

**Wells Farm
Northaw Road East
Cuffley
Hertfordshire EN6 4RD**

Final Great Crested Newt Report



Report Date: 27th September 2021

Survey and Report by

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Report quality management and constraints

This report has been compiled by Dr Jennifer Jones MCIEEM of Jones and Sons Environmental Sciences Ltd. The report format follows standard guidance produced by the British Standards Institute (2013), Chartered Institute of Ecology and Environmental Management (2017) and the English Nature (2001) Great Crested Newt Guidelines.

To achieve the study objectives the conclusions are based on the best information available at the time of the surveys and within the limits prescribed by our client within the agreement contract.

It should generally be recognised that great crested newt requirements change throughout the year and great crested newts can move between different ponds within a local area. The surveys therefore represent 'snap shots' in time.



Contents

A	Executive Summary	5
B	Introduction.....	6
C	Survey Methodology.....	7
	Constraints/Limitations.....	9
D	Ponds and status of great crested newts within the area	10
E	Wells Farm Pond Surveys.....	11
	E1 Habitat Suitability and eDNA results.....	11
	E2 Great crested newt pond nocturnal surveys.....	13
	E3 Terrestrial habitat	15
F	Interpretation including impact of the development.....	16
	F1 Summary	16
	F2 Impact of the development.....	16
	F3 Need for a Great Crested Newt Mitigation Licence.....	17
	Criteria 1 - The action is of overriding public interest.....	17
	Criteria 2 - Consideration of the ‘no satisfactory alternative’	18
	Criteria 3 - the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.....	18
G	Mitigation Strategy	19
	G1 Measures to avoid harm to great crested newts.....	19
	G2 Compensation for loss of habitat with enhancement	20
	G2 (i) New Pond Creation	20
	G2 (ii) Enhancement of existing pond	20
	G2 (iii) Compensation and main enhancement of terrestrial habitat	21
	G2 (iv) Additional enhancements	22
	G3 Post Development considerations	22
	G3(i) Management and Maintenance	22
	G3 (ii) Monitoring.....	22
	G3 (iii) Site safeguards	22
H	References.....	24
I	Appendix.....	25
	Relevant Legislation and Policy	25
	Legislation and Licences.....	25
	National Policy.....	26



Plans27

Plan 1: Site Location27

Plan 2: aerial photograph of survey site and surrounding habitat with ponds28

Plan 3: ponds surveyed at Wells Farm.....29

Plan 4: great crested newt compensation and enhancement measures30



A Executive Summary

This 2021 report documents the results of great crested newt surveys (GCN) at Wells Farm, Northaw Road East, Cuffley, Hertfordshire EN6 4RD (Ordnance Survey Grid Reference TL 3002 0203).

At the request of King & Co (Wells) Ltd, ecologists (holders of Natural England GCN Survey licences) from Jones and Sons Environmental Sciences Ltd undertook an e-dna test for any presence of GCNs in the three ponds at Wells Farm followed by, the then required, population survey of the garden pond.

A planning application (6/2020/3451/MAJ) has been submitted to Welwyn Hatfield Borough Council for the demolition of outbuildings at Wells Farm to enable the erection of 14 residential dwellings. The development will impact on the garden pond.

The six GCN surveys at Wells Farm between 29th April 2021 and 10th June 2021 confirmed the garden pond to be a breeding pond for GCNs with a peak count of 6 individuals. Following the Natural England population class system, this represents a small population. The extensive area of hardstanding within most of the development footprint is unsuitable habitat and the amenity grass lawn with shrubs surrounding the garden pond is sub-optimal terrestrial habitat for GCNs.

No GCNs have been recorded within the surrounding 500 metres and the GCN population at Wells Farm is an isolated population. The loss of a breeding pond will have a high impact on the population at a site/local level. Due to the fact that the Conservation of Habitats and Species Regulations 2017 (as amended) protects all GCNs and their habitats, before development can commence, a Mitigation Licence to derogate from this protection will need to be granted by Natural England.

The Wells Farm area has been allocated for new housing under the Draft Local Plan consultation document (2016) to provide for housing growth in the Cuffley area. Changing the design of the development to accommodate the pond was not feasible. Since the loss of the pond cannot be avoided, the newts will be relocated to a newly created pond in more favourable habitat 115 metres to the west of the existing GCN pond. In the event of further development, double movement of GCNs will be avoided.

This report includes a mitigation strategy with working methods to avoid harm to great crested newts (capture and relocation to a new pond). Two new ponds will be created as compensation, the existing field pond will be enhanced and a swale by the development will provide additional seasonal wet habitat. Terrestrial habitat enhancement will include the construction of a great crested newt hibernacula, log piles as refuges and the planting of trees to enhance habitat connectivity. The mitigation strategy will ensure that the favourable status of great crested newts is maintained within the local area.



B Introduction

Surveys for great crested newts were undertaken at Wells Farm, Northaw Road East, Cuffley, Hertfordshire EN6 4RD (Ordnance Survey Grid Reference TL30020203).

Jones and Sons Environmental Sciences Ltd undertook the surveys at the request of the King & Co (Wells) Ltd of Marquis House, 68 Great North Road, Hatfield Hertfordshire EN64RD. A planning application (6/2020/3451/MAJ) has been submitted to Welwyn Hatfield Borough Council for the demolition of outbuildings at Wells Farm to enable the erection of 14 residential dwellings.

