

Woodland Management in the presence of the great crested newt: Guidance for compliance with the Habitats Regulations¹

GREAT CRESTED NEWT

¹ The 'Habitats Regulations' refers to The Conservation of Habitats and Species Regulations 2010

Purpose of document

To provide advice for woodland managers and operators on a) how to establish presence of the great crested newt (*Triturus cristatus*) particularly their breeding sites or resting places, and b) how to manage woodlands so as to avoid or minimise the risk of committing offences under the Habitats Regulations.

This document should be read in conjunction with the 'Decision tree to aid planning of woodland operations and protecting EPS'.

1. Look at your woodland. What is the probability of great crested newt being present in your woodland or habitat type?

The great crested newt relies on **water, usually ponds**, for breeding but spends much of its life on **land**. Woodland is an important component of the terrestrial habitat required for shelter, foraging, dispersal and hibernation.

Ponds surrounded by **abundant undergrowth** in woodland provide potentially ideal great crested newt habitat.

Shelter and hibernation sites may be above ground in dense undergrowth, beneath timber and log piles and amongst tree roots or underground in mammal burrows, under turf and rocks.

Woodlands with a **diverse understorey** are likely to provide greater opportunities for foraging for great crested newts.
Densely planted coniferous woodland, with no understorey, is less suitable

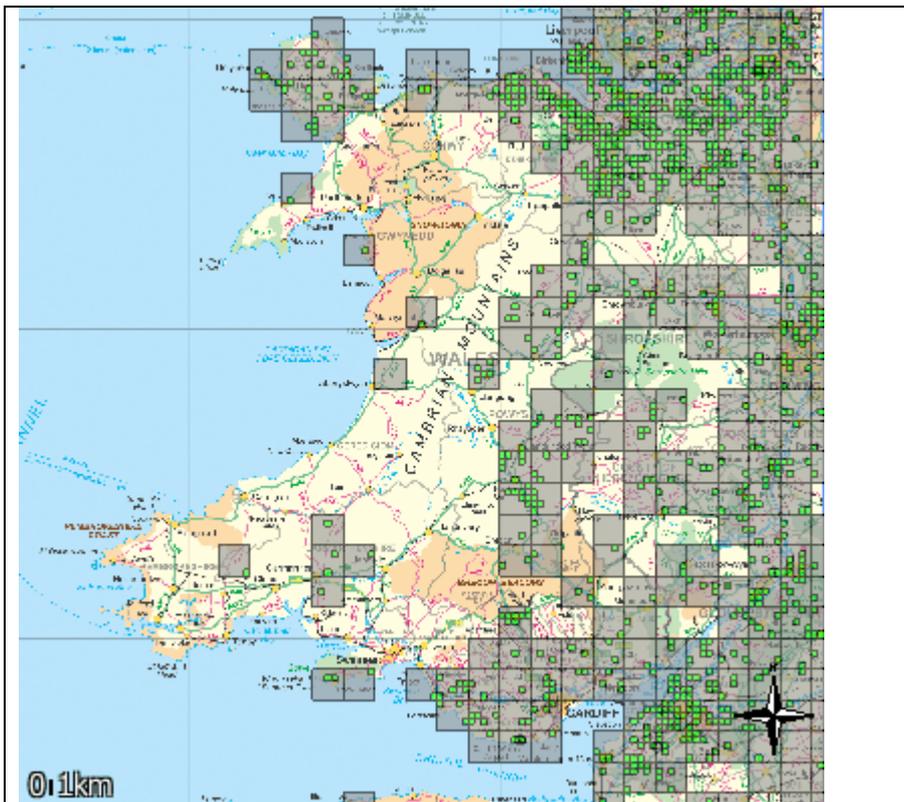
Clusters of ponds linked by suitable land habitat favour better populations

Suitable habitat within 250m of a breeding pond is likely to be used most frequently but dispersal can take place through habitats that don't provide much food or cover e.g. car parks.

2. Are they known or likely to be present in or near (or within 2km) of this particular wood?

a. *Confirm your woodland is approximately within current known range of the species?*

Please note that not all recent occurrences of great crested newt may be mapped.



