



Great Crested Newts

Ecology

Great Crested Newts are Britain's largest newt species. In the UK they may grow up to 17cm long. They cannot generate their own body heat, and have permeable skin, so movement of newts on land occurs on nights with an air temperature of 5°C or above.

Great Crested Newts breed in ponds but spend much of their lives on land, sometimes venturing several hundred meters from the pond. Their populations are often dependent on there being several ponds close together, linked by suitable ground habitat.

Great Crested Newts are nocturnal, and whilst on land, outside the hibernation period, rest during the day in burrows or under logs, stones and vegetation.

Adults hunt in ponds for other newts, tadpoles, young froglets, worms, insect larvae and water snails. They also hunt on land for insects, worms and other invertebrates. Larval newts usually feed on tadpoles, worms, insects and insect larvae.

Great Crested Newts have dark grey-brown backs and flanks, and are covered with darker coloured spots so that they appear almost black in colour. They also have fine white spots on their lower flanks, which are more obvious in breeding males. Their undersides are either yellow or orange and are covered in large black blotches. Males have a jagged crest that runs along their backs, dipping at the rear of the abdomen to a smoother-edged crest above and below the tail. They also have a silver-grey stripe that runs along the tail. The male's crest is more pronounced during the breeding season, and lies flat to the body when the newt is out of water. Females lack a crest, but have a yellow-orange stripe along the lower edge of their tails.

The Newt Year

Great Crested Newts hibernate between October and late February in areas protected from frost and flooding, such as under piles of leaves or logs or inside hollow tree stumps and stone walls. When newts come out of hibernation they head for their breeding ponds.

Movements are often more numerous on rainy nights, but wet weather is not essential. Movement at night may reduce predation risk and makes dehydration less likely.

Once they reach water they spend the days in deeper water and move into the shallows at night to breed. Newts have been found to return annually to the same breeding grounds, but new ponds and ponds where the population has died out are colonised quickly by adults as well as by young individuals.

Peak courtship and egg-laying is from mid-April to mid-May. The female lays approximately 200 eggs per season, individually, on the leaves of submerged plants, over a period of several weeks. The larvae hatch after 3 weeks and develop over the next 2-3 months.

Adult newts leave the breeding ponds from late May onwards, and may return occasionally to feed. Adult males tend to remain in the pond for longer than females.

Between August and October, the larvae have completed metamorphosis, and emerge from the pond. It then takes 2-4 years to reach sexual maturity, during which time the immature newts will be largely terrestrial.

There is often high mortality during the egg and larval stage, but once on land survival rates are relatively high. Adults can live for over 15 years, but the majority will survive only a few years past sexual maturity. Juvenile and immature animals normally outnumber adults considerably.



Habitat

Great Crested Newts require waterbodies for breeding. These are normally ponds but they can make use of other standing waterbodies such as ditches. The most commonly used ponds are lowland, neutral to high pH, are well vegetated and not too shaded. Ponds that dry out in summer may still be suitable. The presence of predatory fish and a high density of waterfowl renders ponds less suitable for breeding, although they may still be frequented by adult newts. Great Crested Newts often occur in metapopulations, which means that there is interchange of newts between the populations of different breeding ponds that are within approximately 250m of each other.

Terrestrial habitat is required for dispersal, feeding and hibernation. Key habitats include grassland, scrub, woodland, hedgerows, wasteground or quarry floors. High quality habitat should contain an abundance of prey items combined with dense ground vegetation or voids in the substrate to allow refuge and shelter on the surface e.g. logs and rubble.

Great Crested Newts can travel considerable distances, sometimes 1.3km from breeding sites, but the vast majority of newts will remain in closer vicinity to their breeding ponds. Natural England (formerly English Nature) define habitat within a 500m radius of a pond known to support Great Crested Newts as terrestrial habitat for them.

Conservation Status

Great Crested Newts are widespread, but extremely local, in mainland Britain. They are widespread across lowland England, but are less frequent in the far south west, in upland areas, in intensively managed farmland, and very urbanised areas.

They are not found in Ireland, but can be found across northern Europe, from France in the west to the Urals in the east.

The UK Biodiversity Action Plan (BAP) contains a Great Crested Newt Species Action Plan aimed at maintaining its existing range and population status, as well as increasing the number of populations through re-colonisation.

Legislation

Great Crested Newts receive protection under The Wildlife and Countryside Act 1981 (and amendments) which makes it an offence to:

- intentionally or recklessly kill, injure or take a Great Crested Newt
- possess or control any live or dead specimen or anything derived from a Great Crested Newt
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a Great Crested Newt
- intentionally or recklessly disturb a Great Crested Newt while it is occupying a structure which it uses for that purpose

The Conservation Regulations 1994 make it an offence to:

- deliberately capture or kill a Great Crested Newt
- deliberately disturb a Great Crested Newt
- deliberately take or destroy the eggs of a Great Crested Newt
- damage or destroy a breeding site or resting place of a Great Crested Newt



Planning Policy

Guidance on the consideration that local planning authorities should give to nature conservation interests is contained in Planning Policy Statement 9.

