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**REPORT ON POND AND
HABITAT ASSESSMENT FOR
PROTECTED SPECIES AT
LAND at 6 THE ELMS
TALLARN GREEN
NR MALPAS**

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1 EXECUTIVE SUMMARY

1.1 BACKGROUND

Val Cooper was commissioned to undertake a pond and habitat assessment in respect of great crested newts at a site at 6 The Elms, Tallarn Green near Malpas. The survey is required in respect of a proposed planning application for the construction of a stable block on a plot in the grounds of the house.

The survey was conducted to determine the potential of the proposed development site and surrounding area to support great crested newts (GCN), assess the potential impact of the proposed development on protected species and, where possible, to investigate the presence/absence of GCN on or close to the intended development area. Site and pond assessments on 2 closest ponds were undertaken on 19th June 2012.

1.2 RESULTS

There are 3 water bodies and one watercourse within 250m of the site. Three ponds are located at 95m, 181m and 241m. A very small brook (the Brook) is 84m to the SW across a road at its closest point. The closest pond (Pond 1) has poor potential (HSI score 0.30) to support GCN and Pond 2 (HSI score 0.73) has good potential. Connectivity of Pond 1 to site is not direct. The site has no hedge boundaries. The closest hedge is 65m away across open ground.

There are 8 other ponds between 270m and 440m from the site. They are separated from the site by open fields, mostly cultivated with some grazing, and have no direct hedge or other connecting line to the site. Connectivity to the other ponds is therefore poor due to distance and lack of direct connective habitat.

The plot for the construction is a paddock with an open expanse of regularly mown grass, which is adjacent to the house. There is a concrete base and fuel tank to the west side, which are to remain.

1.3 ASSESSMENT

The site area to be developed has no refuge potential for great crested newts and potential for GCN to use it for foraging and commuting is low. The closest pond has little possibility of supporting GCN and the other ponds are relatively distant and have plenty of good GCN habitat around them and intervening between the ponds and the site. Movements are assessed as more likely away from than towards the site.

Long term impact is assessed as low to zero. There is to be no impact on the ponds, no destruction of pond habitat features and foraging areas in the surrounding habitat. The stables to be built cover a relatively small area (approximately 150m²), all of the area is mown grass and the completed development will not create insurmountable barriers to any newt movements across the site.

There is a small potential for short term impact during construction if GCN were crossing the site during the construction. Movements of GCN from ponds towards the site are considered to be unlikely due to the suitability of other commuting habitat along hedges away from the site and the very small possibility they are present in Pond 1. Therefore the likelihood of finding GCN is considered to be extremely small. It is considered these impacts may be minimised/removed by employing reasonable avoidance measures (RAMS) during all work undertaken. **Although it is considered very unlikely that great crested newts will be found during work, if any are discovered then all work must stop and Natural England or a qualified consultant, licensed for great crested newts, must be contacted and their advice followed. Failure to do so may result in an offence under the legislation detailed in Section 5.3.**

2 BACKGROUND

2.1 SITE DESCRIPTION

The plot area is approximately 0.015 hectares and is in the grounds of 6 The Elms, Tallarn Green, Malpas, which is a private residence. The survey incorporated the proposed construction area, 2 ponds, and the habitat surrounding the ponds and connecting to the construction areas and other water features. The Ordnance Survey co-ordinates of the plot are SJ448439.

Area of proposed construction of new stable block

The development plot is an area of approximately 0.015ha (**Figure 1**). At present the area is adjacent to the garden and house of 6 The Elms and consists of short-cut grass, which is regularly mown and maintained. The plot is surrounded by a ranch-style fence, with a hedge at the west side (**Figure 2**).



Figure 1: proposed area for stable block



Figure 2: hedge at west side

There is a small concrete base and fuel tank located beside the hedge (Figures 3 and 4). These are to remain in position.