Great crested newt

Picture: The Herpetological Conservation Trust

Map source: National Biodiversity Network copyright C Crown

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b. *Consult the National Biodiversity Network Atlas Map available on the web at <https://wales.nbnatlas.org/>*

for the presence of great crested newts near or in your woods.

By using the interactive map zoom to your area of interest. (Please note that most great crested newt sites are not formally recorded. Not all occurrences of great crested newt may be shown on the map and therefore lack of records does not confirm absence of this species). Your local Countryside Council for Wales or Wildlife Trust representative is also likely to be able to give site specific information on likelihood of great crested newt presence, as may the Local Biological Records Centre www.lrcwales.org.uk natural history societies and local herpetological groups - contact details from: <http://www.arg-uk.org.uk/contactsfurther.htm>

3. Would the proposed operations or activities have an impact on great crested newts if present?

If great crested newts are, or are likely to be, present will your planned operation impact in any of the following ways?

- Kill or injure a great crested newt.
- Cause disturbance to great crested newts that is likely to impair their ability to survive, breed, reproduce or hibernate; or affect significantly their local distribution or abundance.
- Damage or destroy a great crested newt resting-place or breeding site.

The following types of operations have a risk of committing offences if great crested newts are present:

- Harvesting, both felling and thinning of stands
- Tending and establishment
- Access
- Pond management

Table 1 lists forest operations and the risk of committing an offence associated with each operation.

4. After habitat assessment can the activity be modified to avoid impact on great crested newts?

It may be possible to adapt the operation to avoid killing or disturbing great crested newts and therefore allow the operation to continue without the need for a licence.

Table 1 provides further information on how you may alter these operations to reduce the risk of committing an offence and the need for a licence. During operations the aim should be to avoid damaging or destroying breeding sites and resting places or carrying out activities that disturb great crested newts.

Great crested newts are unable to move around a woodland quickly, for instance to flee from a threat. Although breeding sites are relatively easy to locate, terrestrial habitat is harder to identify and is likely to be distributed throughout the woodland. Thus providing an alternative operation or location for the operation that will not damage or destroy their resting places is difficult. If the operation you are planning does not have a satisfactory alternative (Table 1) then you may decide to apply for a licence. If a licence is granted, conditions will apply that will require you to follow a best practice approach similar to that described in Table 2, adjusted for particular local circumstances, eg extreme soil conditions, storm events.

5. If great crested newts are present and impacts cannot be avoided is survey information available?

Recent survey information will confirm presence and numbers to provide information on any impact.

If you suspect that great crested newts are present in your woodland and you intend to carry out management you will need to assess the risk that you may commit an offence (e.g. damage or destruction of a breeding pond or terrestrial resting site).

The organisations listed in **section 2b** are most likely to know of recent surveys. If available go to **section 8**, if none are available then move to **section 6**.

6. Can the landowner/manager do an initial survey of the site?

Confirming presence

To reduce the risk of committing an offence look for evidence of great crested newts and if they are found adjust management plans in the light of the guidance given in tables 1 and 2.

Signs or indicators of great crested newt.

Signs of egg laying can provide an indication of the presence of great crested newts. All three native newt species lay eggs singly, often folding them within leaves of aquatic vegetation. Great crested newts seem to prefer relatively large leaves, which, when folded around an egg, are conspicuous to an informed observer (Figure 1). Confirming the species' identity requires unwrapping the egg from vegetation (Figure 2), which currently would require a Statutory Nature Conservation Organisation (SNCO) licence. However, identifying characteristically folded leaves is an indication that great crested newt may be present and can be used as a prompt for a licensed survey. Great crested newt eggs can be found from March to May (appendix 2 shows a calendar of the GCN year) and plant species used include large-leaved pond plants such as gypsywort, water forget-me-not, water mint and water veronica.

For more information on surveying for great crested newt contact The Herpetological Conservation Trust's Great Crested Newt Conservation Officer (www.herpconstrust.org.uk) and see reading list.