A Preliminary Ecological Assessment of the site, undertaken by Babec Ltd Ecological Consultants (Babec Ltd Report March 2021) recommended further surveys of the ponds in the area be carried out to establish any presence of great crested newts.

Great crested newts are species protected under the Conservation of Habitats and Species Regulations 2017 (as amended) Since the presence of protected species is a material consideration in the planning process (National Planning Policy Framework 2021), great crested newt surveys are required to provide information to the Local Planning Authority on any impact the proposals may have on any great crested newts within the area. Any impact identified on great crested newts will need mitigation to be put forward to Welwyn Hatfield Council to satisfy them that the development will safeguard any great crested newts present, ensure that the species populations are maintained at a favourable conservation status and the legislation is complied with.

The main objectives of the surveys were to:

- Survey the ponds in the area of the development for any presence of great crested newts.
- Assess the size of the great crested newt population if their presence is confirmed.
- Determine any impact of the development on great crested newts.
- If any potential impact is identified provide recommendations to ensure that development complies with the legislation protecting great crested newts including a mitigation strategy to safeguard great crested newts within the area with compensation for any loss of habitat to ensure no detriment to the great crested newt population.

The report includes: the qualifications and experience of the surveyors, methodology used, background information, results of the surveys and evaluation with mitigation proposals. The relevant legislation and plans are included within the Appendix.



C Survey Methodology

Surveyors and Experience

Ecologists from Jones and Sons Environmental Sciences Ltd who have considerable experience of great crested newt surveys undertook the surveys between April and June 2021. Personnel included:

Dr Jennifer Jones BSc PhD - a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and experienced ecologist who and has held a Natural England GCN survey licence for over 20 years and has previously held GCN mitigation licences. For 10 years Dr Jones worked as a county ecologist advising Local Planning Authorities on protected species.

Mr Adam Jones BSc MMedSci -an affiliate member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holder of Natural England great crested newt licence for 12 years.

Background Information

Research was undertaken for any presence of great crested newts within the surrounding area.

Field Survey Methods

To determine any presence of great crested newts within the three ponds within the boundary of Wells Farm the following methods were used.

Habitat Suitability Index

A habitat survey of the site was undertaken to determine the suitability of the ponds and terrestrial habitat for newts. The survey included applying a Habitat Suitability Index (HSI) following the procedure outlined in Oldham, Keeble, Swan & Jeffcote (2000). An HSI is a numerical index between 0 and 1.0 where 0 indicates unsuitable habitat (unlikely to support great crested newts) and 1.0 represents optimal habitat (high probability that the pond could support great crested newts).

Table 1: Categorisation of Great Crested Newt HSI Scores

Overall HIS Score	Pond Suitability for GCNs
<5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent



Environmental DNA (eDNA) testing

This method detects pond occupancy from Great Crested Newts using traces of DNA shed into the water. The detection of Great Crested Newt eDNA is carried out using real time PCR to amplify part of the cytochrome 1 gene found in mitochondrial DNA.

In recent years the application of eDNA testing has been found to be a successful method for detecting Great Crested Newts (Rees, H et al 2014) and Natural England has approved the use of eDNA testing to determine presence or absence following Defra funded research into the application of the technique.

The procedure at Wells Farm followed the Natural England protocol using the methodology documented in Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014) Analytical and methodology development for improved surveillance of the Great Crested Newt. And Appendix 5. Technical advice note for field and laboratory sampling of Great Crested Newt environmental DNA . Freshwater Habitats Trust Oxford

Each pond was examined and 20 spaced out samples of pond water collected from suitable areas of each pond on the 14th April 2021. Following the preservation of the samples in the provided tubes, the sample batches were sent for testing.

Nocturnal surveys

Since the e-dna method proved positive for great crested newts in the garden pond (pond 2), six spaced out nocturnal Great Crested Newt surveys were undertaken between 29th April 2021 and 10th June 2021.

Initially the surveys included three methods: bottle trapping, searching for newts at night using a torch and searches in the vegetation for any GCN eggs.

A constraint of the torch survey was poor visibility in the pond due to: high duckweed cover (90%) over the pond surface and also the high turbidity of the water rendering it difficult to see any newts within the water (high turbidity score of 4-5). Attempts were made to clear the duckweed but the water remained turbid.

Since identifying and counting newts in turbid and vegetation water is impractical this method was abandoned and the subsequent 5 population surveys were solely based on bottle trapping.



Photograph 1: Garden Pond Bottle Traps



Bottle traps (2 litre plastic bottles with an air bubble) were set out around the perimeter of the pond using the standard procedure of Gent and Gibson (1998).

Due to the concrete base around the pond perimeter the standard method of using bottles on sticks could not be used and bottles set in floating material were made that could be secured to the bank.

The pond is of a small size and a total of 8 bottle traps around the perimeter was considered sufficient. The bottles were set out during the evening just before sunset and retrieved early the next morning.

Following the surveys, a population score was assigned following the Great Crested Newt Guidelines produced by English Nature (2001).

Practically, it is not possible to establish a true population of great crested newts in a pond but an indication can be obtained by applying the population class system following the English Nature 2001 Great Crested Newt Mitigation Guidelines. Populations can be classed as: small for maximum counts of 10 individuals, as medium for counts from 11 to 100 individuals and as high for maximum counts of over 100.