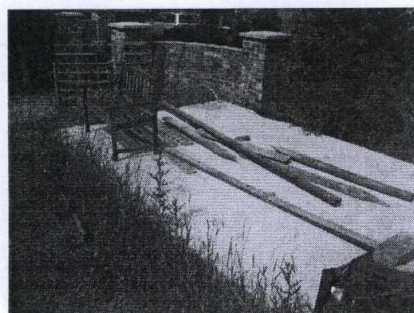


Figure 3: concrete base

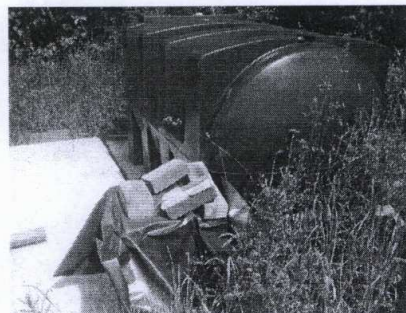


Figure 4: fuel tank

Ponds and habitat

Pond 1 is approximately 300m² in size. The water level is very low. The normal level is at the base of the duck house (**Figure 5**). The pond is completely shaded by mature trees. There is very little vegetation around the pond edges (**Figure 6**) and no emergent or other aquatic plants are present. The pond base has a thick layer of leaf litter and piles of dead branches. Around the pond there is some rough grass and a hedge at the north side (**Figure 7**). The rest of the pond is surrounded by farmland, in use mainly for grazing.



Figure 5: Pond 1 with duck house



Figure 6: Pond 1 edge



Figure 7: Vegetation at north side of pond



Figure 8: Pond 2

Pond 2 is 181m from the site to the north. It has marginal emergent vegetation and some duck weed (*Lemna minor*) is present at the edges. The pond is bordered by rough grassland to the north, east and south and there is a hedgerow and cut field to the west.

2.2 PERSONNEL

Val Cooper undertook the survey. Val Cooper is a professional consultant and bat specialist. 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 Malpas 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 holds scientific/education licences for bat species and great crested newts. She is a full member of the Institute of Ecology and Environmental Management.

2.3 PROPOSED WORKS

There is a proposal to construct a new stable block on a paddock of short-cut grass close to the house.

2.4 AIMS OF STUDY

The surveys were conducted to investigate the status of the site in respect to great crested newts. It was to:

- establish the potential for the presence / absence of these species on the site and/or close to the intended development area
- gather information to make an informed assessment as to the use of the site by these species
- inform an assessment of potential impacts on any species found on site and establish whether there may be a requirement for further survey work to achieve this
- assess the requirement for a European Protected Species Licence (EPSL) for the development.

3 SURVEY METHODOLOGY

3.1 DESK STUDY

All water bodies within 100m and 500m radii of the site of the proposed construction were identified. Potential commuting lines, watercourses and connectivity between ponds were identified from OS maps and aerial photographs provided by Google Earth. The connectivity of these water bodies was assessed.

3.2 FIELD SURVEY

3.2.1 Great crested newts

Pond Survey

Available ponds were assessed for suitability as habitat for great crested newts on the following criteria:

- location
- size
- permanence of pond
- water quality
- percentage shade
- presence of wildfowl
- presence of fish
- pond density
- suitability and availability of terrestrial habitat
- abundance and type of emergent / submerged vegetation

Two ponds were assessed. Other ponds were over 240m from the site (over 350m). No pond surveys were undertaken for the establishment of presence/absence of great crested newts. This was not within the scope of this assessment.

Pond location, habitat and connectivity

Water bodies had been located using an Ordnance Survey map and aerial photographs. Surrounding habitat was examined and the suitability and potential for use by great crested newts assessed. Distance and connectivity between proposed sites, ponds and to other ponds outside the 500m radius were assessed by maps and aerial photographs during the desk survey, and during the site visit. Potential dispersal routes were identified.

Identification of potential refuges, foraging areas on proposed development site

The area of the proposed development plot was inspected for potential usage by great crested newts, around and inside any structures on the site. The immediate areas around the proposed development sites were assessed for their suitability as GCN habitat and potential use of the whole site for commuting, foraging and land refuges.

4 SURVEY RESULTS

4.1 DESK STUDY

- 4.1.1 The water bodies identified within a 100m radius of the field site on an Ordnance survey map are:
- 1 pond to north at 95m

- 4.1.2 Between 100m and 500m there are the following ponds:
- 1 pond 181m to NE of the site
 - 4 ponds 270-400m to the W divided from the site by a road, the Brook and farmland
 - 1 pond 273m to the SW divided from the site by a road and farmland
 - 2 ponds 390-440m to the SE divided from the site by farmland and roads
 - 2 ponds 241m and 440m to the E divided by cultivated agricultural fields

There is some connectivity via hedge rows, but it is not direct to the site and these features are relatively distant. They were not considered relevant to the assessment.

