to support amphibians.	Yes
P11	500m West	A small pond in the centre of an arable field. Has potential to support amphibians.	Yes
P12	373m Northwest	A very small pond at the edge of an arable field by Tadmarton Road. Has potential to support amphibians.	Yes
P13	284m Northwest	A moderate sized pond within an arable field with an island in the centre. Has potential to support amphibians.	Yes

Surveyor Qualifications and Competency

1.16 Amphibian surveys were undertaken by TEP Ecologists in possession of a Natural England GCN survey licence, with relevant training and experience. Further confirmation of survey competency can be provided upon request.

2.0 Methods

Data Search

2.1 An ecological desk study was completed in January 2023 to identify pre-existing records for GCN and other protected or SPI amphibians within 2km of the scheme. The desk study, reported under separate cover (Document Ref: 9731.02.001), included a data request to the Thames Valley Environmental Records Centre (TVERC).

2.2 The data search also included a review of citations and site forms (where available) for statutory and non-statutory designated sites within 2km of the proposed scheme where amphibians were mentioned.

Aquatic Habitat Suitability Index (HSI) Assessments

2.3 Aquatic HSI assessment was undertaken at a total of 13 ponds, including two ponds on site and 11 ponds within 500m of the Scheme. Access was granted to both ponds on site and to all 11 of the ponds located within 500m of the scheme.

2.4 A HSI assessment of Pond P2 on site was undertaken on 6th January 2023 prior to the pond being filled in. HSI assessments of Ponds P1, P3, P4, P5, P6, P9, P10, P11, P12 and P13 were undertaken on 19th and 20th April 2023. A HSI assessment of Ponds P7 and P8 was undertaken on 26th May 2023.

2.5 HSI is a standard measure of calculating the suitability of a pond to support breeding great crested newts, based on an assessment of 10 characteristics (indices), including size, shading, depth, and vegetation profile. The assessment generates a number between 0 and 1 for each of the indices which are combined to provide an overall assessment of a pond's suitability to support GCN on a categorical scale, as presented in Table 2. The assessment has not been designed for or tested on other waterbodies such as ditches.

Table 2: HSI Suitability Scores

HSI Score	Suitability	Predicted GCN Occupancy of Ponds in each Category
<0.5	Poor	3%
0.5 to 0.59	Below Average	20%
0.6 to 0.69	Average	55%
0.7 to 0.79	Good	79%
>0.8	Excellent	93%

Environmental DNA (eDNA) Sampling

2.6 Environmental DNA (eDNA) sampling was undertaken at a total of 12 ponds, located either on site or within 500m of the Scheme. Access was granted to both ponds on site, and to 10 of the 11 ponds located off-site within 500m of the scheme.

2.7 eDNA sampling was undertaken at Ponds P1, P3, P5, P9, P10, P12 and P13 on 19th and 20th April 2023. eDNA sampling was undertaken at Pond P7 on 26th May 2023.

2.8 eDNA sampling was not undertaken at Pond P2 as it had been filled in at the time of survey. Ponds P4, P6 and P11 were not surveyed as they were dry. Access was not granted to survey Pond P8 by eDNA.

2.9 Sample collection was undertaken by TEP licensed surveyors. Sample kits and analysis was provided by ADAS. Both organisations followed the relevant sections of the method set out in the DEFRA funded study endorsed by Natural England. In summary the sampling protocol is as follows:

- 20 samples were taken from around the entire perimeter of the waterbody.
- The surveyor stayed out of the water while taking the samples (extension poles were used in situations where open/sufficiently deep water was at a distance from the dry banks.
- Survey locations were distributed around the pond perimeter, but micro-siting was used to select locations most likely to be used by GCN.
- At each sample location the water column was stirred prior to taking the sample but care was taken to avoid disturbing the sediment on the base of the pond.
- Once all 20 samples were taken, 15ml of the total sample were pipetted into each of the 6 sampling tubes, whilst ensuring that the water in the sample bag was mixed before taking each 15ml sample and that only one sample tube was opened at any one time.
- At all times the surveyor ensured that the risk of contaminating the sampling equipment was minimised by avoiding the placement of the ladle or pipette on the ground or on any otherwise potentially contaminated surfaces and by changing gloves between the initial sampling stage and the pipetting stages of the method.