Figure 1: Leaf folded around a newt's egg.



Figure 2: Unfolded leaf with newt's egg revealed



Source: The Herpetological Conservation Trust

Breeding ponds could be identified using signs above. Great crested newts may be thinly spread throughout the terrestrial habitat surrounding a breeding pond with terrestrial resting/hibernation sites being difficult to find. Identification of likely terrestrial habitat within 250 to 500m of breeding ponds should be investigated as a method to determine presence, and used in the licence application. Difficulty in detecting terrestrial breeding or resting sites may suggest that a specialist survey, to confirm presence and location, is a sensible step

6b. Specialist Survey required to identify and locate any breeding sites or resting places.

A specialist survey may be carried out by a qualified professional or alternatively consider engaging local specialists, for example, a local herpetological group may be interested in a site visit in your woodlands and this could provide information on great crested newt presence.

7b. Evaluate the results of surveys.

If by self-assessment (following the guidance above) and/or specialist survey you are confident that great crested newts are not using your woodland then no further action is necessary and the operation may proceed. It would be sensible to keep a record of your decision and information used to reach it, (for example a specialist survey).

If evidence of great crested newts is subsequently discovered during operations you should stop work, consult the Statutory Nature Conservation Organisation (SNCO) and review your plans as required. It is therefore important for operators to remain vigilant for great crested newts while undertaking work.

8. Can the work be undertaken, or proposals modified to avoid an offence being committed?

Once breeding ponds and resting sites (where possible) have been identified through survey you may decide to go ahead with woodland management by avoiding these areas and using best practice (see table 2 and good practice references below). NB annotating felling and/or design plans with breeding or resting areas is recommended.

9. Can you provide evidence to support a licence application that satisfies the following criteria?

If avoiding damaging or destroying breeding ponds or resting sites is not possible a licence will be required before the operation can be undertaken. The licence application will require evidence of the presence of breeding or resting sites and that there is no satisfactory alternative to committing the offence or offences in question. (i.e., disturbing great crested newts while using resting or breeding sites, or damaging or destroying such places even when they are not present). Licences are to be granted for specific circumstances and are subject to strict tests. There is therefore no guarantee that a licence will be granted. Speculative licence applications will not be considered.

Consider potential for long term provision of habitat for great crested newts

Consider the potential for maintaining populations by planning regular but sensitive active management to provide a continuity of habitat over time that will ensure that populations are maintained in a favourable conservation status. Woodland habitats can be improved for great crested newts by maintaining and improving conditions of the breeding pond, providing terrestrial refuges and increasing the quality of the foraging habitat.

The habitat for great crested newts can be enhanced by:

- maintaining /improving conditions of the breeding pond by coppicing trees that shade the southern margin of breeding ponds
- stacking cut logs and brash to provide refuges within a 50 -250m buffer of the breeding pond and leaving fallen deadwood.
- Increasing structural and species diversity of the woodland understorey (i.e. shrub, herb and ground flora layers) within a 50 -250m buffer of the breeding pond to improve quality of foraging habitat. Development of the understorey is promoted by increasing the light levels reaching the forest floor and will result from operations such as coppicing, thinning or gap creation. Fencing to exclude grazing animals may help the development of understorey in some woodlands.
- Managing the surrounding habitat to ensure there is suitable habitat adjacent to a breeding pond to sustain the local population; consider creating new ponds within suitable habitat not more than 500m from existing breeding ponds.
- Providing a network of suitable habitat (woodland, scrub cover, rough grassland, and woodland floor features such as log stacks and tree roots) between ponds to allow great crested newts to migrate and disperse.

Good practice reference list

English Nature (2001) *Great crested newt mitigation guidelines*. English nature, Peterborough. www.english-nature.org.uk/pubs/publication/PDF/GCN0801w.PDF

Forestry Commission (2003) *Forests and water guidelines*. 4th Edition. Forestry Commission, Edinburgh
[www.forestry.gov.uk/PDF/fcgl002.pdf/\\$FILE/fcgl002.pdf](http://www.forestry.gov.uk/PDF/fcgl002.pdf/$FILE/fcgl002.pdf)

Froglife (2001) *Froglife Advice Sheet 11: Surveying for (Great Crested) Newt Conservation*

Gent & Gibson (1998) *Herpetofauna Worker's Manual*

Langton, T., Beckett, C., Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.

