DRAFT REVISED PLAN SEPTEMBER 2015

# GREAT CRESTED NEWT
## *Triturus cristatus*

### 1. INTRODUCTION

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The great crested newt is the largest of our three native newt species (up to 20cm long) and males in breeding condition have a well developed, jagged crest along the back which is indented at the base of the tail; this is more jagged and less continuously formed than in the commoner smooth newt. The skin is also more uneven than the smooth newt and often appears black. The belly pattern of black spots on a yellow - orange background is unique to the individual which can live for 17 years but more usually just 7 or 8 years.

Most of the life cycle is spent on land, adults returning to their breeding sites, typically ponds (but including canals, open air swimming pools etc.), as early as February. During the winter, adult and immature newts hibernate in frost-free areas such as well- drained soil, hedgerow bases, old walls and piles of rubble. Newts are particularly sensitive to environmental change as they require two types of habitat in close proximity – woodland, pasture, hedgerow, scrub and rank grassland providing good cover and foraging in summer and hibernation sites in winter, and suitable freshwater sites for breeding during spring. This species of newt prefers relatively large (50-750m$^2$), unshaded, fish-free ponds retaining a depth of water throughout the year and with open water and a good macrophyte flora. Intensively farmed arable land is therefore the least hospitable to crested newts but pond clusters within accessible locations within 500m of each other that have similar pond characteristics can support meta-populations of many thousands of adult great crested newts and such areas could qualify as Special Conservation Areas (SAC).

Eggs are laid singly on submerged leaves (although in the absence of aquatic vegetation will use a variety of material including dead leaves, plastic bags (R.Moffatt,1991) and similar rubbish), which the female encloses by folding the leaf and holding it together with her hind feet until an excretion around the egg sets like an adhesive. This process is repeated, often on the same plant, many times during the evening and the enclosing of every egg laid requires about five minutes before the egg has been enclosed by the folded leaf.

The great crested newt can travel up to 0.5km from ponds so it is important to conserve both the aquatic and terrestrial habitat. Creating log/brush piles around the ponds provides places for newts to secrete themselves and hibernate and management around ponds must be carefully planned to minimise the risk of disturbance and other negative impacts. However, conservation of the species lies mainly in the preservation and maintenance of breeding ponds. These animals are capable of replacing even a relatively high juvenile mortality rate through its longevity, their strategy of protecting eggs during gestation and the large number of viable eggs produced by the female in any single year of up to 400. Despite a 50% mortality in the first stages of embryonic development

because of a bizarre chromosome system (Beebee, 2015), after a prolonged period of population decline at a breeding pond, there may be emergence levels of several thousand animals in a single season immediately following restoration. Obviously, such peaks of population expansion are not sustainable as they are likely to deplete foraging opportunities within the pond (great crested newt breeding ponds are generally associated with relatively small populations of other amphibian species) and surrounding terrestrial habitat in subsequent years. It is also likely that such population increases will ultimately lead to an increase in predatory species.

Many breeding ponds have disappeared since 1900 owing to neglect, drainage, infilling, eutrophication from fertilizers and the introduction of fish but loss as a result of infilling is an increasingly rare event. However, ponds in agricultural land or those that have become enclosed by urban expansion are still at risk from the introduction of fish or wild fowl. While the effect upon great crested newt populations as a result of these two acts can be disastrous, the greatest cause of decline is neglect. As ponds become increasingly shaded by surrounding scrub and trees, particularly those in woodland, summer water temperatures are reduced and this eventually prevents juvenile development. Ultimately, the numbers of adults inhabiting the pond will become depleted as a result of natural mortality.

