

# resource



## great crested newt surveys



**We're into April and, temperatures permitting, into great crested newt survey season!**

Great crested newts (GCNs) have a reputation for costing developments money because of their European protected status and their narrow survey season, which lasts about 12 weeks (see our survey calendar) and is weather and temperature dependent. So we always advise our clients to consider these as early as possible to avoid programme delay and, potentially, waiting for the following year's survey season.

If you're wondering if GCNs may be relevant to your projects, they typically use temporary or permanent ponds and ditches which are surrounded by rough grassland and/or woodland and hibernate over winter. There's often an exception to the rule,

however, as GCNs have been recorded occupying a water-holding swimming pool cover! They forage considerable distances over land and generally a zone of 500 m around a waterbody is within the bounds of any surveys and recommendations.

Capita Symonds' Ecologists use a range of survey techniques to determine appropriate levels of survey effort for the habitat type. These progress from Habitat Suitability Assessments, to presence / absence surveys, up to population surveys. We pride ourselves on tailoring our advice to be specific to the site and needs of the client, with an excellent record in anticipating and averting problems and rapid turnaround of advice, reports, and mitigation implementation.

Our dedicated team hold Natural England licences and are able to undertake all aspects of GCN mitigation including development (EPS) licence applications and translocations. We are also able to provide extensive advice regarding habitat creation and enhancement for GCNs.

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Development site near Rainham Marshes with Giant Hogweed *Heracleum mantegazzianum* (foreground), a schedule 9 species.

## non-native species

**Almost everyone has encountered Japanese knotweed through commercial development proposals and within the public domain. The tales of great expense and time delays offer a sorry picture of the effects of this pervasive weed deliberately introduced into the UK in the early 19th Century as an ornamental plant.**

Japanese knotweed, listed under Schedule 9 of the original Wildlife and Countryside Act 1981 (the Act), will soon be joined by an additional 24 animals and 38 plants making it illegal to plant them in, or release them into, the wild. Offences carry penalties of up to £5,000 and/or 2 years imprisonment. Additional species added to the Act are generally common and wide-spread including a number of Cotoneaster species often used in landscaping schemes and Himalayan balsam, an attractive and frequently encountered alien, found throughout the UK's waterways.

The purpose of the provisions of the Act is to prevent the release into the wild of certain plants and animals which may cause ecological, environmental, or socio-economic harm. Schedule 9 lists non-native species

that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated. The Schedule also includes some native species (e.g. barn owl) in order to provide a level of control to ensure that releases, in particular re-introduction programmes, are carried out in an appropriate manner and biodiversity is properly safeguarded.

Be prepared for changes to the Act by contacting the Capita Symonds ecology team as early as possible to programme in site surveys. The general survey season runs from late-March to early-October. If dealt with early within the development process or as part of general land management, these species need not become 'show stoppers'. The identification and management of these species through specialist interpretation by the Capita Symonds' Ecology Team can put you and your client in control of these changes, which are in force as of 6 April 2010.

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## reptile mitigation measures

**A recent meeting (Herpetofauna Worker's Meeting, January 2010) brought experts and consultants together to focus on improving reptile mitigation measures, with the aim of making these more practical and effective. The resulting guidance is scheduled for publication by the end of May 2010.**



Grass snake *Natrix natrix*.

Potential changes to surveys and mitigation design are likely to include:

- using Habitat Suitability Assessments to determine if further surveys are required
- changes to numbers of survey visits and survey effort for surveying different species
- using different types of artificial refugia (roofing felt, corrugated steel sheets etc.) to improve detection of all reptile species, and
- selection criteria and safe-guarding measures of receptor sites.

These changes are motivated by the declines suffered by reptile species, to varying extents, across the country and the potential to reap greater benefits from surveys and mitigation. As all reptile species are now protected and on the UK BAP priority list, local authorities and other public bodies have a legal duty to take their conservation into account.

Mitigation therefore forms a legal requirement in most developments but can also make effective contributions towards the conservation of these species. Survey techniques and mitigation design are to take this into account more effectively and, by making good use of your consultant's expertise, tailor these guidelines to the specifics of your site and development proposals.

Anticipating these changes to the existing accepted guidance and best practise methods ensures any that imminent reptile work is carried out with these new measures in mind. We aim to furnish our clients with this information to facilitate smoother planning processes and winning stakeholder support.

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# not so evil weevils



Before treatment with weevils (13th June 2008)



After treatment with weevils (20th August 2008)

**Weevils are generally thought of as pests, munching their way through the plants in your garden or in bags of flour in your kitchen cupboard. However, it is now being proved that these little blighters are not all bad!**

A weevil (*Stenopelmus rufinasus*) originating from north America (see photo) is now being introduced as a biological control for the invasive non-native plant species *Azolla filiculoides* generally referred to as Azolla. This plant, also known as floating water fern, infests watercourses throughout much of the UK and if left untreated, forms dense mats on the water's surface, choking watercourses and starving them of sunlight.