Constraints/Limitations

No major constraints were encountered during the bottle trapping surveys since they were undertaken during the optimum period when newts would be present in their breeding pond.

The turbidity and duckweed cover of the pond was a constraint on undertaking torch surveys. Since bottle trapping was undertaken, this is not considered to be a major constraint.

The weather conditions are given in Table 3. The bottles were set when the daytime temperature was 6°C or above and considered suitable for newt activity. The temperature however during the April survey fell to lower 5°C overnight.



D Ponds and status of great crested newts within the area

Due to the significant decline in great crested newt populations, they are afforded protection under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). Due to their significant decline great crested newts are also listed as a species of principal importance under the NERC Act (2006).

In Hertfordshire great crested newts have a patchy distribution but are relatively widespread. Within the Cuffley area ponds supporting great crested newts are scarce. There are no known previous records for any presence of great crested newts at Wells Farm and the Hertfordshire Environmental Records Centre (HERC) data search found no records within a 1km radius of Wells Farm. The nearest ponds with great crested newts identified are approximately 2km to the north along The Ridgeway near Northaw Great Wood SSSI.

Great crested newts will travel large distances between ponds (travelling 1km distance) although it is more usual to remain close to their breeding pond (usually within 250 metres of their breeding pond). Due to the fact that great crested newts may disperse between ponds, when a plot of land is proposed for development, other ponds within 500 metres should be checked (English Nature 2001). The density of ponds around Wells Farm is low as illustrated in plan 2 in the appendix. There are four ponds within 500 metres of Wells Farm. These include three ponds within the Wells Farm site boundary itself and a fourth pond at Colesdale Farm at a distance of 260 metres from the proposed development. Within 1km there is another pond approximately 600 metres northwest. This pond was not surveyed due to the distance and unknown ownership.

Photograph 2: Colesdale Farm Pond



The Colesdale Farm pond was previously surveyed by Jones and Sons Environmental Sciences in 2014 and found to support poor suitability for great crested newts mainly due to the abundance of fish. No great crested newts were observed during an evening survey. Due to these factors, it is considered that any presence of great crested newts in the Colesdale Farm pond is highly unlikely.

Of the three ponds at Wells Farm only one (the large field pond) is an old rural pond as shown on the 1916 historic maps, the other two ponds are relatively newly constructed garden ponds. The garden pond adjacent to the outbuildings is known to be at least 30 years old. The 1916 historic maps however do show that a second rural pond previously existed within the grounds of Wells Farm immediately adjacent to the road on the west side of the buildings that were present at the time. The original buildings were cleared in 1978 and it is likely that this pond was filled in.



E Wells Farm Pond Surveys

E1 Habitat Suitability and eDNA results

The ponds surveyed are shown in Plan 3 in the appendix. A description of the ponds at Wells Farm, habitat suitability for great crested newts and e-DNA results are given in the table below

Table 2 Wells Farm Ponds suitability for great crested newts

Pond Number	Pond		
	1	2	3
Name	Small Ornamental Fish Pond	Small Garden Pond	Large Field Pond
OS Grid Ref	TL30040207	TL30040202	TL29930193
Pond Area	<30 m ²	Approx. 50 m ²	430 m ² Area with water
Distance from proposed development	35 metres	Within development area	60 metres
Brief pond Description	Small artificial pond with steep brick wall surrounded by fence. Stocked with large numbers of goldfish reducing suitability. Running water into pond. Poor quality/ low invertebrate diversity. Limited aquatic plants-some floating plants but no aquatic emergent plants.	Relatively recently constructed concrete ornamental pond with south deep oval pond connecting by shrub lined shallow channel to north dry section. Rocks present. Low invertebrate diversity. Duckweed cover. Plants include brooklime, float grass, sedge, willowherbs, floating water lilies. Suitable plants for newt egg laying present.	Large pond with a central island of scrub. Low invertebrate diversity. Regularly used by mallards and Canada Geese. Probable presence of fish. Patch of pendulous sedge and soft rush but virtually no aquatic vegetation
Adjacent terrestrial habitat	Mown amenity lawn and paving	Mown amenity lawn, shrubs, scattered trees and gravel driveway	Tall grass ruderals, bramble scrub and scattered trees
HSI score	0.30 Poor suitability	0.69 Average suitability	0.67 Average Suitability
Great crested newt eDNA	Negative	Positive	Negative



Photograph 3: Pond 1 Fish Pond



Photograph 4: Pond 2 Garden Pond



Photograph 5: pond 2 view west



Photograph 6: pond 2 drier north section



Photograph 7-8: Pond 3 Field Pond view north and south



The above photographs (7-8) were taken in April 2021. During the summer tall grass and tall ruderals dominated the vegetation.



E2 Great crested newt pond nocturnal surveys

Due to the eDNA confirmation of great crested newts in the small garden pond (pond 2) a population survey was undertaken. The results are given in the table below.