| 2. | OBJECTIVES | TARGETS |
|---|---|---|
| Associated Action Plans are: '*Woodland*', '*Lowland Grassland (all types)*', *Old Parkland & Veteran Trees', 'Lakes & Reservoirs', 'Parks & Public Open Spaces'* ,'*Ponds*', '*Canals', 'Quarries & Gravel Pits', 'Hedgerows'* and *'Gardens'* | | |
| PLEASE CONSULT THE ***'GENERIC SPECIES'*** ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL SPECIES PLANS | | |
| **A.** | **Emphasise the legal protection that exists for the species and for both its aquatic and the terrestrial habitats to landowners and land managers, including local and national designations.** | **ongoing** |
| **B.** | **Identify opportunities for the restoration and enhancement of ponds.** | **2020** |
| **C.** | **Provide a comprehensive approach to pond survey work and review the manner by which pond data is gathered and managed.** | **2020** |
| **D.** | **Establish a strategic, spatial approach to pond creation for great crested newt to develop resilience to climate change and meet connectivity requirements and other habitat threats.** | **2020** |

## 3. NATIONAL BAP OBJECTIVES & TARGETS

The great crested newt is on the current UK Biodiversity Action Plan (BAP) Priority Species list published in 2007(Joint Nature Conservation Committee). The targets and objectives for the Great Crested Newt BAP, updated in 2013, may be seen online.

## 4. CURRENT STATUS

The global distribution of great crested newt extends throughout much of the northern and central parts of Europe, the more southern sections of Scandinavia and a significant central area of Russia (although the exact extent is not known). The UK population is amongst the largest in Europe but even here its distribution is largely restricted to lowland areas within England and Wales. It is absent from the south west peninsula as well being absent from central and western Wales and the whole of Ireland. In Scotland the distribution is extremely restricted and disjointed, being found in the south-west, Midland belt and around the lowlands of Inverness.

The known distribution of great crested newt is widespread in the sub-region, but there are areas in the extreme south, north-west and north-east where few pond surveys have been carried out. A recent survey in the north of the sub-region, which had previously been under-recorded revealed nearly a quarter of the ponds visited contained great crested newt populations, and there appear to be several significant meta-populations. But recent studies in and around Coventry reveal that a high proportion of ponds there have either been lost or become highly degraded in recent decades, with evidence of significant losses of newt breeding ponds. Some efforts to counter these losses through a combination of dredging and scrub removal resulted in total recoveries of great crested newt population strength.

The Warwickshire sub-region has made a significant contribution towards the Million Ponds Project run by Pond Conservation and new ponds are being dug and recorded on an annual basis.

### 4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the Wild Birds Directive (1979), the Wildlife and Countryside Act (1981), the Conservation Regulations(1994) and EC Habitats Directive (1992). Protection of sites is afforded nationally through Sites of Special Scientific Interest (SSSI) designation, Special Areas of Conservation (SAC) and Local Nature Reserve (LNR) statutory status. Other sites are offered recognition of their value through Local Wildlife Site status (LWS), Local Character Areas and identified Landscape Scale Areas. The National Planning Policy Framework (2012) chapter/section 11 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of the Conservation of Habitats & Species Regulations (2010) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

Great crested newts are strictly protected under European law (annexes II & IV of the EC Habitats Directive & Appendix II of the Bern Convention) from injury / killing / capture and destruction or deterioration of their habitat. Strictly protected under Schedule 2 of the Conservation of Habitats & Species Regulations (regulation 40) and the Wildlife & Countryside Act (Schedule 5) from trade, injury / killing, capture, disturbance and damage / destruction to their habitat. A licence is needed to handle them. Legislation includes the provision for clusters of ponds to be designated as Sites of Special Scientific Interest (SSSI) and as SACs on the basis of great crested newt population strength.

## 4.2 Current Factors Affecting the Species

- **Infilling of ponds** for development, farming and waste disposal.
- **Changes in farming practice** that result in ponds becoming overgrown and silted up.
- **Introduction of fish,** much of which takes place without a licence from the Environment Agency.
- **Water table reduction** especially through excessive water extraction and the effects of droughts.
- **Chemical pollution and nutrient enrichment** from road runoff and agricultural runoff of fertilizers.
- **Degradation, loss and fragmentation of terrestrial habitat** through development construction of new roads and the changes of land management especially where this involves the removal of hedges, scrub and tall grassland.
- **Creation of new breeding ponds -** through quarrying, quarry restoration and the creation of ponds in business parks, farmland and in nature reserves.
- **On-going pond management** undertaken by interested farmers under stewardship plans, by developers as part of mitigation strategies and as part of off-setting projects and by conservation organisations.
- **Directed survey work** is providing an increasing understanding of the distribution of great crested newts within the sub-region.
- **Legal protection** that has promoted greater awareness of pond conservation and increased our understanding of species distribution in the sub-region through an increase in the amount of pond surveys that are being carried out.