There are no native organisms that feed on Azolla and other potential means of control, such as mechanical dredging are thought to compound the problem, rather than solve it, as fragmentation of the plant causes it to spread even further. After extensive research in South Africa, CABI Bioscience, has found the weevil *Stenopelmus rufinasus* to be one of Azolla's natural enemies, feeding solely on Azolla and posing no risk to any other plants. This biological means of control negates the need to dredge watercourses through the deployment of mechanical equipment which can be intrusive even with the most sensitive of

machine operators, or treat with chemical herbicides which has obvious affects on surrounding native vegetation. Once a 'seed population' of the weevil has been released onto the Azolla and the population has increased to optimal numbers, control may be gained within a matter of weeks.

Capita Symonds' Ecology team has harnessed the power of the weevil! Weevils have been deployed in order to control an infestation of Azolla within compensation ditches as part of the A249 Isle of Sheppey to Sheerness 5 year monitoring scheme. Ditches within the road scheme are surveyed and assessed quarterly to monitor their general state and condition. During May 2008, one of the ditches was identified as containing a large mass of Azolla, which required urgent treatment to control its spread into adjacent ditches. Following extensive research and obtaining approval from the relevant statutory bodies, CABI Bioscience were contacted to place an order for weevils. The team presumed that the weevils would be delivered by courier, however, on arrival at the office one day, we were amused to find that they had been posted first class in two small plastic containers, which I could only describe as lunchboxes! Each of the two containers, although small, held approximately 500 weevils, which were to become the 'seed population'.

On arrival at the ditch, the weevils were released onto the Azolla mat and left to get on with their feast. After approximately eight weeks, we returned to site to find that the weevils had increased in number and had devoured all of the Azolla in the ditch. The microscopic beasts are a victim of their own success as they feed exclusively on Azolla thus following a successful eradication exercise the animals will expire on mass.

The photographs illustrate the dramatic end results. Following the success of this treatment, plans are now afoot to introduce the weevils into a second ditch on the Site during 2010.

There is a long history of biological control techniques in the UK including the use of ladybirds to control aphid infestations which is now available to the general public from certain suppliers. Further developments of biological control techniques are in progress including the potential control of Japanese knotweed with the application of sap sucking Psyllids. Defra have now given the go-ahead for these insects to be released on test sites during spring / summer 2010.

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# capita symonds' ecology teams

Capita Symonds has ecologists in seven offices across the UK (Blackburn, Carlisle, Colwyn Bay, Cwmbran, East Grinstead, Glamorgan and Sheffield).

Our services include providing ecological and nature conservation input for development proposals, including advice on legislation, policy and biodiversity, liaison with statutory consultees and stakeholders, completion of ecological desk studies, initial ecological habitat mapping surveys (Phase 1 Habitat surveys), and advice on protected species.

More detailed surveys offered include botanical, NVC, tree, hedgerow, river habitat, protected species surveys and development licence applications (with expertise in birds, bats, badger, reptiles, dormice, otters, water voles, great crested newts, fungi, fish, invertebrates and white-clawed crayfish), plus BREEAM and Code for Sustainable Homes assessments, ecological impact assessments and Habitat Regulations Assessments (AAs / AIEs) with innovative recommendations for mitigation as well as protected species translocations and site supervision.

We also provide advice and specifications for greening buildings and sustainability solutions, invasive species strategies, method statements, ecological habitat creation, enhancement, restoration and management plans and monitoring measures. Our ecologists hold relevant licences to carry out species surveys and follow best practise guidelines and are members of the Institute of Ecology and Environmental Management.



Protected species and habitat survey timetable\*

	jan	feb	march	april	may	june	july	august	sept	oct	nov	dec	
phase 1 habitat / invasive	Sub-optimal			Optimal					Sub-optimal				
NVC	Not possible				Optimal					Not possible			
overwintering birds	Optimal			Not possible						Optimal			
breeding birds	Not possible		Optimal					Not possible					
badgers	Optimal				Sub-optimal				Optimal				
bats	hibernation roosts / ground based tree roost potential		Sub-optimal		summer roost emergence / activity surveys					swarming bats	Hibernation roosts		
	building surveys (external & internal)												
dormice	Sub-optimal		Not possible						gnawed hazel nut search				
	Not possible			nest box / tube survey									Not possible
otters	Sub-optimal		Optimal								Sub-optimal		
water voles	Not possible	only proceed if known population			Optimal					only proceed if known pop.		Not possible	
reptiles	Not possible			Optimal			Sub-optimal		Optimal		Not possible		
great crested newts (GCN)	Not possible		Sub-optimal	4-6 visits			Sub-optimal	Not possible					
	Sub-optimal			habitat assessment					Sub-optimal				
invertebrates (terrestrial)	Not possible		slightly differing timings for each species					Not possible					
invertebrates (freshwater)	Not possible		2 surveys, 1 in spring, 1 in autumn					Sub-optimal	Not possible				
white-clawed crayfish	Not possible			Sub-optimal		Survey trapping / manual search			Sub-optimal		Not possible		

\* It should be noted that this timetable only provides an overview of survey timing. Survey frequency is dependant on several factors including; level of potential, geographic location, habitat and accessibility.

- Optimal survey period
- Sub-optimal survey period
- Surveys not possible