4.2 FIELD SURVEY

4.2.1 Pond survey

Two ponds at 95m and 181m were available for assessment. The HSI scores and parameters are given in **Appendix 1** and summarized below in **Table 1**.

Pond 1 (Figure 9) is a small water body of about 300m². It has no marginal vegetation. It is completely shaded by mature trees, which have laid a thick leaf litter and dead wood on the pond base. This has decayed to a thick mud and the water was cloudy, with a surface layer of scum created by vegetation decay. There is some terrestrial vegetation close to the water's edge on west side (**Figure 9**). Ducks have been present and anecdotal evidence from a neighbour stated that the water level has dropped considerably in recent years. The edges are puddle, indicating the edges of the pond have been grazed by cattle/horses.

Invertebrate assemblage was poor, with 2 families represented all pollution tolerant (see **Table 1**). This and the condition of the pond base and surface water indicate poor water quality.

The terrestrial habitat is classified as moderate. There are areas of good habitat to the north and along the hedge that runs on the south side. This feature does not directly connect to the proposed development (target) site.



Figure 9: Pond 1

Pond 2 (Figure 10) is fenced and has no signs of grazing. There is good GCN habitat immediately surrounding the pond. This extends with rough grassland to the north and south and an orchard area to the east. There is a hedge on the west side, with a cultivated field beyond (**Figure 11**).

The pond is partly shaded to the west side. There is a small area of emergent vegetation and some submerged. The invertebrate assemblage (**Table 2**) was fair, with 7 families. Newt larvae were found. These were very small (<20mm) and could not be positively identified as smooth or GCN.



Figure 10: Pond 2



Figure 11: Habitat on west side of Pond 2

Table 1: HSI (Habitat Suitability Index) scores for ponds

Pond	score	assessment
Pond 1	0.30	Poor potential to support GCN
Pond 2	0.73	Good potential to support GCN

Table 2: Invertebrate assemblages of ponds (and vertebrates)

Pond	families	number	comment
Pond 1	Bloodworm Phantom midges (Chaoboridae)	2	Detritus on bed and the water was very shallow. This made dipping difficult and samples were badly clouded.
Pond 2	Water beetle (x2) Lesser water boatman (corixidae) Ramshorn snail (Planorbidae) Damselfly (Lestidae) Chironomid midge larvae Phantom midges (Chaoboridae) Newt larvae (species not positively identified)	7 1	Water was clear and the bed had little detritus.

4.2.2 Pond location, habitat and connectivity

The attractive habitat areas near to **Pond 1** are at the north side of pond (**Figure 12**), which has long, rough grass areas and a substantial hedge that runs west and east. To the south side (**Figure 13**) towards the target site the area is open with grazed and cut areas of grass. There are no connecting hedges and no direct commuting link from pond to target site. The least attractive direction is south towards the intended plot area (**Figure 13** with position of **Pond 1** indicated).

There is a substantial hedge line between **Ponds 1** and **2** (**Figure 14**), providing a direct dispersal and commuting link between the 2 ponds. They are 110m apart.



Figure 12: North side of Pond 1



Figure 13: Area between site and Pond 1 (pond indicated)



Figure 14: west hedge between Pond 1 and 2



Figure 15: Proposed development site

4.2.3 Identification of potential refuges, foraging areas on development site

The plot area for the stable block has no potential refuge areas for GCN. The grasses round the concrete base and hedge at the west side would provide some potential shelter. These are to be retained. The fences around the plot (**Figure 13**) have a line of rougher grass at the edges. This is to be retained.

5 ASSESSMENT

5.1 CONSTRAINTS ON SURVEY

- 6.1.1 There were no surveys to establish presence and absence undertaken. This was not within the scope of this assessment.
- 6.1.2 The condition of Pond 1 made sampling and identification of invertebrates difficult. The water was heavily sedimented and a clear sample could not be taken.

