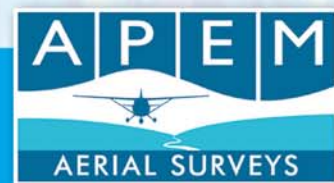




Biodiversity & Protected Species

- Expert advice on the biodiversity & protection of rare species in all aquatic habitats
- Monitoring of sensitive habitats & assessment of management practices such as flood defence, land drainage, weed cutting & dredging
- Robust scientific investigation of the conservation & protection of rare or endangered species
- High calibre, public inquiry defensible aquatic Environmental Impact Assessment for planners & developers
- Condition assessment, new site investigations & management guidelines



building reputation through excellence



What can we offer?

APEM offers extensive experience in aquatic ecology and management in relation to rare and protected species. We boast a team of licensed surveyors who are experienced in survey and translocation methods for the white-clawed crayfish (*Austropotamobius pallipes*), great crested newt (*Triturus cristatus*), freshwater pearl-mussel (*Margaritifera margaritifera*) water vole (*Arvicola terrestris*) and otter (*Lutra lutra*) among many other protected species. We have been involved in a number of major conservation and protection programmes and in high-profile, multi-agency projects promoting greater biodiversity.

Why choose APEM?

APEM is a science-based consultancy, working exclusively within the realm of Aquatic Science for over 20 years. We operate UK-wide, providing a comprehensive, multi-disciplinary approach to the monitoring and management of aquatic ecosystems. Our scientists are recognised experts in their diverse and specialist fields. Our teams work to exacting standards and are committed to providing a professional, client-focused service.

Our work has informed national policy and guidance documents and a range of Research and Development and policy projects for the regulators and other agencies. This has included major contributions to the 'LIFE in UK Rivers' series on rare and endangered species. As part of this EU initiative we've developed monitoring techniques for the conservation agencies for a range of threatened species including lampreys, bullhead, spined loach, Arctic char and poutan.

APEM has also carried out many large and small scale studies under European Habitats and Species legislation, monitoring species and habitats within Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Sites of Importance for Nature Conservation (SINC), Special Protection Areas (SPA) and Ramsar sites.

Who are our clients?

We work for a wide range of organisations including:

- Environment Agency/SEPA
- Highways Agency
- Conservation agencies
- British Waterways
- Water & power companies
- Local authorities
- Environmental consultancies
- Angling clubs & associations
- Regional Development Agencies

Key projects

Crayfish assessment

The indigenous white-clawed crayfish is under increasing threat from a fungal disease carried by the introduced American signal crayfish species. The River Darent in the M25 corridor has historically had large numbers of crayfish. The Highways Agency needed to assess the impact of a road scheme adjacent to the river. We mapped the habitat and measured crayfish numbers using trapping and hand searching. Our input helped inform the Highways Agency's biodiversity strategy.

Lamprey population surveys

We were commissioned to determine the most appropriate lamprey sampling methodology as part of the 'LIFE in UK Rivers' project. Our report, containing fully quantified population estimation exercises, now forms part of the 'LIFE in UK Rivers' lamprey handbook. We have also undertaken major surveys of lamprey populations in the Spey and Tay catchment of North East Scotland, as well as the Welsh Rivers Dee, Tywi, Teifi and Cleddau. We recently completed a review for the Environment Agency of all known data relating to lamprey in the UK.

Great crested newt

Approximately 80 per cent of the world's great crested newts are in Britain. The loss of habitat, particularly breeding ponds, led to a serious decline over the last century. The newt is now included in Annexes II and IV of the EC Habitats Directive and it is a protected species under the Wildlife and Countryside Act 1981 (as amended). APEM has carried out surveys and translocations throughout the country.

Water vole surveys

Water voles were included in the Wildlife and Countryside Act 1981 (as amended) in 1998 after suffering an alarming decline in British waters. We have carried out surveys on the Rivers Allander and Findhorn in Scotland, as well as waterways in Kent, East Anglia, Cumbria and Cheshire to support habitat restoration and protection schemes often associated with development plans.

Bullhead investigations

Bullhead are listed in Annex II of the EC Habitats Directive. APEM helped to develop bullhead monitoring techniques as part of the 'LIFE in UK Rivers' project. We have undertaken a variety of dedicated surveys using quantitative depletion techniques at locations including the Afon Teifi, River Axe and tributaries of the River Wharfe.

Spined loach surveys

Spined loach are recognised as an endangered species under the EC Habitats Directive. APEM was contracted by the Environment Agency to evaluate the impact of drainage schemes and flood defence management techniques on spined loach communities in lowland waterways in Eastern England. Our work helped develop guidance to minimise the harmful effects of these techniques.

Every day we deliver a professional, integrated service across all Aquatic Science disciplines. Every day our people raise the bar with their dedication to quality, integrity and impartiality. Every day we strive to exceed your expectations.

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