Table 3: Results of the 2021 nocturnal bottle trapping surveys at Wells Farm (pond 2)

Date	29-30 th April	11-12 th May	18-19 th May	27-28 th May	3-4 th June	10-11 th June	Peak Count
GCN adult female	0	2	0	2	0	0	2
GCN immature female	0	0	0	0	2	1	2
GCN adult male	0	2	2	2	0	0	2
GCN immature male	0	0	0	0	0	0	0
GCN Total	0	4	2	4	2	1	6
Smooth newts	1F (torch)	9M	7M 1F	17M 2F	12M	5M1F	19
GCN Eggs		Present on brooklime	Present				
Palmate newts	0	1M	2M	3M 2F	2M	0	5
Temp °C	6-5	11-10	9-6	15-12	20-14	19-16	

M= male, F = female

The surveys caught a total of 2 mature adult female great crested newts, 2 immature female great crested newts (approximately 1 year old newts) and 2 adult male great crested newts giving a peak count for the pond of 6 great crested newts.

Following the Natural England population class system, the peak count of 6 individuals represents a low population (a low population comprises 10 or less individuals). However, a count of 6 caught over the 6 sessions, is just a minimum count and not an accurate total population due to factors such as sampling efficiency and population dynamics. It should be remembered that the population class assessment is just an indication of relative numbers of newts using the pond.

During May two large mature females and also one large mature male and one slightly smaller but mature male was regularly caught. During June immature female great



crested newts approximately 1 year old were caught. The notable large size of the adult newts would suggest that they had been present in the pond for many years.

Smooth newts and palmate newts were also caught in the pond. These species receive limited protection (protected under the Wildlife and Countryside Act 1981 from sale) Smooth newts are common and widespread in Hertfordshire but palmate newts are relatively scarce in Hertfordshire with the nearest known records in ponds at Broxbourne Woods.

Photograph 9: Great crested newts from garden pond



E3 Terrestrial habitat

Great crested newts spend much of the year on land and during the winter seek cover under refuges and may go underground for example amongst tree roots. Newts migrate to the breeding pond from February onwards with adult newts emerging from the pond from late May. Once any aquatic larva have metamorphosed to juveniles they will leave the pond between August and September and remain on the terrestrial habitat to forage. It then takes up to 4 years to become sexually mature during which time they will depend on the terrestrial habitat for prey (newts are carnivores). The suitability of the surrounding terrestrial habitat is therefore important for the survival of great crested newts.

The terrestrial habitats within the garden around the garden pond are of low quality for great crested newts comprising predominantly mown amenity grassland (photographs 4-6). Dense vegetation is limited although some shrubs and scattered trees are present capable of providing cover. Terrestrial habitats of low suitability for great crested newts are more likely to support low populations.

Crevice/voids in the ground are key factors to provide refuge. Extending northwards from the garden pond is a concrete channel with shallow water connected to a circular dry section with a concrete base and rocks. There is potential for great crested newts during their terrestrial phase to shelter within the crevices of the rocks. It was also reported that newts (species unknown) had been found within crevices of paving slabs in the garden.

The habitats within the development footprint itself are mainly the buildings and an extensive courtyard of hard standing. Artificial habitats provide no cover and are unsuitable habitats for great crested newts.

There are areas of taller semi-improved grassland within the field to the west that provide more cover and is more suitable habitat for great crested newts.

Refugia (onduline mats) distributed around the garden pond and also around the development area between 27th April 2021 and 16th June 2021, primarily to determine any presence of reptiles (see reptile survey report), proved negative for great crested newts. The refugia survey however was undertaken at a time of year when most newts would be in the pond.



F Interpretation including impact of the development

F1 Summary

The majority of habitats within the development site comprise the buildings and hardstanding (unsuitable terrestrial habitats for great crested newt dispersal).

Three ponds were surveyed at Wells Farm with breeding great crested newts confirmed in the garden pond just within the development footprint. Other amphibians recorded in the pond included smooth newts and palmate newts.

No great crested newts were recorded in the other ponds at Wells Farm or in the surrounding 500 metres of Wells Farm. There is also a low density of ponds within the surrounding 1km area.

The relatively recently constructed garden pond supporting great crested newts is small in size with a concrete base and with sub optimal surrounding terrestrial habitat. The surveys confirmed the population class to be low, potentially due to the poor quality habitat.

It is concluded that the garden pond at Wells Farm supports an isolated population of great crested newts.

F2 Impact of the development

The construction of the 14 dwellings will impact on the existing courtyard of hardstanding and require the demolition of the existing outbuildings. Any risk of encountering great crested newts within the hardstanding is considered to be unlikely. The loss of the habitats within the courtyard will therefore have a negligible impact on great crested newt habitat.

The clearance work required for the development will also impact on the terrestrial grassland and flowerbed habitat adjacent to the development footprint. This terrestrial habitat is sub-optimal habitat and its loss will have a minor adverse impact. Any impact on terrestrial vegetated habitat within the close proximity of the breeding pond would pose a risk of encountering great crested newts. Without appropriate mitigation, clearance of this terrestrial habitat could result in direct harm to great crested newts.

The plans for the housing layout show that the construction area on the east side will need to extend into the existing garden. The building (semi-detached houses number 11/12) will extend into the area of the pond and require the loss of the pond.

The loss of the breeding pond will have a high impact on the isolated great crested population (small population). The draining and infilling of the pond, without appropriate mitigation, could also result in direct harm to great crested newts.



In a site/local context, the loss of the pond without mitigation/compensation would have a high impact on the population of great crested newts within the site/local area. Great crested newts however are generally widely distributed across the district and county and in a wider district context, the loss of the garden pond would have a minor negative impact.