5.2 CONCLUSIONS

Great crested newts

The conclusions below are given on the basis of the:

- evaluation of the ponds, the surrounding habitat around the ponds, habitat on the intended development site and HSI scoring
- connectivity of the proposed development plot to the ponds/water bodies
- assessment of the potential impacts on GCN if present in any of the ponds

It is concluded that:

- It is extremely unlikely that great crested newts (GCN) will be present in Pond 1. There is potential for them to be present in Pond 2.
- Connectivity of the proposed development site to the closest water body (**Pond 1**) is poor. There are no close water bodies that may provide a dispersing population and no connective pathway to the target site from either of the closest ponds.
- The identified migration routes, refuge areas and foraging habitat indicates that **if** GCN are present in Pond 2, the most likely migration and dispersal routes would be away from the proposed development site and via more suitable habitat such as the hedges, shrub areas and rough grass habitat that are around the pond to the north and east sides
- The plot area for the new stables has no refuge areas for GCN. It may have some potential for foraging.
- The plot is unlikely to be used as a commuting route as it is very open all around the area with no refuge or areas of cover
- **It is therefore concluded that the likelihood of GCN being on the plot area, using it as a refuge or crossing it as a commuting pathway is low**
- Long term impacts of development are assessed as low to zero. No ponds will be removed and the **potential** commuting and foraging areas of habitat lost to development are minimal (< 0.015ha). There would not be a significant loss of GCN habitat
- The proposed structures will not create an insurmountable barrier to movements and no post-development impacts are identified
- Short-term impacts are assessed as potentially low to zero. Any potential for GCN to be using the target site to commute across may be addressed by reasonable avoidance measures (RAMs).

Potential short-term impacts are given in **Section 6.1**. Long-term impacts are given in **Section 6.2**.

5.3 LEGISLATION AND POLICY GUIDANCE

Great Crested Newts

Great crested newts, *Triturus cristatus*, are offered special protection under the following legislation:

- **The Wildlife and Countryside Act 1981 (as amended) Schedule 5, Section 9.** This Act transposes into UK law the **Convention on the Conservation of European Wildlife and Natural Habitats** (commonly referred to as the "Bern Convention"). The WCA was recently amended by the **Countryside and Rights of Way [CroW] Act 2000**. This makes it an offence to:
 - intentionally kill, injure or take a great-crested newt [Section 9(1)]
 - possess or control any live or dead specimens or anything derived from a great-crested newt [Section 9(2)]
 - intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great-crested newt [Section 9(4)(a)]
 - intentionally or recklessly disturb a great-crested newt while it is occupying a place or structure which it uses for that purpose [Section 9(4)(b)].
- **The Conservation (Natural Habitats &c) Regulations 1994** (The Habitats Directive) transposes into UK law **Council Directive 92/43/EEC** of 21st May 1992 on the **Conservation of Natural Habitats of Wild Fauna and Flora** (referred to as the Habitats [and Species] Directive). The great-crested newt is listed on Annex II and Annex IV of the Directive. Inclusion in Annex II serves to underline the species' conservation significance; inclusion in Annex IV (European Protected Species) means that member states are required to put into place a system of strict protection as outlined in Article 12. This is done through inclusion in Schedule 2 of the Regulations. Regulation 39 makes it an offence to:
 - deliberately capture or kill a great crested newt [Regulation 39 (1)(a)]
 - deliberately disturb a great crested newt [Regulation 39(1)(b)]
 - deliberately take or destroy the eggs of a great crested newt [Regulation 39(1)(c)]
 - deliberately damage or destroy a breeding site or resting place of a great crested newt [Regulation 39(1)(d)].

This legislation applies to all life stages of great crested newts.

Exceptions for licensing

There are several exceptions to the provisions listed above under Regulation 44(2)(e). The Wildlife Licensing Unit of Natural England issues licences for a number of purposes, including "*preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment*". Licences permit unlawful activities under and in accordance with the terms of a licence granted by the appropriate authority.

Regulations 39 does not apply to anything done (under appropriate licence) for any of the following purposes

- scientific or educational purposes;
- ringing or marking, or examining any ring or mark on, wild animals;
- conserving wild animals or wild plants or introducing them to particular areas;
- protecting any zoological or botanical collection;
- preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- preventing the spread of disease; or
- preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property or to fisheries.

The appropriate authority shall not grant a licence under this regulation unless they are satisfied-

- (a) that there is no satisfactory alternative, and
- (b) that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

6 IMPACT ASSESSMENT

6.1 PRE AND MID-TERM IMPACTS FOR GCN

There is a very small potential impact for disturbance, injury or death through the possibility of amphibians crossing the plot.

