

**PROTECTED SPECIES:
SUPPLEMENTARY REPORT 2
FOR LAND TO WEST SIDE OF
ELLESMERE LANE,
PENLEY
WREXHAM
LL13 0LP**

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1 INTRODUCTION

1.1 BACKGROUND

EVR Ecology undertook a protected species assessment and Phase One habitat survey on land on Ellesmere Lane, Penley, Wrexham on 26th March 2014. The site was approximately 2 hectares in size. There are no structures on site. Results and recommendations were given in the ecology report number 2013(14)/VC/69 (EVR Ecology, 2014ii).

Recommendations included further surveys as follows:

- **It will be necessary to establish whether GCN are present in Ponds 1, 2 and 5.** The survey season for GCN is March to June, with at least 2 survey sets being undertaken in the period mid-April to mid-May. Initially, 4 sets of survey visits are made to the pond and various protocols including trapping, netting and torch searching undertaken. If GCN are found to be present, then 2 further surveys will be completed, with a total of 6 visits undertaken to establish populations.
- A minimum of 2 evening surveys will be required during the main active season of May to August to establish whether the oak tree is being used as a roost and to monitor edge activity at the west side
- A nesting bird survey along the hedges at the north, east and south sides of the site.

EVR Ecology undertook bat surveys on 24th and 29th July 2014. Results and recommendations are found in EVR Ecology report 2014(15)/VC/37 (EVR Ecology, 2014i).

1.2 SCOPE OF SURVEYS AND SUPPLEMENTARY REPORT (2)

This report covers the results of the surveys undertaken for great crested newts following presence/absence surveys conducted in 2015. A breeding bird survey was conducted on 27th May 2015.

All data collected in 2014 and 2015 are used to provide conclusions, recommendations and mitigation given in this supplementary report (2). Data, conclusions and recommendations for all other species and the site habitat are given in the 2014 report by EVR Ecology (EVR Ecology, 2014ii) and in a 2015 addendum to this report, Summary Note 2015 (EVR Ecology, 2015), issued on 16th June 2015.

1.3 PERSONNEL

Val Cooper is a professional consultant and bat specialist. She has over 19 years experience in surveying and conservation work on mammals and amphibians, and holds licences for surveying bats, barn owls and great crested newts. She has a BSc in Zoology/Psychology (Joint Honours) and MSc (with distinction) in Restoration Ecology. She has been a licensed bat worker and member of the Cheshire Bat Group since 1994. She works as a Voluntary Bat Warden for Natural England and participates in the annual National Bat Monitoring Programme of the Bat Conservation Trust. She is a full member of the Chartered Institute of Ecology and Environmental Management. She holds a Class 2 survey licence for bats reference: 2014 3249 CLS and Class 1 for great crested newts (ref 2015-7046-CLS-CLS).

Rob Smith is a professional consultant and specialist in mammals, birds and reptiles, with over 30 years experience in survey and conservation work. He is an active member of the Cheshire Mammal Group. He holds licences for surveying bats and great crested newts and is experienced in preparing and delivering protected species licences. He has also considerable experience in species conservation and reserve management and has been responsible for management of national and international nature reserves.

Bobby Smith is an ecologist with a BSc in Ecology and Conservation Biology. He has over 3 years' experience in surveying UK protected species including bats, great crested newts, birds and badgers. He has carried out field research in tropical ecosystems and marine environments whilst on location in Central America. He is presently training for NE bat and GCN licences.

2 METHODOLOGY

2.1 DESK SURVEY

2.1.1 Great crested newts

A COFNOD search was requested for records of GCN within a 1km radius of the site. Connectivity to ponds within 500m was assessed.

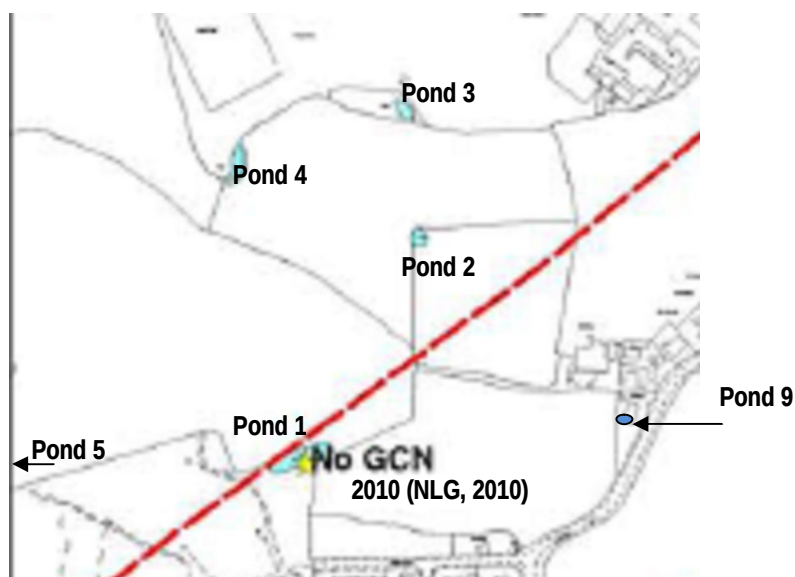
Planning applications for the Penley area were search for and, where available, ecology reports for the sites examined. This information, in conjunction with results from 2014 assessment and the present survey data collected on the additional surveys undertaken, were used in the conclusions and recommendations in this report supplement.

2.2 FIELD SURVEY

2.2.1 Great crested newts

It was concluded in the first report (EVR Ecology, 2014i) that it would be necessary to establish whether GCN are present in **Ponds 1, 2 and 5** (see **Figure 1** below).

Four sets of surveys were conducted on **Ponds 1 and 2**, 2 visits made to **Pond 4**, and one set to **Pond 5**. Justification for the varied survey effort is given in **Section 3.2.1**. Dates are given in **Table 1** below. **Pond 9** was visited on 2 occasions. This was a later addition to the survey protocol, following a report by a neighbour that he had a garden pond.