F3 Need for a Great Crested Newt Mitigation Licence

Due to the fact that the Conservation of Habitats and Species Regulations 2017 (as amended) protects great crested newts and their habitats and there will an impact on great crested newts as a result of the development, a great crested newt mitigation licence will need to be applied for prior to the commencement of works to derogate from the protection afforded to great crested newts. Natural England, under powers conferred by the Secretary of State, has authority to issue licences but only for certain purposes.

The planning authority before granting planning permission (as well as Natural England before granting a licence) will need to be satisfied that the criteria listed below are satisfied. The three criteria are:

- 1 That the action is “in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53(2)(e)).
- 2 That there is no satisfactory alternative (Regulation 53(9)(a)) to the ‘do nothing’ option.
- 3 That the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range (Regulation 53(9) (b)).

Criteria 1 - The action is of overriding public interest

There is a national requirement for more housing and in the Welwyn and Hatfield Draft Local Plan Submission document (August 2016), the consultation process has allocated new housing sites for the Cuffley area to enable housing growth as required by national policy.

The Wells Farm area (reference HS30) has been allocated for 75 dwellings. Due to the fact that it is national and district policy to provide more homes, the development satisfies the requirement that it is of overriding public interest. This site allocation is justified in the draft local plan to provide for housing growth.



Criteria 2 - Consideration of the ‘no satisfactory alternative’

The application of the mitigation hierarchy is required for all developments. The proposed Welwyn/Hatfield Ecology and Landscape Policy (SAAM 16) requires proposals that would result in harm to protected species to follow the mitigation hierarchy to firstly avoid, reduce and remediate direct and indirect impacts before considering compensations.

For the planning application at Wells Farm, consideration was given to the realignment of the dwellings to avoid the loss of the pond to reduce the impact on great crested newts, but redesigning the development was not considered possible. It would also be in the best interest of the newts to move them away from the development area.

Criteria 3 - the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range

Since a negative impact on the great crested newt population, due to the construction of houses cannot be avoided, a mitigation strategy to avoid harm to newts and provide compensate for the habitat lost is required.

A mitigation strategy is given in the section below.



G Mitigation Strategy

G1 Measures to avoid harm to great crested newts

Prior to any removal of great crested newts from the site, a suitable receptor pond able to function in a similar way to the lost pond must have been constructed along with suitable refuges to accommodate relocated newts from the terrestrial habitat.

Prior to the infilling of the garden pond, to avoid any harm to great crested newts, they will need to be captured and excluded from the area.

Trapping of the newts will be required within the pond and also the areas of suitable surrounding terrestrial habitat. The winter period will need to be avoided with the trapping programme put in place between February and October (inclusive) with removal of adults from the pond between February and June.

The population at Wells Farm is assessed as a small population which, applying the standard mitigation guidelines (English Nature 2001) requires 30 trapping nights followed by 5 days of zero capture. In the event of newts still being found after 30 days, capture will need to continue until 5 captive free nights under suitable weather conditions has been achieved.

The capture of newts will require a combination of methods: ring fencing of the pond with bottle traps in the pond to remove the adults, relocation of the vegetation containing eggs and removal of the larvae.

As not all the population of great crested newts may enter the breeding pond, pitfall traps and refugia on the ground will also be needed to remove newts from the terrestrial habitat.

The draining of the pond will need to be supervised by the licenced ecologist and a search undertaken for any newts that may still be present within the silt and pond debris.

Following reasonable effort to remove the great crested newts from the area, temporary exclusion fencing around the development site will be required as an additional precautionary measure.



G2 Compensation for loss of habitat with enhancement

Compensation and enhancement measures for great crested newts is shown in Plan 4 within the appendix and includes:

- The creation of two new ponds as replacement for the loss of the garden pond used by great crested newts.
- Enhancement of the existing field pond to improve suitability for great crested newts.
- Enhancement of terrestrial habitat by the creation of great crested newt hibernacula and log pile refuges
- Planting of native trees to infill gaps and improve habitat connectivity
- Creating a swale with suitable planting to provide additional seasonal wet habitat.

G2 (i) New Pond Creation

The main compensation measure will be the construction of two new ponds designed to be suitable for great crested newts and with similar dimensions to the existing great crested newt pond.

These will be created within the southwest corner of the field at a distance of 115 metres to the west of the existing great crested newt pond. The field is in the ownership of Wells Farm, near to an existing pond and also near to Hempshill Brook that provides suitable terrestrial habitat for dispersal. For the great crested newts to thrive, translocation of the great crested newts from sub optimal habitat (mown lawns/hardstanding) to alternative good quality habitat (field of tall rough grassland) would be long term benefit for the local GCN population.

The ponds will be constructed outside the flood zone. One of the newly created ponds will be used as a receptor pond for the translocated great crested newts. Suitable aquatic plants from the existing garden pond will be transferred to the new ponds to ensure vegetation suitable for egg laying is present. The pond will be completed at least 6 months in advance of the translocation of the newts. Locating the pond in a safe location (area that cannot be developed) will be beneficial for the translocated newts. In the event of further development around Wells Farm any double movement of great crested newts will be avoided.

G2 (ii) Enhancement of existing pond

There is an existing large pond (OS Grid reference TL29930192) in the southwest corner field. The pond is illustrated in photograph 7 and 8 of this report.

The pond currently does not support great crested newts but could be improved to render the pond more suitable for great crested newts.



The current conditions of the pond are not suitable for the breeding success of great crested newts mainly due to the probable presence of fish and lack of sufficient suitable aquatic vegetation for egg laying.