Chain of Custody

2.10 On receipt from ADAS the sampling kits were registered on a central database using the unique bar codes. Immediately prior to survey, sampling kits were issued to surveyors with individual Sample Forms using the unique bar code as identification. The site name and date of issue was also recorded on this form (and on the central database). Once in the field and at the ponds, the surveyor confirmed that the appropriate field survey sheet was being completed by checking the bar code on the box and double checking the corresponding bar codes on the sample tubes. The surveyor then filled in the date of survey and the pond ID number (as well as other information relating to survey conditions) on the Sample Form.

2.11 On returning to the office the Sample Forms were signed to confirm for each sample who received the samples and checked them into the fridge and the temperature of the fridge. The pond IDs on each form were checked against a site map confirming which ponds had been sampled and this map was stored with the Sample Forms. All this information was also recorded on the central

database. The sample preserving tubes were stored in a fridge until the morning of collection by the courier. The Sample Forms and the central database were updated to confirm the date of collection by the courier.

2.12 The unique bar codes were used by ADAS to report results. All results were recorded in the central database by one member of staff and cross checked by a second member of staff before issuing to the project leader for review.

Survey Limitations

2.13 All ponds were subject to HSI. Access was not granted to survey Pond P8 for eDNA. Ponds P4, P6 and P11 could not be subject to eDNA surveys as they were dry. Pond P2 had been filled in by the time of the eDNA survey.

2.14 There were no limitations to the HSI or eDNA surveys conducted within the surveyed ponds. The results obtained are considered to show an accurate overview of the GCN presence within these ponds.

Surveyor Qualifications and Competency

2.15 GCN surveys were undertaken by TEP Ecologists in possession of a Natural England GCN survey licence, with relevant training and experience. Further confirmation of survey competency can be provided upon request.

3.0 Results

Desk Study

3.1 The desk study confirmed habitats within and adjacent to the scheme have the potential to support amphibians.

3.2 Data searches using Magic Maps confirmed the presence of amphibian species records within 2km from the scheme boundary. In brief, these records included:

- Great crested newt (GCN) (EPS, WCA5, SPI);
- Common frog (WCA5 section 9.5a);
- Palmate newt (WCA5 section 9.5a); and
- Smooth newt (WCA5 section 9.5a).

Pond Survey

HSI Assessment

3.3 The results of all ponds subject to a HSI assessment are set out in Table 3 below.

Table 3: HSI Assessment Results

Water body ID	SI1 Location	SI2 Area	SI3 Permanence	SI4 Water Quality	SI5 Shade	SI6 Waterfowl	SI7 Fish	SI8 Density	SI9 Terrestrial Habitats	SI10 Macrophyte Cover	HSI Overall Score	HSI Suitability Category
P1	A	700	Sometimes	Poor	60%	Minor	Absent	>13	Moderate	30%	0.73	Good
P2	A	200	Sometimes	Poor	5%	Absent	Absent	>13	Moderate	10%	0.67	Average
P3	A	<50	Annually	Poor	90%	Minor	Absent	>13	Moderate	10%	0.40	Poor
P4	A	<50	Annlyally	Poor	75%	Minor	Absent	>13	Moderate	0%	0.42	Poor
P5	A	50	Sometimes	Poor	80%	Minor	Possible	>13	Moderate	90%	0.55	Below Average
P6	A	<50	Annually	Poor	0%	Absent	Absent	>13	Moderate	0%	0.45	Poor
P7	A	50	Never	Moderate	50%	Minor	Possible	>13	Moderate	70%	0.70	Average