Reproduced by kind permission NLG Ecology 2010

Figure 1: Pond positions at Ellesmere Lane, Penley

Table 1: Survey effort and dates

POND	DATES	EFFORT (visit x technique)
1	6-7/5/15, 12-13/5/2015, 18-19/5/15, 26-27/5/15	4 x BT, 4 x ES, 2 x T
2	6-7/5/15, 12-13/5/2015, 18-19/5/15, 26-27/5/15	4 x BT, 4 x ES, 1 x T
3	6-7/5/15	1 x BT, 1 x T
5	6-7/5/15	1 x BT, 1 x T
9	18/5/15, 26/5/15	2 x T, 2 x TS

BT =bottle trapping, ES = egg search, T = torching, TS = terrestrial search

2.2.2 Nesting birds

A site walkover along the hedge lines, observing activity at intervals, was undertaken on the morning of 27th May 2015.

3 RESULTS

3.1 DESK STUDY

3.1.1 Great crested newts

These results were report in EVR Ecology (2014ii) and reproduced here as they are used in the final recommendations.

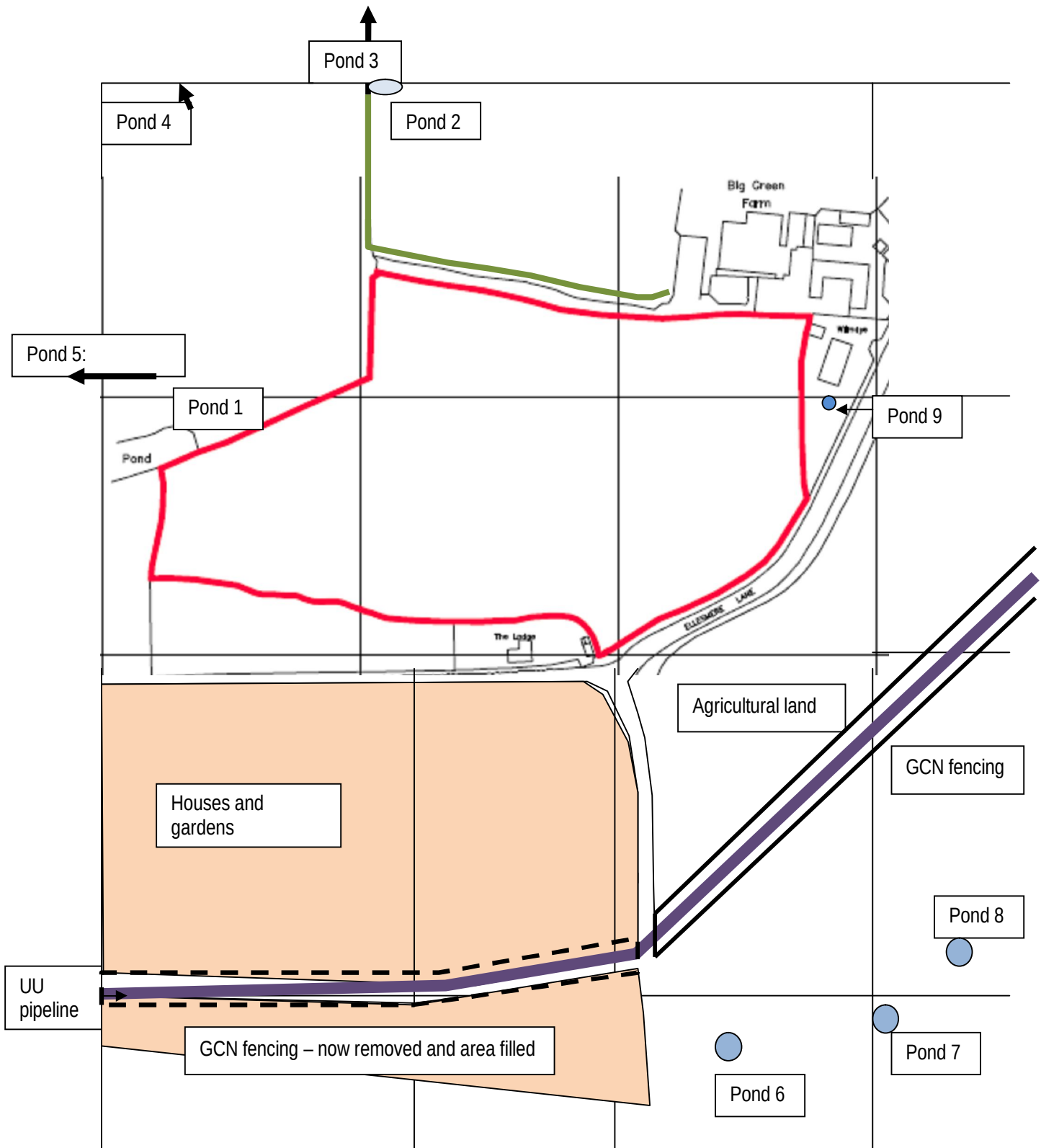


Figure 2: Positions of ponds and UU pipeline and GCN fencing 2014

COFNOD search results

Great crested newt records were found for 3 (Ponds 6 to 8 in **Figure 2**) ponds within 500m of the target site. Six records were within 250m of the site. All were on the opposite side of the pipeline route and temporary GCN fencing (see Section 3.2.1). **Appendix 1** provides data search results (public domain).