No great crested newts will be translocated to this pond but the pond will be enhanced to create conditions more favourable for great crested newts to increase their chances of breeding success in the future. Measures such as removal of fish and planting with marginal aquatic vegetation suitable for egg laying such as water forget-me-not and brooklime will be implemented.

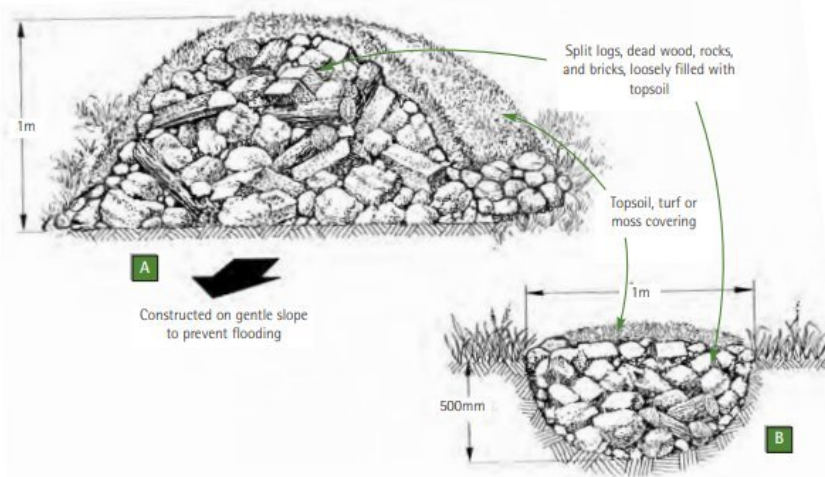
G2 (iii) Compensation and main enhancement of terrestrial habitat

In addition to the provision of water habitats, the terrestrial habitat will also be enhanced. It is proposed that this is achieved by the provision of a Great Crested Newt hibernacula near the newly created pond plus log pile refuges around the large pond.

The hibernacula will be constructed as illustrated in the Great Crested Newt Conservation Handbook (Froglife 2001) and achieved by placing cut logs on the ground mixed with rocks and bricks loosely filled with soil to create crevices suitable for newts. The mound will be topped with turfs. The hibernacula mound will have a minimum length of 2metres long, minimum width of 1 metres and minimum height of 1 metre as illustrated in the diagram below.

Hibernacula design from Great Crested Newt Conservation Handbook (Froglife 2001

Fig. 8 Great crested newt refuges on (A) impermeable and (B) free-draining soils



Special Newt Conservation Measures



G2 (iv) Additional enhancements

Locating the great crested newt habitat in the southwest corner of the site means that it would be possible for great crested newts to disperse naturally along the banks of the adjacent Hempshill Brook either north or south under the road. The brook is well vegetated and on the dates of the visit was dry. Enhancement of the habitat along the brook would be beneficial. Connectivity of the terrestrial habitat will be improved by planting additional trees (native species) in the gaps along the field edge.

The development also includes a swale in the field to the west of the development. The swale will provide additional seasonal wet habitat and will include wetland plants to create a habitat suitable for amphibians.

G3 Post Development considerations

G3(i) Management and Maintenance

The southwest field and ponds will be managed sympathetically for great crested newts by ensuring: appropriate aquatic vegetation management, clearance of leaves, a low mowing regime around the pond margins to ensure newts can emerge under the cover of tall grass and control of encroaching scrub to ensure that sunlight can reach the water.

G3 (ii) Monitoring

A monitoring plan will be put in place to assess whether the great crested newt population has responded favourably to the mitigation and to inform ongoing management. The existing population is low and therefore monitoring over a 4 year period would be appropriate.

G3 (iii) Site safeguards

Appropriate signed written agreements will be required such as a Section 106 agreement to ensure mitigation and compensation measures are put in place.

The great crested newt ecologist will need to sign off the phases of the development that affects great crested newts and also sign off post development monitoring to ensure that works are compliant with planning and the Natural England licence.

The following sign-off stages are suggested:

- Stage 1: Habitat creation completed with receptor ponds suitable to receive great crested newts from the donor garden pond. Hibernacula and log pile refuges completed.



- Stage 2: exclusion of great crested newts with translocation of newts from the garden pond to the receptor pond and translocation of newts on the land to the log piles.
- Stage 3-When the ecologist has confirmed reasonable effort has been made to remove the great crested newts from the development area following the timings required by GCN mitigation guidelines, a temporary newt exclusion fence around the development footprint will remain and building works can start.
- Post development monitoring of the receptor pond on an annual basis for the presence of great crested newts with remedial work/ further improvements implemented if required

The mitigation strategy proposed meets the third test of the Habitats Regulations in that the development would not be detrimental to the maintenance of this low population of great crested newts at a favourable conservation status in their natural range.



H References

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I Appendix

Relevant Legislation and Policy

Legislation and Licences

Great crested newts and their places of shelter are fully protected by the Wildlife and Countryside Act 1981 (as amended) and through inclusion in Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Amendments to the legislation means that legal protection for bats falls mostly under the Habitats and Species Regulations.

In England the legislation makes it illegal to:

- Kill, injure or capture (take) any life stage of a great crested newt.
- Disturb any life stage of a great crested newts while they are occupying a structure or place which is used for shelter and protection.
- Damage, destroy or obstruct access to any place of shelter or protection of great crested newts. Places of shelter include both the breeding pond and the surrounding terrestrial habitat used by great crested newts.