Latham, DM, Oldham, RS, Stevenson, MJ, Duff, R, Franklin, P & Head, SM (1996) Woodland management and the conservation of the great crested newt (*Triturus cristatus*). *Aspects of Applied Biology* 44: 451-459.

Scottish Environment Protection Agency (2000) *Ponds, pools and lochans: guidance on good practice in the management and creation of small waterbodies in Scotland* SEPA, Stirling.
www.sepa.org.uk/pdf/guidance/hei/ponds.pdf

Produced by Forest Research, Forestry Commission Wales and CFS, Welsh Assembly Government and Countryside Council for Wales.

Information on long-term habitat management to benefit the great crested newt is also provided. Great crested newts are protected by the Habitats Regulations and are European Protected Species (EPS).

Great crested newts feed mainly on invertebrates but also on smaller amphibians, especially larvae.

Great crested newts are unable to make their own holes, relying instead on existing crevices or voids. Both ponds and terrestrial habitats are important for foraging.

Table 1. Forest operations, risk of committing an offence associated with each operation and procedure for reducing risk.

Forest operations are in **bold** type, descriptions in plain type; risk is classed as high or low.

Risk of committing an offence	HIGH RISK -operations that are likely to damage or destroy breeding or resting places of great crested newts.	LOW RISK -alternative approaches to high risk operations that may reduce risk, and low risk operations
Operation	Sub-operations (and brief description of impact)	
HARVESTING, INCLUDING FELLING OR THINNING OF STANDS	Harvesting within 250 m of a breeding pond: Damage and disturbance to pond used for breeding and to terrestrial hibernation and resting sites within woodland, killing individuals.	No low-risk alternative
		Harvesting between 250 and 500m of a breeding pond: Damage and disturbance of terrestrial habitat used for hibernation or resting sites and the killing of individuals are possible but risk is minimal.
	Timber stacking within 10m of a breeding pond on wet ground may result in ground disturbance and silt run-off, which affects water quality in pond.	Stack timber on dry ground and outside 10m buffer area of breeding pond.
		Timber stacking within 50m of a breeding pond: stacks of timber may be used as resting and hibernation sites if left in-situ with the risks increasing with the length of time timber is left. Remove as soon as possible and before start of hibernation period (see calendar of great crested newt, appendix 2). Or stack timber more than 50 m from breeding pond.
TENDING/ ESTABLISHMENT OPERATIONS	Ground preparation within 10m of breeding pond: water run-off leading to siltation of breeding ponds. Restrict ground preparation techniques to scarification (dry soils) or excavator mounding (wet soils) and maintain a minimum of 10m undisturbed buffer zone around pond.	No low-risk alternative.
	Ground preparation within 250m of breeding pond: damage to terrestrial resting sites.	No low-risk alternative.
		Ground preparation between 250 and 500m of a breeding pond: Damage and disturbance of terrestrial habitat used for hibernation and resting sites and the killing of individuals are possible but risk is minimal.