Table 2: Pond distances and GCN status (with date of record)

POND	DISTANCE	GCN status	Date/source of record
Pond 1	adjacent	No GCN present (Smooth newt recorded as present)	NLG Ecology 2010 (COFNOD and NLG (2010))
Pond 2	90m north	Unknown	No records from COFNOD. Outside pipeline impact area.
Pond 3	209m north	Unknown	No records from COFNOD. Outside pipeline impact area.
Pond 4	215m NW	Unknown. Pond condition poor	No records from COFNOD. Outside pipeline impact area.
Pond 5	256m WNW	Unknown. Pond condition excellent for GCN	No records from COFNOD. Outside pipeline impact area.
Pond 6	212m SE	Small, breeding GCN population (5 + EGGS)	COFNOD: ADAS, 2008
Pond 7	240m SE	Small, breeding GCN population (6 + EGGS)	NLG Ecology 2010 (COFNOD and NLG (2010))
Pond 8	221m SE	One female GCN 3 GCN (max. no.) + EGGS 9 GCN (max. no.) + EGGS 3 GCN (max. no.) + EGGS	NLG Ecology 2010 (COFNOD and NLG (2010)) NLG Ecology 2010 (COFNOD and NLG (2010)) ADAS 2008 ADAS 2008

Records from Vyrnwy Pipeline report (NLG Ecology 2010)

Map and Table data from NLG are in the report NLG Ecology, 2010, pages 14 and 37.

Eighteen other GCN records were logged for ponds ranging in distance from 600m to 1.2km. All but five logged small breeding populations. One of these had a medium population (22 maximum count for pond at 1km to the NE). NO specific data were given for the other 4.

Table 3: Connectivity of ponds at Ellesmere Lane site

Pond 1	adjacent	Excellent connectivity to proposed site and to hedge along south side of site
Pond 2	90m north	Good connectivity along the hedge running north from the end of the public footpath
Pond 3	209m north	Poorest connections, with only a circuitous route along the hedges. Good connections to Pond 4, which is 120m to the west of this pond.
Pond 4	215m NW	Some connection to site via hedges.
Pond 5	256m WNW	220m from Pond 1. Good connections via excellent GCN habitat (woodland) to the south of Pond 1
Pond 6	245m SE	Fair. Open fields between and a road (not insurmountable, but a residential road with kerbs and drains being a deterrent). No direct hedge or other linking habitat
Pond 7	288m SE	As above
Pond 8	317m SE	As above

Assessment for Ponds 6-8 are affected by the presence of temporary fencing from 2012 to the present, which reduces connectivity to the site.

Planning applications

Two applications for the immediate area were found:

- The Lodge, Tudor Drive, Penley, LL13 0LR: P/2014/0358. This is the strip of land directly adjacent to the target site on the south side. No ecology report was available on the website.
- Land area at NW side of Ellesmere Lane: P/2014/0392. The site is 240m NE of the target site. The ecology report available is a scoping study and no presence absence surveys were undertaken.

3.2 FIELD SURVEY: GREAT CRESTED NEWTS

3.2.1 The following results 3.2.2 to 3.2.4 are reproduced from the 2014 report (EVR Ecology 2014i) as they contribute to the final recommendations.

3.2.2 Inspection of GCN fencing and pipeline route 2014

The route of the pipeline at the south end of Ellesmere Lane (**Figure 2**) and the route across the A539 to the north (**Figure 3**) were examined for GCN fencing. There was fencing present at the south section extending NE towards the A539. To the south of Ellesmere Lane the pipeline trench was filled and the fencing removed (**Figure 2**). Fencing was present on the south side of the A539. No fencing was found at the road edge on the north side of the main road. The pipeline route was filled and the ground levelled.

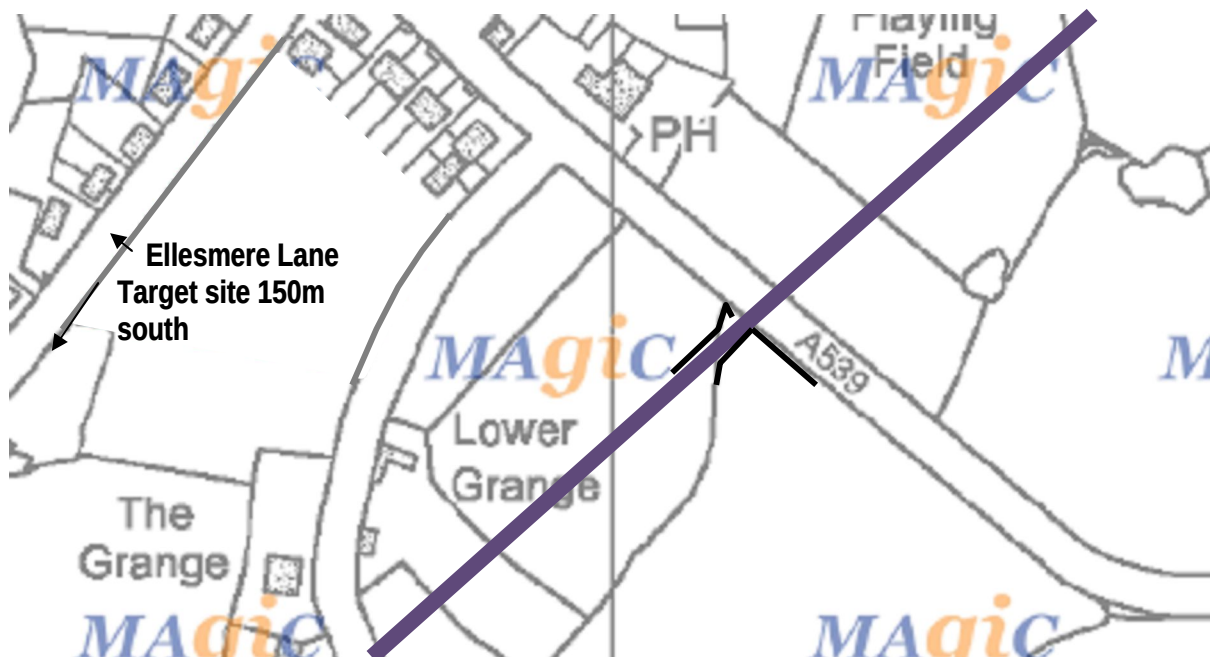


Figure 3: Pipeline route across A539. Visible GCN fencing from road (field not accessible)

3.2.3 Inspection and netting of Pond 2

Pond 2 had very little standing water, an area of <4m² in the centre of the pond. This was covered in floating vegetation, which could not be identified from the pond edges. A ring of emergent and marginal vegetation, about 2-3m deep, surrounded the entire pond and some areas in the pond perimeter had terrestrial grasses growing in them. Dipping was limited to 3 areas at the north, west and south sides.