Building works that would contravene the protection afforded to great crested newts under the Conservation of Habitats and Species Regulations 2017 require a Mitigation Licence prior to the commencement of works. Natural England, under powers conferred by the Secretary of State, has authority to issue licences but only for certain purposes.

Three tests must be satisfied before Natural England can issue a licence to permit otherwise prohibited acts. These are:

- 1 That the development is “in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53(2)(e)).
- 2 That there is no satisfactory alternative (Regulation 53(9)(a)) to the ‘do nothing’ option.
- 3 That the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range (Regulation 53(9) (b)).

A clearly documented mitigation strategy is required to satisfy this regulation.



National Policy

The National Planning Policy Framework (NPPF) revised in July 2021 has a presumption in favour of sustainable development that in an environmental context means developments should contribute to protecting and enhancing our natural, built and historic environment.

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity. If significant harm resulting from a development cannot be avoided, adequately mitigated or, as a last resort, compensated for, then planning permission should be refused.

In addition, the Natural Environment and Rural Communities Act (NERC) 2006 places a duty on all public bodies to promote and enhance biodiversity in all its functions. Section 40 of the Act states “Every public authority must, in exercising its functions, have regard, as far as is consistent with the proper exercise of these functions, to the purpose of conserving biodiversity”. Special attention is paid to species included on the Government’s list of species of principal importance that includes great crested newts.



Plans

Plan 1: Site Location



Plan 2: aerial photograph of survey site and surrounding habitat with ponds.