Before applying for planning permission, an appraisal of the impact of development on the newt population is required. Planning authorities are required to take account of Great Crested Newts when considering planning permission, and may refuse applications on the basis of an adverse effect on newt populations. Insufficient appraisals can lead to delays or a refusal of planning permission. When granting permission, planning conditions or Section 106 agreements may be used to help ensure appropriate mitigation and aftercare.

Great Crested Newt Surveys

Aquatic Habitat

Natural England define that presence or absence of a Great Crested Newt population in aquatic habitat can be determined from data collected over 4-days of survey, with at least two of these visits being timed between mid-April and mid-May. To gain an idea of population size, data must be collected over a 6-day survey, with at least 3 visits timed between mid-April and mid-May. At least 3 of the following survey methods should be employed: bottle trapping, torching, egg search and netting.

The optimal period for aquatic Great Crested Newt surveys is March through to mid-June. Surveys must be carried out by a licensed ecological consultant. The window of opportunity for surveys of aquatic habitat is so small that sites should be assessed for their potential to support Great Crested Newts at site procurement. Ignoring this advice can cause costly programme delays of possibly a year or more.

Terrestrial Habitat

Surveys of terrestrial habitat can be undertaken using pit traps and drift fencing. A site-specific licence must be obtained from Natural England for this technique to be used. It is time consuming with a minimum of 60 days data being required. Surveys must be timed to coincide with either spring migration to ponds or autumn migration to hibernation sites.

Natural England Licence Applications

All activities that would otherwise constitute an offence under The Conservation Regulations 1994 must be licensed by Natural England. To obtain a Natural England licence a site must either have been issued with detailed planning permission, with all conditions relating to Great Crested Newts being discharged, or else be for overriding reasons of public health and safety. Licenses should be prepared and submitted by a licensed ecological consultant on behalf of the client. To obtain a licence it is necessary to demonstrate that all alternatives to the proposals have been considered and that there will be no net loss of conservation status of Great Crested Newts. Further details are contained within Keystone Guidance Note: Natural England Licence Applications.

Impacts

Impacts to Great Crested Newts can be summarised as:

- Loss of aquatic and/or terrestrial habitat
- Disturbance/injury/death of newts e.g. by traffic, site works, drainage systems with gully pots etc.
- Habitat degradation e.g. by pollution, adverse management techniques
- Habitat fragmentation



Mitigation

Adverse impacts must be mitigated. In the first instance, attempts should be made to avoid the impact by design. To address unavoidable impacts the level of mitigation required depends on the size and type of impact and the importance of the population affected.

Mitigation strategies tend to involve the translocation and exclusion of newts from working footprints. It is therefore essential to identify a suitable receptor site that has the capacity to hold the resident newt population for the duration of works. It is best practice to create a receptor site around existing ponds, though receptor sites based around new ponds may be approved. As a general rule, 3 new ponds should be created for each pond lost. Receptor sites should not be entirely surrounded by exclusion fencing, should contain a range of high quality terrestrial habitat types and should have links to habitat off site during works. The purchase of additional land as mitigation may be necessary and a significant lead in time, often 6 months to 1 year, is typically required for habitat creation and establishment.

Drift fencing and pit traps are typically used to capture newts from the working footprint. They must be inspected each morning prior to 11am. Ideally pit trapping should be timed for spring migration, though in some instances it is acceptable to pit trap during autumn and during some other months of the year (never winter). Pit trapping is a time consuming exercise that may take 90 days for large populations of Great Crested Newts.

Destructive searches often follow translocation exercises, although they may be used in isolation in areas of hardstanding that support rubble piles and dumped materials and in small areas of habitat where translocation would be unproductive.

Permanent newt-proof fencing may be required post construction to deflect newts away from roads, depending on where they are placed, at what times they are in use and the density of traffic using them.

Development schemes should be designed to incorporate additional aquatic features, green corridors to improve linkage and movement across and around the site and terrestrial habitat of varied structure with hibernation sites. Sustainable urban drainage schemes can be used to achieve conservation gain for Great Crested Newts whilst addressing the hydrological requirements of the proposed development and the impacts of gully pots on newts.

Overall, and most importantly, mitigation strategies must demonstrate that the Great Crested Newt population to be affected suffers no net loss of conservation status.

This information was accurate, to the best of our knowledge, at the time of publication (January 2008).

These notes are intended as guidance only. Professional advice from an ecological consultant should be sought in relation to protected species and development. Surveys, impact assessment and the design of mitigation strategies must be considered on a site-specific basis.

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