## 5. LOCAL ACTION

- All known records are stored electronically in the Warwickshire Amphibian & Reptile Team (WART) database and are passed to Warwickshire Museum.
- Planning applications are checked for potential impact on great crested newt colonies.
- The scrutiny of planning process is identifying a significant number of planning applications that have been considered without acknowledging the presence of great crested newt ponds close to a proposed development site. This is especially true for smaller developments, even where ponds lie immediately adjacent to the development site. Examples from Rugby Borough, North Warwickshire Borough, Nuneaton and Bedworth Borough, Coventry City and Stratford upon Avon District have all missed great crested newt ponds as part of the planning process. Overall very few applications consider ponds to a radius of 500metres.
- Several new ponds have been constructed by Warwickshire Wildlife Trust (WWT) on local reserves, the Trust, often with the support from Butterfly Conservation has also restored a number of ponds in the sub-region. Other

work by members of WART includes conservation action to restore great crested newt ponds at Dunchurch, Tile Hill in Coventry, Henley Green in Coventry, Warwick University and also includes the construction of new ponds in Kenilworth, Bubbenhall, Cryfield Grange etc. Many of these ponds now contain breeding populations of great crested newts.

- Training provided by WART and supported by WWT ensures that numbers of volunteers capable of undertaking surveys to identify great crested newt populations is increasing within the sub-region.
- Directed surveys have already provided encouraging evidence of great crested newt breeding populations within areas where previously no records occurred.
- The HBA (2014) is using the Great Crested Newt Habitat Suitability Index (Oldham et al. 2000) which is based on 10 semi-quantitative aquatic and terrestrial features, including the presence of neighbouring ponds forming a 'cluster'. As there is usually a high correlation between a high HSI score and the presence of newts, the index can predict if newts are likely to be present. The index of suitability of a cluster (= 1 for 4 or more ponds per km$^2$) is derived from dividing the number of ponds within 1km of the survey pond by 3.14 (pi).

## 6. PROPOSED LOCAL ACTIONS

| ACTION | Lead | Partners | By |
|---|---|---|---|
| PLEASE CONSULT THE ***'GENERIC SPECIES'*** ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL SPECIES PLANS | | | |
| **Policy, Legislation & Protection** | | | |
| **PL1**. Set criteria to allow clusters of great crested newt breeding ponds to be considered for statutory designation and as Local Wildlife Sites (LWS), emphasising the importance of the significant numbers in Warwickshire in the context of lower populations in neighbouring counties. | WART | WWT NE WCC LAs LWSP | 2015 |
| **PL2.** Campaign to further encourage Local Authorities to act in line with best practice guidelines as part of their statutory duties and as part of the planning process. This may include training sessions. | WART | WWT WCC LAs | 2015 |
| **PL3.** Agree a strategy and programme in conjunction with agencies and landowners to deal with issues such as the introduction of fish and wildfowl to ponds with an existing population of great crested newts. | WART | NE WWT EA WCC HBA LWSP LAs LOs | 2015 |
| **Site / Species Safeguard & Management** | | | |
| **SM1.** Implement a programme of pond construction | WART | NE WCC | 2020 |