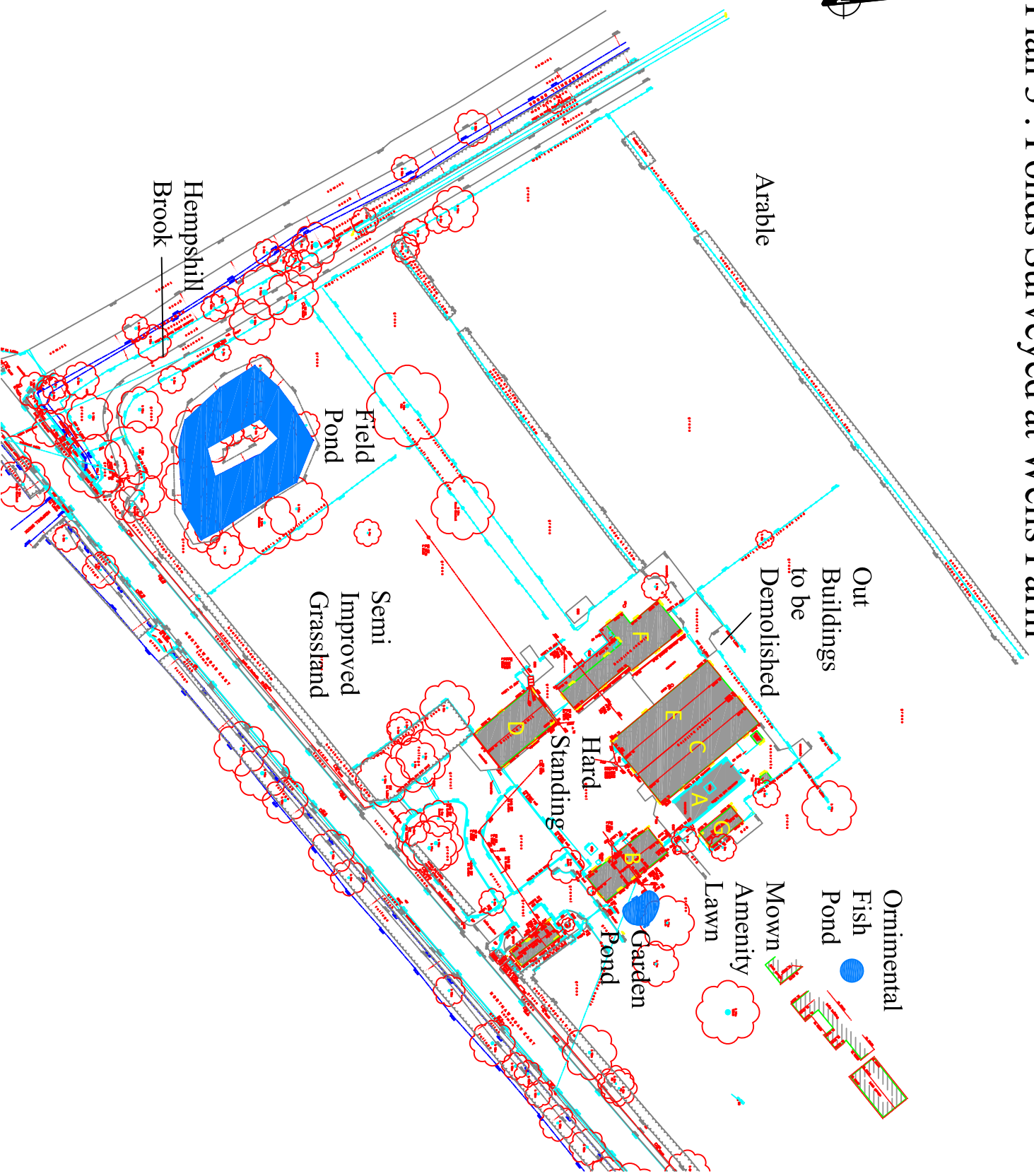
● Pond



Plan 3: ponds surveyed at Wells Farm



Plan 3 : Ponds Surveyed at Wells Farm



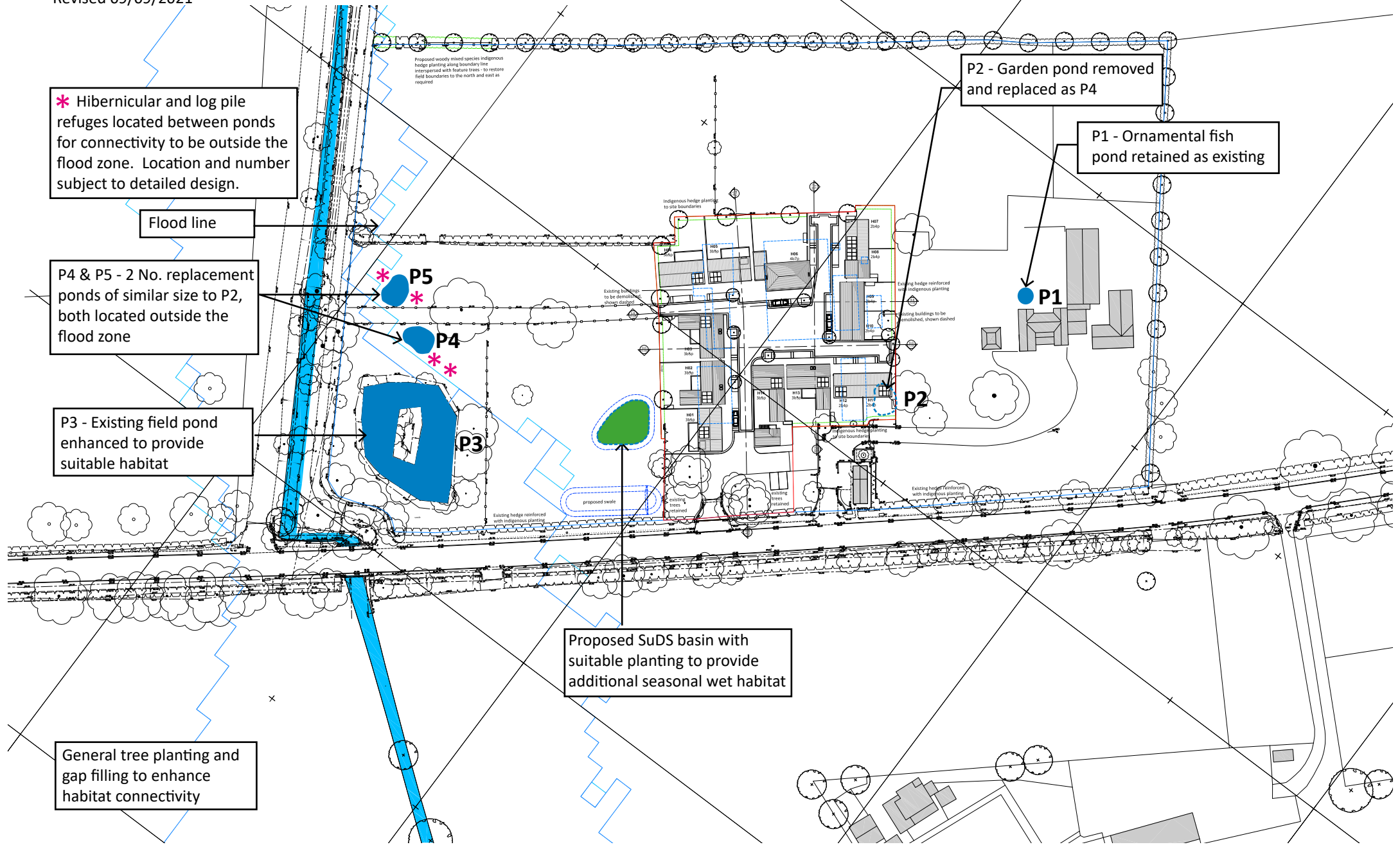
Plan 4: great crested newt compensation and enhancement measures



WELLS FARM

Schematic GCN Mitigation and Habitat Compensation

Revised 09/09/2021



* Hibernicular and log pile refuges located between ponds for connectivity to be outside the flood zone. Location and number subject to detailed design.

Flood line

P4 & P5 - 2 No. replacement ponds of similar size to P2, both located outside the flood zone

P3 - Existing field pond enhanced to provide suitable habitat

General tree planting and gap filling to enhance habitat connectivity

P2 - Garden pond removed and replaced as P4

P1 - Ornamental fish pond retained as existing

Proposed SuDS basin with suitable planting to provide additional seasonal wet habitat

Proposed woody mixed species indigenous hedge planting along boundary line interspersed with feature trees - to restore field boundaries to the north and east as required

Indigenous hedge planting to site boundaries

Existing buildings to be demolished, shown dashed

Existing hedge reinforced with indigenous planting

Existing buildings to be demolished, shown dashed

Indigenous hedge planting to site boundaries

Existing hedge reinforced with indigenous planting

Existing hedge reinforced with indigenous planting

proposed swale

existing trees retained

Existing hedge reinforced with indigenous planting