Water body ID	SI1 Location	SI2 Area	SI3 Permanence	SI4 Water Quality	SI5 Shade	SI6 Waterfowl	SI7 Fish	SI8 Density	SI9 Terrestrial Habitats	SI10 Macrophyte Cover	HSI Overall Score	HSI Suitability Category
P8	A	100	Rarely	Moderate	0%	Absent	Possible	>13	Moderate	50%	0.86	Excellent
P9	A	400	Rarely	Good	90%	Absent	Possible	>13	Good	90%	0.85	Excellent
P10	A	650	Sometimes	Poor	60%	Absent	Absent	>13	Moderate	20%	0.75	Good
P11	A	100	Annually	Poor	100%	Absent	Absent	>13	Poor	0%	0.41	Poor
P12	A	<50	Annually	Poor	5%	Absent	Absent	>13	Poor	0%	0.42	Poor
P13	A	550	Never	Poor	75%	Major	Possible	>13	Moderate	0%	0.44	Poor

eDNA Survey

3.4 The results of the eDNA surveys are presented in Table 4 and are illustrated in drawing G9731.02.012.

3.5 GCN were confirmed to be present by eDNA at three ponds (Ponds P5, P7 and P10) located within 500m of the site boundary.

3.6 A negative result for GCN eDNA was obtained for Pond P1 located within the site boundary. Negative results were also obtained for off-site ponds P3, P9, P12 and P13.

3.7 Ponds P4, P6 and P11, located within 500m of the site, were all dry at the time of the eDNA survey. Given that the survey was undertaken in April when periods of rainfall had occurred in the preceding weeks, it is considered highly unlikely that ponds P4, P6, or P11 would regularly hold sufficient water during the breeding season to support breeding GCN.

3.8 Pond P8 was not subject to eDNA survey as access to the pond could not be obtained. The presence of GCN within this pond therefore cannot be ruled out.

3.9 Ponds P2 was not subject to eDNA survey as it had been filled in at the time of survey.

Table 4: eDNA Survey Results

Waterbody ID	Survey Date	Surveyor	Score (/12)	GCN
P1	19th – 20th April 2023	David Miller Charlie Gannicott	0	N
P2	19th – 20th April 2023	Not surveyed – Pond had been filled in		

Waterbody ID	Survey Date	Surveyor	Score (/12)	GCN
P3	19th – 20th April 2023	David Miller Charlie Gannicott	0	N
P4	19th – 20th April 2023	Not surveyed – pond dry at time of survey		
P5	19th – 20th April 2023	David Miller Charlie Gannicott	12	Y
P6	19th – 20th April 2023	Not surveyed – pond dry at time of survey		
P7	26th May 2023	Ruth Woolston Charlie Gannicott	12	Y
P8	19th – 20th April 2023	Not surveyed – No access		
P9	19th – 20th April 2023	David Miller Charlie Gannicott	0	N
P10	19th – 20th April 2023	David Miller Charlie Gannicott	12	Y
P11	19th – 20th April 2023	Not surveyed – pond dry at time of survey		
P12	19th – 20th April 2023	David Miller Charlie Gannicott	0	N
P13	19th – 20th April 2023	David Miller Charlie Gannicott	0	N

4.0 Evaluation

Aquatic Habitats

4.1 A summary of the GCN survey results is provided in Table 5 below.

Table 5: Survey Results Summary

Waterbody ID	HSI Survey Result	eDNA Survey Result
P1	Good	GCN absent
P2	Average	Not surveyed - Pond filled in
P3	Poor	GCN absent
P4	Poor	Not surveyed – pond dry at time of survey
P5	Below Average	GCN present
P6	Poor	Not surveyed – pond dry at time of survey
P7	Average	GCN present
P8	Excellent	Not surveyed – No access
P9	Excellent	GCN absent
P10	Good	GCN present
P11	Poor	Not surveyed – pond dry at time of survey
P12	Poor	GCN absent
P13	Poor	GCN absent

Terrestrial Habitats

4.2 It is not possible to quantitatively score habitat quality, as this depends on the complexity, connectivity, and type of vegetation present between waterbodies, as well as the vegetation and water quality in the waterbodies themselves.

4.3 The terrestrial habitats within the site are mapped in Drawing G9731.02.007B Phase 1 Habitat Survey. Suitable terrestrial habitat for amphibians is located within the site, including hedgerows, scattered and dense scrub, tall ruderal vegetation, woodland and scattered trees. There is potential for GCN and common amphibians, including common toad (SPI), to range into suitable terrestrial habitats on site.