	Drainage within catchment or 250m of breeding pond: reducing the water table in area around breeding ponds leading to pond loss.	Avoid carrying out drainage in pond catchment area or within 250m of breeding pond, whichever is the greater.
	Clearing and removal of old stacked timber and brash etc: could lead to damage to hibernation or resting sites.	No low-risk alternative. Retain brash piles. Do not remove existing piles of timber.
		Cleaning and weeding of shrub layer or understorey within 500m of a breeding pond: if carried out throughout foraging area will lead to the removal of habitat used by prey. Restrict cleaning each year to maintain continuity of vegetation cover and diversity within 500m of breeding pond.
		Use of pesticides throughout foraging area within 500m of a breeding pond: direct impact on prey or habitat of prey. Only use those listed in Appendix 1 and avoid overspraying within 500m of breeding pond.
	Pond /Drain Maintenance: Removal of vegetation during breeding period will damage or destroy breeding sites and eggs	Clean only badly silted ponds and do so during mid-winter, when newts least likely to be in water, only clean short sections of drain, less than 1 quarter of area, annually. Do not dump spoil from drains in 10m buffer area of pond.
ACCESS	Road construction and maintenance: direct damage to breeding pond and pollutants from road material entering pond water.	Build roads well outside 250m buffer areas of ponds. Avoid using acidic, metal or sulphide rich spoil from mine workings for road construction. Control erosion and silt run-off from roads by appropriate engineering and road maintenance.
	Mowing in amenity areas e.g. picnic sites and paths within 250m of a breeding pond: destruction of individuals during foraging and dispersal, damage to terrestrial resting sites	No low-risk alternative
		Mowing in amenity areas e.g. picnic sites and paths between 250 and 500m of a breeding pond: reducing quality of foraging area. Newts unlikely to be in areas of short grass. Keep mown areas short from early summer, to discourage use by newts. For less formal areas employ a high cut.

Table 2. Best practice approach for carrying out operations around great crested newt. An EPS licence may include additional conditions due to local circumstances.

<i>Operation</i>	Sub-operations	Best practice
<i>HARVESTING, INCLUDING FELLING OR THINNING OF STANDS</i>	Harvesting Risk of damage to hibernation and resting sites is greatest within 50m of the pond, but will reduce with distance, being minimal after about 250m from pond.	<ul style="list-style-type: none"> • Within 50m of pond fell trees away from the pond. • Machinery should not work within a 10m buffer area of pond to maintain water quality. • Prevent large inputs of brash to pond during harvesting operations. • Fuels and lubricants should be stored outside the 50m buffer zone. • Avoid clearfelling in situations where the run-off from the clearfell site will enter the pond. • Where possible, time operations to coincide with hibernation period (see calendar of great crested newt, appendix 2). • If possible avoid harvesting within 50m of breeding pond.
<i>TENDING/ ESTABLISHMENT OPERATIONS</i>	Ground preparation and/or drainage within 250m of a breeding pond: damage to terrestrial resting sites	<ul style="list-style-type: none"> • Where possible, time operations to coincide with hibernation period (see calendar of great crested newt) to avoid destruction of individuals during foraging and dispersal. • If possible, avoid disturbing dense vegetation within 50 m of pond during the period of foraging on land (see calendar of great crested newt). • If possible avoid work in areas within 50m of pond.
<i>ACCESS</i>	Mowing in amenity areas within 250m of breeding pond e.g. picnic sites and paths: damage to terrestrial resting sites.	<ul style="list-style-type: none"> • For less formal areas employ a high cut. • If possible, avoid disturbing dense vegetation within 50 m of pond during the period of foraging on land (see calendar of great crested newt).

Appendix 1

Pesticides that will have least impact on the invertebrates which great crested newts feed on

Herbicide	Insecticide	Fungicide	Mammal repellent/ rodenticide
Asulam*	Diflubenzuron	<i>Phlebiopsis gigantea</i>	Aluminium ammonium sulphate
Clopyralid		Urea	Warfarin
2,4-D*			
Dichlobenil*			
Diquat + paraquat			
Glyphosate*			
Isoxaben			
Metamitron			
Paraquat			

* approved for use near water when applied in a specific way and under specific conditions.

Source: Willoughby, I., Evans, H., Gibbs, J., Pepper, H., Gregory, S., Dewar, J., Nisbet, T., Pratt, J., McKay, H., Siddons, R., Mayle, B., Heritage, S., Ferris, R., & Trout, R. (2004) Reducing pesticide use in forestry. Forestry Commission Practice Guide. Forestry Commission, Edinburgh.

Appendix 2

Calendar of great crested newt activities during the year

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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Hibernation on land	Breeding in ponds			Forage on land				Hibernation on land			
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*adult and immature newts will live terrestrially around the pond at all times; larvae are present in the ponds between April and October