



### Hydro-electric scheme



Proposed location of a small-scale run-of-river hydro-electric scheme

The aquatic macroinvertebrate assemblages within an upland catchment in the

Dartmoor National Park were assessed in relation to likely impacts from a proposed small-scale run-of-river micro hydro-electric scheme.

The study aimed to identify a flow regime with minimal impact within the depleted section of river ensuring the river achieves its target status.

Both qualitative and quantitative sampling methodology were undertaken within various mesohabitats representing disparate flow condi-

tions; pools, falls/cascades and run/riffles.

A variety of metrics assessed the biological water quality, conservation value, diversity and flow preference of the aquatic fauna.

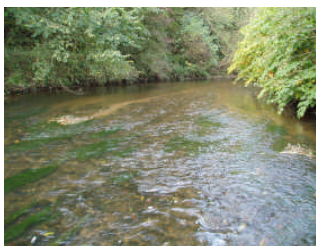
The suitability of selected seasonally-variable residual flow scenarios were discussed, reflecting the complex relationships between faunal hydraulic preferences, various aspects of a flow regime and channel morphology.

#### Principal project collaborators in this issue:

- HEIDRA LTD
- AQUATONICS LTD

### Multi-source river pollution

A combination of statistical analysis of historical data and multi-season chemical and macroinvertebrate surveys were undertaken. This was part of a long term study to identify spatial and temporal trends in biological



Exposed in-channel sand bars associated with Water Crowfoot

water quality and faunistic diversity in a large lowland river.

Individual and cumulative impacts from multiple stressors, such as metal contamination, organic enrichment, invasive alien species and habitat loss, within the catchment were researched.

Longitudinal variability in faunal assemblages in relation to restoration and enhancement works carried out to sections of the river channel were studied.

Persistent effluents were identified and suitable treatment regimes recommended.



Typical riverine habitat

Stretches of channel most effected by the presence of invasive riparian species were identified for potential habitat enhancement work.

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