5.0 Conclusions and Further Requirements

Further Surveys

5.1 No further GCN surveys are recommended at the site.

5.2 GCN survey data are valid for a minimum of two seasons, potentially up to four seasons depending on the specific use of the data, local conditions and the potential impact predicted on GCN. When survey data become greater than two seasons old, advice should be sought from an appropriately experienced ecologist as to whether repeat surveys may be needed.

Potential Impacts and Mitigation Approach

5.3 No GCN are present within ponds on site or within 250m of the site boundary. Works over 250m from a GCN breeding pond are not considered licensable. Works between 250m and 500m of a GCN breeding pond, which is not separated from the site by a significant barrier to amphibian dispersal, should be conducted under a Precautionary Working Measures Method Statement (PWMS).

5.4 GCN are present within three ponds located within 500m of the scheme at Tardmarton Road, Bloxham. GCN are present within the following ponds:

- Pond P5, located 334m north east of the site;
- Pond P7, located 280m east of the site; and
- Pond P10, located 280m to the west of the site.

5.5 Ponds P5 and P7 are separated from the site by Tadmarton Road. Tadmarton Road is a minor road, with no kerb edges or street lighting. This road does not act as a major barrier to amphibian dispersal from ponds P5 and P7, but will provide a minor barrier to movement of amphibians. Pond P10 is not separated from the site by any barriers to amphibian dispersal.

5.6 A 250m and a 500m buffer has been applied to Ponds P5, P7 and P10, which were confirmed to support GCN. The buffer zones are displayed in drawing G9731.02.013. The drawing shows that the entire site boundary falls within the 250m to 500m buffer of the GCN breeding ponds.

5.7 Any clearance of suitable habitat for GCN on site should be done under a PWMS. Suitable habitat for GCN on site includes ponds, hedgerows, scattered and dense scrub, woodland, tall ruderal vegetation and scattered trees. The PWMS will minimise the risk of harm and injury to GCN and other common amphibians, including common toad (SPI), if present on site, under the works.

5.8 If GCN are found on site during site clearance under the PWMS, works must stop and a licence must be applied for. It this case, it will be possible to register the site under the Nature Space GCN District Level Licencing (DLL) Scheme. Works must then not continue until the licence has been granted.

Annex A: Legal and National Policy Context

Annex A: Legal and National Planning Context

Disclaimer: This is a guide to legislation and procedure relating to biodiversity in England. It is general guidance, and it does not give specific advice in relation to any site, species, or project. It represents an interpretation of legislation and procedure as of July 2023. Readers should note that legislation and procedure changes continually and is interpreted on a case-specific basis. Nothing in this Annex should be construed as an offer of advice or legal opinion.

All British amphibian species receive legal protection in the United Kingdom though the degree to which different species are protected varies.

Great crested newts (GCN) *Triturus cristatus* and natterjack toads *Epidalea calamita* and their habitats (aquatic and terrestrial) are afforded full protection by a combination of national legislation.

They are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and under Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended). The Wildlife and Countryside Act 1981 is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) which was amended by the Countryside and Rights of Way Act 2000.

In brief, this legislation makes it an offence to:

- deliberately capture, kill, disturb, or injure these species;
- damage or destroy a breeding or resting place of these species;
- deliberately or recklessly obstruct access to resting or sheltering places of these species (deliberately or by not taking enough care);
- possessing, selling, controlling, or transporting live or dead specimens of these species, or parts of them; or
- take eggs of these species.

This Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention). The Act has been amended by the Countryside and Rights of Way Act 2000 and by the Conservation of Habitats and Species Regulations 2017 (the 2017 Regulations), as amended.

The other more widespread British amphibians - common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *Triturus helveticus* - are not subject to such strict legal protection. These species are protected only against sale (Section 9(5) of the Wildlife and Countryside Act 1981).

In all cases, the legislation applies to all life stages including spawn, eggs, juveniles, and adults.

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 imposes a Duty upon public authorities to conserve biodiversity. Specifically, this Act states that '*Every public 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*.' Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity

in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional planning authorities, in implementing their 'biodiversity duty' imposed under Section 40.

Current amphibian species recorded on the list include GCN and common toad. Presence of S41 listed species, referred to as Species of Principal Importance (SPI) within influence of the Scheme may be considered by the planning authority as a material consideration, irrespective of the level of legal protection afforded to the SPI.