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|---|---|---|---|
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| in target areas identified by **RM3.** | | WWT LAs LOs HBA | |
| **SM2.** Implement a management programme for scrub removal to benefit the newt, possibly by volunteers (see **RM9**). | WART | WWT WCV LOs LAs | 2015 |
| **Advisory** | | | |
| **A1.** Employ a protocol for informing landowners of the presence of great crested newts on a LWS and the legal implications and management needs, using existing publications. | LWSP | WWT WART WCC | 2015 |
| **A2.** Promote incentives for pond creation and management (also including adjacent terrestrial habitats) on farmland under the agri- environment schemes**.** | NE | WWT WART LOs | ongoing |
| **A3.** Provide annual training and support for volunteer surveyors and those involved in the management and conservation of the great crested newt. | WART | WWT WBRC | ongoing |
| **A4.** Provide recommendations for the siting of new ponds and the appropriate management and restoration of existing ponds to expand or restore the local range and to create robust populations. | WART | LWSP WWT WCC | 2015 |
| **Research & Monitoring** | | | |
| **RM1.** Record every known great crested newt pond digitally; non-records and survey methodology to be included. | WART | WBRC WWT HBA | 2015 |
| **RM2.** Identify areas that have been under-recorded and prioritise for surveys. | WART | WWT WCC | 2015 |
| **RM3.** Develop a programme of pond construction, identifying cost effective contractors and mechanisms for this work, using habitat mapping to identify target areas**.** | WART | NE WCC WWT LAs LOs HBA | 2015 |
| **RM4.** Produce and trial a modified Habitat Suitability Index (HSI) for great crested newts that can be applied to aerial photographs. | WART | WBRC WWT HBA | 2015 |

| ACTION | Lead | Partners | By |
|---|---|---|---|
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| **RM5.** Apply the modified HSI to ponds, especially in the prioritised areas (see **RM2**)**.** | WART | WBRC WWT HBA | 2020 |
| **RM6.** Initiate a programme of targeted pond surveys to determine status of great crested newt populations in the prioritised areas (see **RM2**). Such surveys should include daytime visits to check for efts. | WART | WBRC WWT LWSP | 2020 |
| **RM7.** Initiate a stratified survey programme to determine the effectiveness of a modified HSI and to provide an evaluation of the approximate numbers of great crested newt breeding ponds within each landscape unit. | WART | WBRC WWT HBA | 2020 |
| **RM8.** Undertake further surveys to assess pond clusters and determine whether these can be identified as important breeding sites. | WART | WBRC WWT NE HBA SRNBG | 2015 |
| **RM9.** Identify ponds and pond clusters that would benefit the newt by scrub removal work (to implement **SM2**). | WART | WWT LOs | 2015 |
| **Communication & Publicity** | | | |
| **CP1**. Develop links with large development companies, large employers, quarry operators and ecological consultants to promote pond construction and management as part of their working operations and mitigation for development. | WCC | WART WWT LAs NE | ongoing |

**Abbreviations**: **EA**- Environment Agency, **HBA** – Habitat Biodiversity Audit partnership, **NE** – Natural England, **LAs** – Local Authorities, **LOs** – Landowners, **LWSP** – Local Wildlife Sites Project, **SRNBG** - Sun Rising Natural Burial Ground, **WART** – Warwickshire Amphibian Reptile Team, **WBRC** – Warwickshire Biological Record Centre, **WCC** – Warwickshire County Council, WCV – Warwickshire Conservation Volunteers, **WWT** – Warwickshire Wildlife Trust.

## 7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Results will be entered onto the national Biodiversity Action Reporting System BARS. Progress with this plan up to 2008 can be seen at www.warwickshirewildlifetrust.org.uk/LBAP.

## 8. BIBLIOGRAPHY

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## 9. FURTHER INFORMATION

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Joint Nature Conservation Council (1998). Herpetofauna Workers Manual.

Great Crested Newts on Your Farm (booklet available in pdf from the NE Suffolk Team. Tel. 01733 455000.

RSPB (2007). Farm Wildlife Handbook Available online or tel. 01234 263616.

ARC Trust (2011) Amphibian Habitat Management Handbook.

The Conservation Volunteers (TCV)

Amphibian & Reptile Groups of the UK (ARG) – a group of volunteers working for the conservation of amphibians and reptiles.

Dewpond restoration for assisting dispersal of great crested newts. A joint project between English Nature and the Peak District National Park.
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## 10. CONTACTS

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