Invertebrates found were limited in variety with greater water boatmen the dominant species caught (over 15 per sweep). Ramshorn snails, leeches, water flea, midge pupae and sludgeworm were present. No amphibian larvae were caught.

3.2.4 Identification of potential refuges, foraging areas on site

Seven areas were identified in the 2014 report (EVR Ecology, 2014) as having potential for use as refuges by great crested newts. They are illustrated in **Figure 7** and listed below:

- 1) Long grasses and rutting, with pools of water and fissures, at the west boundary
- 2) Fence line at NW and west boundaries where the grasses are long and tussocks have developed
- 3) Large patch of short annual/perennial plants at north boundary
- 4) Woodland edge where there are long grasses and undergrowth very close to Pond 1
- 5) Hedge boundary with long grasses and some ruderal growth at base
- 6) Hedge boundary as above
- 7) The long grasses and tussocks along the fence line at the north boundary.

On 24th and 29th July visits to the site, it was noted the west area (1 in **Figure 4** below) had not been cut and had established an area of tall vegetation interspersed with shallow pools and wet areas. Rush and hairy willowherb were present. Grass species were dominant. Area 3 had been cut closer to the field edge and the margin reduced to approximately 1m.

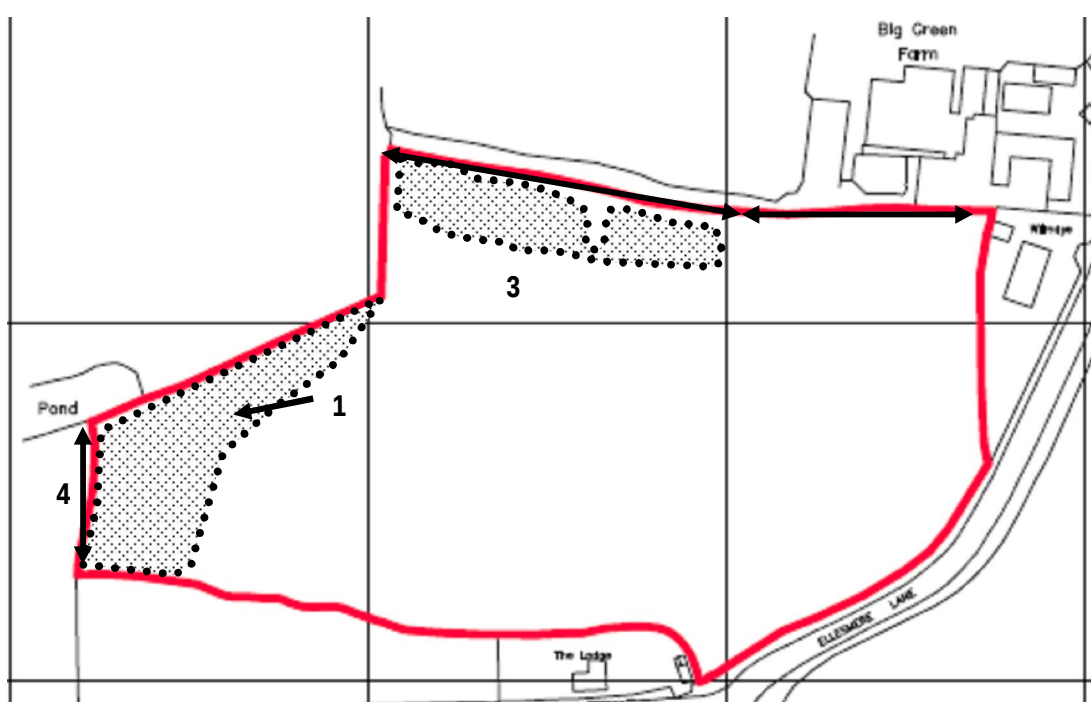


Figure 4: Potential refuge areas for GCN (March 2014)

3.2.5 Pond surveys for GCN: presence, absence results 2015

Table 4: Pond 1 results 2015

DATES	Bottle trapping	Egg search	Torching
6-7/5/15	NEGATIVE	NEGATIVE	NEGATIVE
12-13/5/2015	NEGATIVE	NEGATIVE	
18-19/5/15	NEGATIVE	NEGATIVE	NEGATIVE
26/5/15	NEGATIVE	NEGATIVE	

Table 5: Pond 2 results 2015

DATES	Bottle trapping	Egg search	Torching
6-7/5/15	NEGATIVE	NEGATIVE	NEGATIVE
12-13/5/2015	NEGATIVE	NEGATIVE	
18-19/5/15	NEGATIVE	NEGATIVE	
26-27/5/15	NEGATIVE	NEGATIVE	

Table 6: Pond 4 results 2015

DATES	Bottle trapping	Egg search	Torching
6-7/5/15	NEGATIVE	NEGATIVE	NEGATIVE
12-13/5/2015		NEGATIVE	NEGATIVE
18-19/5/15			
26-27/5/15			

Table 7: Pond 5 results 2015

DATES	Bottle trapping	Egg search	Torching
6-7/5/15	NEGATIVE	NEGATIVE	NEGATIVE
12-13/5/2015			
18-19/5/15			
26-27/5/15			