Annex B: Detailed Survey Table

Detailed Survey Table

Table A.1: Pond Descriptions

Waterbody ID	Grid ref (NGR)	Photo	Description
P1	SP 42016 35850		A large pond within the former quarry workings area of the site. The pond had earth and stone banks and base and linked to the wet ditch formed by the outflow pipe at the western edge of the quarry workings. The pond was immediately surrounded by dense scrub and trees. Bulrush *Typha latifolia* was present as emergent vegetation.
P2	SP 42079 35857	 	A moderate sized pond within the former quarry workings area of the site. The pond had earth and stone banks and base. The pond was immediately surrounded by tall ruderal vegetation and scattered scrub including willow *Salix* species, common ash *Fraxinus excelsior*, and dog rose *Rosa canina*. An island was present in the centre of the pond formed of earth and stone with scattered scrub evident at the time of survey. Bulrush was present as emergent vegetation. A photograph of the pond taken in January 2023 has been provided as well as a photograph of the area during the survey undertaken in April 2023 after the pond had been filled in.

Waterbody ID	Grid ref (NGR)	Photo	Description
P3	SP 42096 36377		A small pond located within a pastoral field. The pond was heavily shaded by surrounding willow trees with a large fallen willow within the water. Some scrub and shrubs were present on the bank. The water was turbid and appeared to have a high nutrient content due to run-off from surrounding farmland.
P4	SP 42251 36143		A small pond located within a pastoral field. The pond was dry at the time of survey. A hedgerow was present on one side and small trees and shrubs were scattered. The presence of common nettle *Urtica dioica* and docks *Rumex sp.* within the pond bed indicated a high nutrient content.
P5	SP 42441 36164		A small to medium sized pond in a fenced off area within a field. Willow scrub and young trees were present on the bank side. Rushes *Juncus sp.* were present as marginal vegetation. Bulrush was present as emergent vegetation. A dense blanket of algae covered the surface.
P6	SP 42389 36085		A former field pond. Very little evidence of the area being a pond was found at the time of survey. It was considered possible that the depression holds water during periods of high rainfall.

Waterbody ID	Grid ref (NGR)	Photo	Description
P7	SP 42373 35885		A small wildlife pond in the ground of a school, lined with a pond liner. Aquatic and emergent vegetation included pond sedge *Carex* species, water lily *Nymphaeaceae* species and water milfoil *Myriophyllum* species.
P8	SP 42297 35589		A large pond within the biodiversity mitigation area of the adjacent recent residential development, 'Woodlands'. The pond could only be viewed from a distance due to it being located within a secured area. The pond was surrounded by semi-improved grassland and appeared to be linked to the stream and woodland to the south by a drainage ditch. Emergent vegetation was abundant and included bulrush and common reed *Phragmites australis*.
P9	SP 41940 35397		A moderate sized pond within some woodland at the edge of fields that was fed by a stream at the northern end. Aquatic vegetation included submerged and emergent grasses, willowherbs *Epilobium sp.* and fool's watercress *Apium nodiflorum.*
P10	SP 41545 35876		A moderate sized pond at the edge of an arable field by a bare earth and stone farm track. The pond had an earth base and banks. The pond was surrounded by dense and scattered scrub, scattered trees, and tall ruderal vegetation, and had an island in the centre covered with willow trees and scrub. Bankside tall ruderal vegetation included rosebay willowherb *Chamaenerion angustifolium*, thistles *Cirsium sp.*, and common nettle. Bankside scrub and trees

Waterbody ID	Grid ref (NGR)	Photo	Description
			included ash, willow species, and brambles *Rubus fruticosus agg*. Bulrush was present as emergent vegetation.
P11	SP 41437 36140		A small pond in the centre of an arable field. The pond had an earth base and was heavily shaded by surrounding trees. The pond was dry at the time of survey. Bankside vegetation included semi-mature to mature willow trees, and tall ruderal vegetation including rosebay willowherb, common nettle, docks, and teasel *Dipsacus* species. No emergent or aquatic vegetation was present at the time of survey.
P12	SP 41724 36322		A very small pond at the edge of an arable field by Tadmarton Road. The pond contained very little water at the time of survey and no vegetation.
P13	SP 41919 36387		A moderate sized pond within an arable field with an island in the centre. The pond was surrounded by scrub and trees with common nettles, cuckoo flower *Cardamine pratensis*, and bluebells *Hyacinthoides sp.* present on the banks. No aquatic or macrophyte vegetation was identified.