The potential for short-term impacts is assessed as very low because:

- It is very unlikely that GCN are crossing the plot.
- There is no refuge potential in the plot area for the building
- Although Pond 2 has good suitability for GCN there is a lack of connectivity to the site making the potential for dispersal across it very low
- Even if GCN are present it is considered that the low risk may be addressed by the use of reasonable avoidance measures during the development
- Construction activities can be timed to minimise any risk of finding GCN present on the site.

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 (RAMs), during the development work.

6.2 LONG-TERM IMPACTS FOR GCN

6.2.1 Habitat loss

There is no impact identified in respect of habitat loss. The areas of the development have been identified as poor GCN habitat and unlikely to be used by them..

6.2.2 Habitat modification

Habitat modification is insignificant.

6.2.3 Fragmentation and isolation

The proposed construction will not cause any potential for the fragmentation or isolation of populations or metapopulation of newts. The present connectivity of the habitat is to be maintained and the proposed structures will not present insurmountable obstacles.

6.3 POST ACTIVITY IMPACTS

There will be no significant increase in potential disturbance levels.

The potential for future interference that may result in impacts on any potential GCN population at the site is low. The site is not to be sold and the present owner is aware of the protected status of great crested newts.

6.4 SUMMARY OF POTENTIAL IMPACTS

These potential impacts are assessed on the basis of a possibility of GCN being present in Pond 1.

A summary of **potential** impacts is given in **Table 3** below.

Table 3: Summary of impacts

Potential Impacts on GCN populations	Without mitigation	With mitigation
Pre and mid-term	Low-none	None
Long term	None	None
Post-activity	None	None

7 IMPLICATIONS AND RECOMMENDATIONS

7.1 FURTHER SURVEY

There is no requirement for further surveys for GCN or any other species at this point in time. The potential presence of GCN is accounted for in mitigation proposals and in the final impact assessment on populations as made in Section 6.4 above.

The conclusions and recommendations in this report in respect of protected species are based upon results from surveys in June 2012. These data will only be of use for 2-4 years for GCN (depending on intended data use) 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.

7.2 REQUIREMENT FOR LICENSING

There is no requirement at this time for a European Protected Species licence (EPSL) for work to be undertaken. **If at any time GCN or any other protected species are found on the site then work will stop (as below) and this position reviewed.**

7.3 MITIGATION PROPOSALS

7.3.1 Great crested newts

The development will not result in the loss of any aquatic habitat and significant loss of potential terrestrial habitat of great crested newts, nor on the basis of present evidence will it result in significant disturbance of the species or interrupt its migration between habitats. The development on the plot will not result in the destruction of a significant amount of potential habitat areas (<0.015ha) and connective links around the site and the habitat around the ponds will remain intact. The long-term and post-activity impacts are assessed as no impact on GCN. There is some potential impact in the short-term, which may be addressed by the following mitigation proposals.

It is considered **on present evidence** that the following measures will mitigate for the potential short-term impacts that have been identified.

Reasonable Avoidance Measures (RAMS)

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

- Removal of any materials on site (none specifically identified, but this includes any items not foreseen during survey such as logs, planking, pavement slabs) will be done by hand and at a time when it is less likely for GCN to be present. The best period is from March to July when most are in ponds, or from November to February when they are hibernating, providing there is no identified potential for hibernation on clearance areas. In this instance all clearance is surface and has no hibernation potential
- Piles of materials on the site must be retained in enclosed bags or on pallets
- All building materials (bricks, tiles, concrete blocks etc) etc should be 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
- 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 that have been left in overnight, whether or not they have been covered, must be examined for the presence of amphibians prior to filling.

- No building practices during works should result in detrimental impacts on any of the water bodies on site.

It is considered very unlikely that great crested newts will be found during work. If any GCN are discovered then all work must stop and a qualified consultant, licensed for great crested newts, must be contacted and their advice followed. Failure to do so may result in an offence under the legislation detailed in Section 5.3.

8 APPENDICES

Appendix 1: HSI scores and parameters for GCN

9 REFERENCES

- English Nature (2001) *Great Crested Newt Mitigation Guidelines* Version August 2001
- Gent, T. & Gibson, S. (2003) *Herpetofauna Workers' Manual* Revised reprint 2003. JNCC
- Langton, T.E.S., Beckett, C.L. and Foster, J.P. (2001) *Great Crested Newt Conservation Handbook* Froglife.
- 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

The conclusions and recommendations in this report in respect of protected species are based upon results from surveys in June 2012. These data will only be of use for 2-4 years (depending on intended data use) 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.