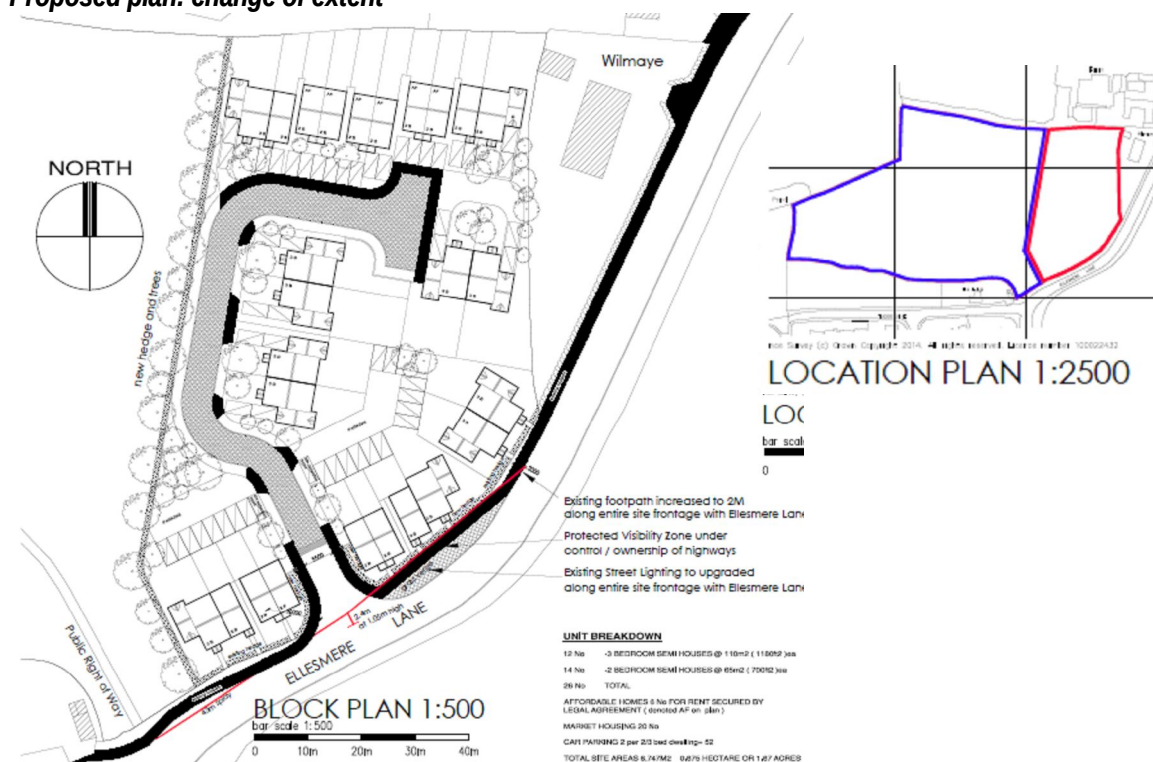
Table 8: Pond 9 results 2015

DATES	Terrestrial search	Torching
6-7/5/15		
12-13/5/2015		
18/5/15	NEGATIVE	NEGATIVE
26/5/15	NEGATIVE	NEGATIVE

Smooth newts were found on all 4 trapping sets in Pond 1, once in Pond 2, once in Pond 4 and once in Pond 5. Numbers were low (maximum count over all ponds was 7 on 7th May 2015). It was noted that the adult males found were very dark on the dorsal side.

Pond 9 was evaluated following anecdotal report from a neighbour of a newt being seen in the garden of the house at the NE corner of the site, where there is an ornamental pond. The newt could not be positively identified. The survey found a very small pond with overlapped stones at the edge, heavy macrophytes especially submerged and a large stock of carp. It is unsuitable for GCN and scored 0.42 on the HSI index (**Appendix 2**).

3.2.6 Proposed plan: change of extent

**Figure 5: Proposal for development at Ellesmere Lane, Penley**

The extent of the proposed development has altered, reducing the areas identified as potential refuge and foraging areas for GCN (see **Figure 4**) and extending the distance of the site from **Pond 1** to over 100m.