Drawings

G9731.02.012 GCN Crested Newt eDNA Survey Results

G9731.02.013 GCN Positive Ponds with Buffer Zones

G9731.02.007B Phase 1 Habitat Survey

KEY

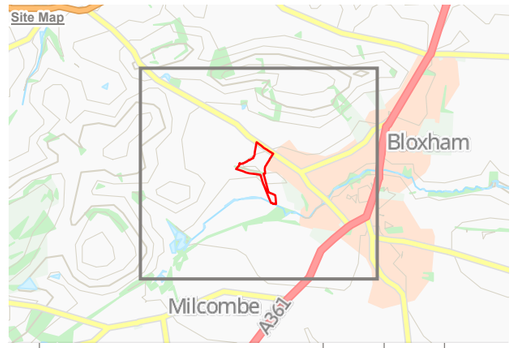
- Site boundary
- Site boundary - 500m buffer

Great Crested Newt eDNA Survey Results

- Pond with positive result
- Pond with negative result

Note:
The locations of habitats and habitat features are indicative.

Site Map



Rev	Description	Drawn	Approved	Date

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Project
Tadmarton Road, Bloxham

Title
Great Crested Newt eDNA Survey Results

Drawing Number
G9731.02.012

Drawn	Checked	Approved	Scale	Date
IJ	BJ	KM	1:6,500 @ A3	20/10/2023

KEY

Site boundary

Great Crested Newt eDNA Survey Results

Pond with positive result

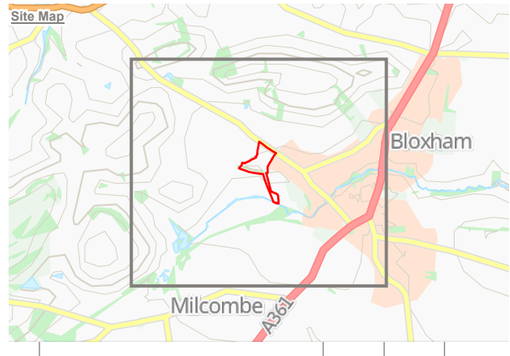
Pond with negative result

Great Crested Newt eDNA Positive Pond Buffers

Great Crested Newt eDNA Positive Pond - 250m buffer

Great Crested Newt eDNA Positive Pond - 500m buffer

Note:
The locations of habitats and habitat features are indicative.



