

Field assessment of great crested newt *Triturus cristatus* mitigation projects in England

The great crested newt (*Triturus cristatus*) is fully protected by law. Great crested newts often occur on land subject to development threats, and if development proceeds, a mitigation plan is frequently implemented. Typically, such mitigation involves the capture and exclusion of newts, and their removal to areas that have been subject to habitat creation, enhancement or restoration. Previous reviews of mitigation projects have all highlighted the need for more rigorous pre- and post-development monitoring of great crested newts (Oldham and others, 1991; Edgar & Griffiths, 2005). Comparing the population status of great crested newts pre- and post-development – as well as comparing population status between different sites – is often difficult because of the lack of standardised survey protocols. This research was designed to overcome methodological and data deficiency problems by undertaking standardised population estimates at a range of mitigation sites.

What was done

Thirteen sites subject to mitigation efforts before 2002 were surveyed using standard techniques. This involved a combination of torch counts, bottle trapping, mark-recapture population estimates and habitat assessment at 31 ponds.

Results and conclusions

A combination of the English Nature (2001) and Griffiths and others (1996) scoring systems suggested that four of the sites contained 'small' populations; four of the sites contained 'small-medium' populations; four sites contained 'medium' populations; and one site contained a 'medium-large' population. In terms of presence or absence of newts, those ponds and associated terrestrial habitats that had relatively high Habitat Suitability Indices (HSIs) generally contained great crested newts. However, some sites with high HSIs had low counts of newts by torching or trapping, so the relationship between HSIs and newt counts was weak. Although many of the sites contained appropriate aquatic and terrestrial habitats for newts, the majority were

very isolated due to development and had poor connectivity to other suitable habitats. Nevertheless, two ponds supported 'medium to large' numbers of newts despite local development, high levels of fragmentation, and connectivity to just one and two other ponds respectively. The level of ongoing survey and management at the sites varied, with some sites suffering from a lack of both activities.

Natural England's viewpoint

This research supports the view that mitigation undertaken several years ago has had mixed effects on the resident newt populations. Newts were detected at all sites, and some populations appear to be substantial. However, there seems to be a high degree of isolation and a lack of post-development management, which does not bode well for the future of some populations. Unfortunately, conclusions about the actual effects of mitigation and development are difficult to gauge in most cases because of the lack of data on newt populations before development. Nonetheless, the report makes useful

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recommendations for future mitigation planning that would lead to more effective mitigation for the impacts of development, including:

- Further standardisation of pre-development surveys;
- Greater use of pre-development habitat assessments, to complement newt surveys, in impact assessments;
- Greater emphasis on retaining or improving connectivity between newt ponds when planning mitigation;
- Ensuring that adequate and secured funding is in place for long-term habitat management.

Selected references

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Further information

For the full details of the research covered by this information note see **Natural England Research Report NERR001 - Field assessment of great crested newt *Triturus cristatus* mitigation projects in England**.

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