3.3 FIELD SURVEY: NESTING BIRDS

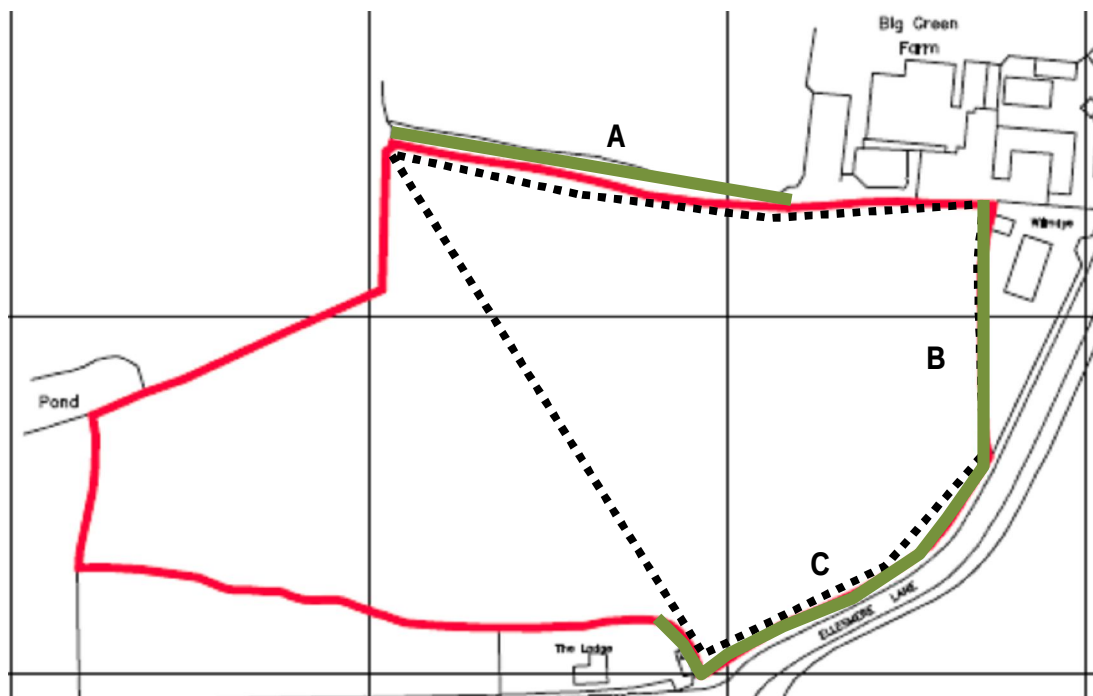


Figure 6: Hedges and proposed development area

No nests were found, and bird activity was limited along Sections B and C by the roadside. The most activity was registered around the hedge in Section A, which is set back from the field edge across the farm track, about 5-7m from the edge of the proposed development site. No specific instances of birds entering the hedges with nesting material or food stuffs were observed.

Section A and C hedges are dense in places and have potential for use by nesting birds. Section C is a border with the garden of the corner house and is low and quite sparse. No birds were observed entering or leaving the hedge.

3.4 FIELD SURVEY: OTHER PROTECTED SPECIES

See additional reporting in Summary Note 2015 (EVR Ecology, 2015).

4 ASSESSMENT

4.1 CONSTRAINTS OF SURVEY

- 4.1.1 Torching on all ponds was limited due to poor access and in the case of Ponds 2 and 4, was abandoned as considered to be ineffective.
- 4.1.2 The ground around Pond 2 was too uneven, boggy and waterlogged to safely access to dip the pond fully.

4.2 JUSTIFICATION FOR SURVEY EFFORT

- 4.2.1 **Pond 1:** This was the closest pond to the proposed development area. The extent of the development area has been reduced in the new plan (**Figure 5** below), making the pond 105m from the development edge. It is still the closest and has connecting habitat so a full set of surveys was required.

Pond 2: This is just over 100m to the north, connected via the hedge and so a full set was required.

Pond 3(see **Figure 1**): This scored as poor (0.45) on the HSI and was only fairly well connected to the site, with no direct link to the proposed development area, but indirectly via Pond 2. It was concluded that, if GCN were in Pond 3, then they would be almost certain to be found in Pond 2. Therefore it was considered that, unless population levels were needed then surveys on Pond 3 were not required.

Pond 4: This was poorly connected. It was trapped and torched, but its connectivity was again via Pond 2 and so the above justification for Pond 3 applies here.

Pond 5: This pond is now well over 250m from the site edge. The pond was difficult to access and it was concluded that as connectivity to the site would be via Pond 1, if no GCN were found there then they would be very unlikely to be in Pond 5. If they were then lack of them in Pond 1 indicates dispersal movements are away from the site and not towards it. Again further survey would only be required if population counts were necessary. No GCN were found in any ponds and so this was not the case.

Pond 9: This was not suitable for trapping and was totally unsuitable for GCN. Torching found numerous carp present and the structure of the pond, with an overlapping stone lip and steep sides, would make access for GCN difficult. The newt seen could not be positively identified and its description indicated it was likely to be a smooth and not a GCN.

4.3 CONCLUSIONS

4.3.1 Great crested newts: 2014

Conclusions in the first report (EVR Ecology 2014) were

- Three of the 5 ponds in 250m have good potential to support great crested newts
- There is potential for great crested newts to forage and take refuge on the site
- There is some potential for GCN to cross the field
- If GCN are present in Ponds 1, 2 and/or 5, there is potential for them to be on site and for adverse impacts on the species due to the development
- At present there is insufficient information to assess these potential impacts.

From the additional information it is concluded:

- In 2010 there were no GCN present in Pond 1, which is the closest pond at the very edge of the site. This pond has been isolated from the closest ponds in the south (Ponds 6-8) since 2012 at the latest, due to the works on the pipeline and the presence of GCN exclusion fencing along the length directly between the site and the ponds. This will have reduced considerably any potential for GCN to disperse from these ponds to Pond 1

- Ponds 2 and 5 are in a similar position and therefore subject to a similar constraint on potential for GCN to be present
- Presence of GCN in the south ponds 6 and 8 was recorded in 2008 (COFNOD record), but no GCN were recorded in Pond 1 in 2010
- Numbers had reduced in the south ponds between 2008 and 2010
- These data indicate that the potential for dispersal from the south ponds to the site is very low and was very low prior to the pipeline work. Colonisation of Pond 1 had not happened between 2008 and 2010 even though there is some connectivity, Pond 1 is good for GCN and at that time no additional barriers to movement were present. Therefore it is very unlikely that Pond 1 has been colonised in between 2010 and the present day
- As there has been no dispersal to Pond 1 it is extremely unlikely that Ponds 2 and 5 have GCN, as it would be expected that they would then be present in Pond 1
- Northern ponds (over the A539) are too distant and separated by the main road to provide a potential source of GCN for the ponds close to the site
- It is therefore concluded that it is very unlikely that GCN that will be present on the site and are using it as a refuge and foraging area
- Amphibians (smooth newts) are present and it will be recommended that all work will be undertaken using reasonable avoidance measures (RAMS) and that there will be a section of the west side of the site that will be set aside as a buffer zone between the pond and the western part of the development.