Rev	Description	Drawn	Approved	Date

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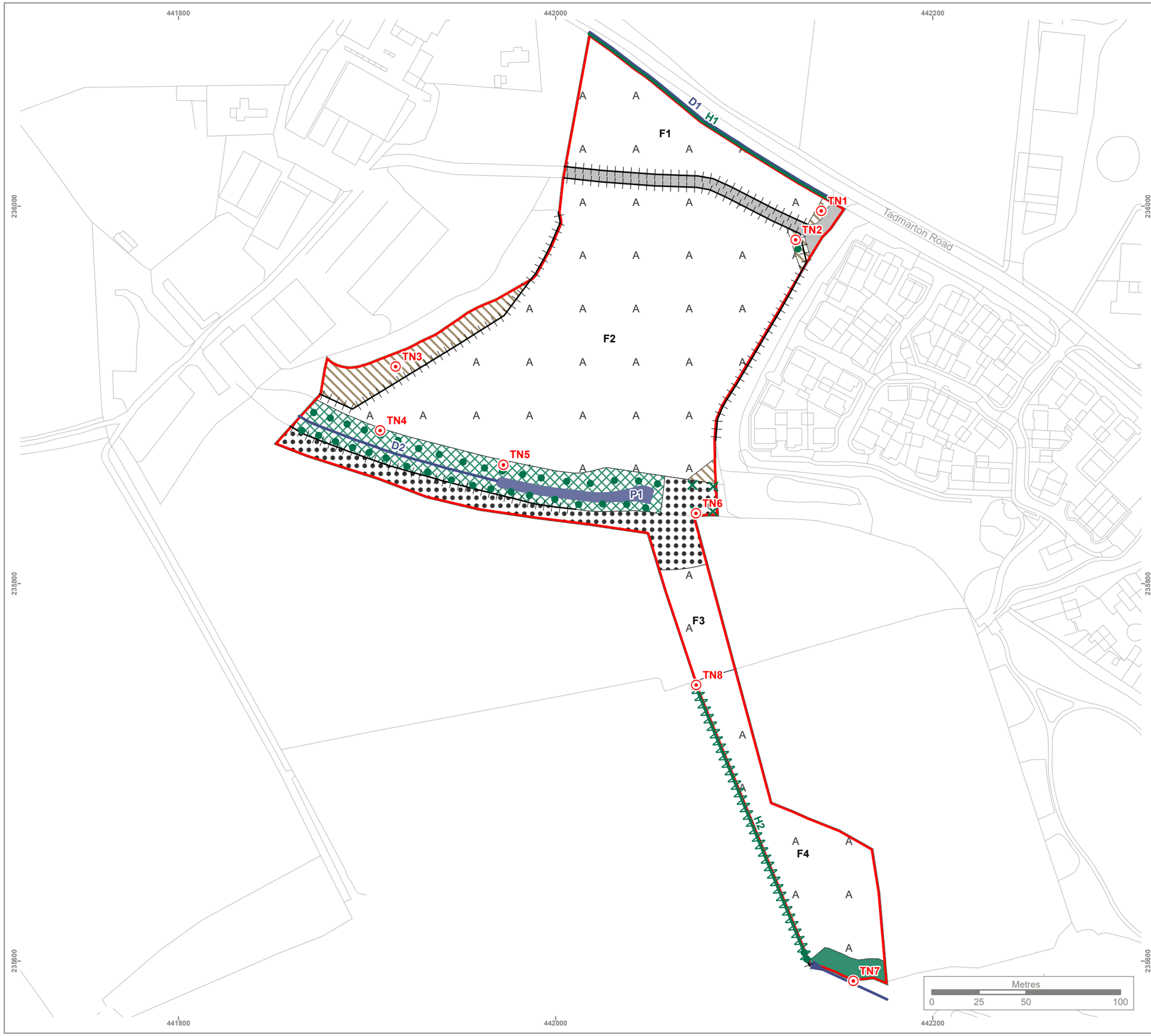
Title
Great Crested Newt Positive Ponds with Buffer Zones

Drawing Number
G9731.02.013

Drawn	Checked	Approved	Scale	Date
IJ	BJ	KM	1:7,000 @ A3	20/10/2023

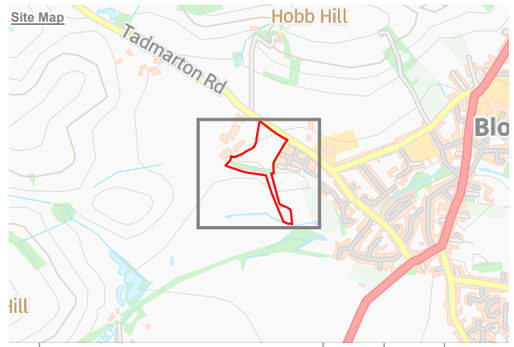


KEY

- Site boundary
- Target note
- Scattered scrub
- Scattered broad-leaved tree
- Standing water
- Running water
- Native species-rich intact hedge
- Species-poor intact hedge
- Fence
- Semi-natural broad-leaved woodland
- Dense/continuous scrub
- Tall ruderal
- Standing water
- Arable
- Bare ground
- Hardstanding

Note:
The locations of habitats and habitat features are indicative.

Site Map



Rev	Description	Drawn	Approved	Date
B	Updated habitats and target notes.	IJ	KM	07/11/2023
A	Updated site boundary and associated habitats.	SP	RW	26/04/2023

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Project
Tadmarton Road, Bloxham

Title
Phase 1 Habitat Survey

Drawing Number
G9731.02.007B

Drawn	Checked	Approved	Scale	Date
ET	MH	RW	1:2,000 @ A3	07/11/2023

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