4.3.2 Great crested newts: 2015

It is concluded:

- There are no great crested newts in either of the 2 ponds (Pond 1 and Pond 2) that are closest to the proposed site
- The other ponds looked at showed no signs of presence and their connectivity was limited to the extent that any dispersal towards the site would result in GCN being present in Pond 1 and Pond 2
- There has been no such dispersal and it can be concluded with some confidence that GCN are unlikely to be in the other ponds investigated
- The GCN fencing at the south side was removed before spring 2014 and there is no evidence of dispersal from Ponds 6-8 towards the site
- It is therefore concluded that the potential risk for GCN to be on or near the development site is considered low
- It cannot be totally discounted however as GCN are known to be in the area and dispersal can take place over a long period of time.
- The reduction of the area to be developed, resulting in the retention of the majority of the area identified as good GCN habitat, reduces the potential long and short-term impacts identified in 2014
- The proposed development may proceed under reasonable avoidance measures (RAMS), with all precautions followed to remove any potential disturbance, death and injury to GCN. In the light of present evidence, it will not require a European protected Species licence
- However, if great crested newts are discovered at any time on the site during the works then all work must stop and advice taken from a licensed and experienced ecologist and/or NRC as to how to proceed. Failure to do so may result in an offence under the legislation for protected species (**Appendix 3**).

4.3.3 Nesting birds

No specific evidence of nesting was observed. There is potential especially in Section A and to a lesser extent Section C to be used by nesting birds. This is an ongoing potential impact through the nesting season.

4.4 POTENTIAL IMPACTS

4.4.1 Great crested newts

GCN: short-term impacts

There are ponds within 250m of the site. There is a small potential impact for disturbance, injury or death through the possibility of amphibians crossing the site during works. The potential for short-term impacts is assessed as low because:

- No GCN were found in the closest ponds to the site and it is concluded that they are very unlikely to be present in other ponds examined during the survey work
- Evidence indicates there has been no dispersal as yet from the ponds to the south, which were shown to have GCN in 2010, up to this point and there had been none between 2008 (COFNOD record) and 2010 (NLG record) despite the lack of barriers at that time, indicating there are no drivers for newts to disperse in this direction at present
- Potential for GCN to be present on the site is therefore low to zero
- Any short-term impacts can be removed by reasonable avoidance measures (RAMs)

The potential for impact is assessed as small and it will be addressed by mitigation measures. It is concluded that any potential impacts can be mitigated by using best practice, including reasonable avoidance measures, during the development work.

GCN: Habitat loss

There is a small loss of good potential GCN habitat at the fence at the north side. The vegetation in this area had been cut back in 2015. The new plan reduces the loss of potential foraging habitat and refuge area (at the north side by the fence) to 0.04 hectares. Overall loss of land area is approximately 1.65 hectares. Using the risk assessment calculation (NE – GCN application form) loss of 1-5 hectares of land over 250m from breeding pond is calculated as green, which is no offence likely. Ponds 6 – 8 are only just under 250m and, taking that in addition to the barriers already cited, would indicate that in this instance an offence was unlikely.

Potential loss will be mitigated for by provision of a wildlife area and enhancing any intended landscaping with features that are attractive to amphibians and other wildlife (see **Section 5: Mitigation**)

GCN: Fragmentation and isolation

There are no potential impacts identified at this time. However, construction of housing with enclosed fence areas will result in the prevention of potential future movements of GCN. The connectivity will remain around the existing site with the retention of hedges. Best practice is to create gardens that do not exclude the movement of wildlife (or example through the installation of concrete base/fence panel style boundaries that prevent free movement between gardens) while allowing residents privacy from neighbours.

4.4.2 Nesting birds

There is potential for the site hedges to be used by nesting birds and birds were active across the site.

Therefore there is potential for short-term impacts on birds during the development work through dust, noise and disturbance from works within 4m of the hedges during the nesting season.

The hedges are all retained apart from a small section at the south side for the new access. Therefore the potential for future nesting is maintained. Also the houses are generally 10m or over from the field edges, apart from one at the NW side. Therefore potential impact through disturbance post-development is considered to be low. All long-term potential impacts are classified as low.

4.4.3 Other protected species

See additional note.

5 RECOMMENDATIONS AND MITIGATION

5.1 FURTHER SURVEY

5.1.1 Great crested newts/nesting birds

No further survey is recommended at this time.

5.1.2 Other protected species

See additional note.

5.1.3 The conclusions and recommendations in this report in respect to surveys for protected species are based upon results from surveys in June 2015. These data will only be of use for 1-4 years (depending on species and circumstances) after which further survey to establish the position and possible changes in status will be necessary to ensure all activities are informed and guided by recent data on site status.

5.2 REQUIREMENTS FOR EPS LICENSING

5.2.1 Great crested newts

It is concluded that on present evidence and assessment there is no requirement at this time for a European Protected Species Licence (EPSL) for great crested newts prior to the start of works. **It is imperative that, should any great crested newts be found on site or any amphibian that cannot be identified conclusively, all work must stop and advice and guidance taken from a suitably qualified person(s) (ecologist, NRW). If GCN are found to be present then the licence position will require immediate review.**

5.2.2 Protected species

No requirement for licensing is identified at this time. This will be reviewed in the event of any protected species being discovered on the site during the development period.

5.3 MITIGATION MEASURES

5.3.1 Great crested newts

It is concluded that they are very unlikely to be on site. However there are ponds within 250m of the site and GCN are known to be present within 1km of the site (closest known is 217m to the south). Therefore it is required that reasonable avoidance measures must be undertaken at all times on the site to prevent the possibility of This is qualified by the caveats that

- 1 in all areas where there are ponds it is best practice to undertake works using reasonable avoidance measures (RAMS), to minimise risk of impacts should GCN be present and undetected. These are given below.
- 2 **if at any time during the development great crested newts are found, all work will stop immediately and advice taken from a licensed ecologist or Natural Resources Wales (NRW) as to how to proceed. This would include a review of the licensing position. Failure to do so may result in an offence under the protected species legislation (Appendix 3).**

It is recommended that reasonable avoidance measures (RAMs) are implemented to minimize the potential for any harm to great crested newts and other amphibians during the development. The storage of materials on the site (for example) could provide commuting amphibians with potential places for shelter/refuge. The following RAMs should therefore be implemented:

- No hedge removal will be undertaken in the winter period from November to March. These periods will be subject to variation in the weather patterns of any year. Early onset of cold will extend the period into October, for example, and late cold temperatures in early spring will extend in further into the year.

- All open grass areas that have been maintained at a short sward must continue to be managed in the same way until the start of development to ensure no new refuge potential is created on the site
- The area of longer grass to the north side will be cleared in the winter period. This is surface clearance and the area has no potential for use as a hibernation area for any amphibians. It will be topped down in November and if required in March to May, from the present until the start of the development. Failure to do so may result in the creation of a sward that will provide potential refuge habitat for amphibians and over-wintering potential
- Land clearance of short sward areas should be undertaken in the periods March to June or November to February (when still cold). These periods are the least likely to impact on amphibians. If undertaken in the intervening periods then it should be done during a dry period
- Any piles of materials brought onto the site must be kept on pallets and not stored on the ground. There are no material piles presently identified on site.
- All building materials (bricks, tiles, concrete blocks etc) etc should be delivered and stored off the ground on pallets or timber baulks
- All loose materials should be delivered to and stored on site in bulk bags, and not be loose tipped on site. Any loose tipped piles that are not compact material must either be stored in bulk bags or enclosed in a fenced compound. This includes stones and pebbles, any large size aggregate pieces etc. Sand, cement and other close packed material may be stored on the ground.
- Excavations should, wherever possible, be back-filled at the end of each working day. Where trenches are excavated for services, the trench should be excavated in the morning, the services laid and the trenches back-filled in the afternoon. Where this is not possible, the trenches should be covered over with sheet plywood and the edges sealed with topsoil to prevent amphibians falling into the trenches. Any trenches left open for any reason must be thoroughly checked prior to filling. If there is water built up that cannot be clearly inspected to the bottom then this must be drained carefully prior to filling.
- If it is impractical to cover trenches or dug holes then a climb out must be provided (planking, earth ramp or similar) and trenches checked prior to filling as above.

5.3.2 Nesting birds

All bird species and their nests are protected from destruction and disturbance in the breeding season. The potential for short-term impacts will be mitigated for by the following measures:

- The section of hedge to be removed will be taken out outside the nesting season if possible. If not, then it is advised that it and the hedges to either side up to 10m are surveyed prior to removal. If nests are present then work will be delayed until the young have fledged. Clear sections will be netted to prevent other birds from nesting until the entire length and 10m either side are clear. The section may then be removed.
- **Start of works** avoids the nesting season March to September
- If this is not possible and work commences in the breeding season of March to September then a survey will be carried out for their presence prior to any work being carried out near to the hedges (within 4m)
- If no nests are found then work will go ahead, but a watching brief will be maintained over the nesting period to ensure that no active nests are disturbed during the works.
- Storage compounds, contractors' compound and any processes involving cutting, creating dust, noise and vibration will be located at least 10m from any hedge line to minimise the possible disturbance
- **if nesting behaviour is observed (carrying nesting materials or food into buildings), then work should be suspended in 4m of that area and an ecologist contacted to assess the situation and advise.**

5.3.3 Conservation and enhancement measures

A redevelopment provides opportunities to enhance a site for wildlife and is recommended on sites where there is potential for wildlife and site features that may be used as foraging areas and/or commuting pathways for bats and other species. It is therefore recommended:

- Divisions between gardens should be designed to allow gaps under fences and not closed off. This will allow free movement of wildlife such as newts, other amphibians and hedgehogs between gardens and maintain the connectivity of the garden habitats across the site. Fence gaps can be small to prevent pets escaping or unwelcome incursions from larger animals
- Where possible, the mature trees and hedgerows on around and near the site should be retained. These have potential to develop into natural roosting sites for bats and birds.
- It is also recommended that insect attracting shrubs be incorporated into planting schemes for the gardens and/or public areas to encourage the presence of insects and thereby provide suitable foraging sites for local bats which have been observed to use the site for foraging (see **Appendix 4**).
- The landscape should be managed where possible to maintain the small mammal populations and the insect population that is attracting bats. Shrub and less well-managed areas will create habitats to attract small mammals, birds and invertebrates

5.3.3 **If any protected species are found during any work being undertaken during the clearance and construction on the site then all work must stop and a qualified ecologist or NRW contacted for advice as to how to proceed. Failure to do so may result in an offence under the legislation detailed in Appendix 3.**

5.3.5 Other protected species

See additional note.

6 REFERENCES

- English Nature (2001) *Great Crested Newt Mitigation Guidelines* Version August 2001
- EVR Ecology (2015) *Summary note for protected species* Ref: 2015(16)/VC/71CO/ADD
- EVR Ecology (2014i) *Protected species: supplementary report for land at Ellesmere Lane, Penley* Report Number 2013(14)/VC/69 Issued 8th April 2014
- EVR Ecology (2014ii) *Phase One habitat survey and protected species assessment for land at Ellesmere Lane, Penley* Report Number 2013(14)/VC/69 Issued 1st August 2014
- Langton, T.E.S., Beckett, C.L. and Foster, J.P. (2001) *Great Crested Newt Conservation Handbook* Froglife.
- Natural England (2007) *Badgers and Development: A Guide to Best Practice and Licensing* Version 09/07
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- Oldham, R.S., Keeble J., Swan M.J.S and Jeffcote, M. (2000) *Evaluating the suitability of habitat for Great crested newts*. Herpetological Journal 10 143-155

7 APPENDICES

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| Appendix 1: | COFNOD data search results |
| Appendix 2: | HSI results for ponds |
| Appendix 3: | Legislation and policy guidance |
| Appendix 4: | Habitat enhancement |