The Lower Mole Flood Alleviation Scheme

Survey Fact Sheet: Invertebrates

Between October and December 2019 we carried out invertebrate surveys within the Lower Mole Flood Alleviation Scheme.

The map below shows the specific sites along the Scheme where the invertebrate surveys were carried out.

Our teams used a standard three-minute kick sampling method to record invertebrates in five locations throughout the Lower Mole. This method of sampling involves disturbing the river bed and allowing the flow to carry invertebrates into the net. A hand search of large substrates is also undertaken.
Samples are then analysed in a laboratory.

We use the aquatic invertebrate data to calculate biological metrics. Metrics are a system or standard of measurement, and are used to analyse and interpret biological data.

These metrics can tell us about the water quality, flow sensitivity, conservation importance and effects of sedimentation on freshwater ecology. Five sites were sampled in total:

- Downstream of Royal Mills sluice
- The Ember Loop
- River Ember
- Two sites along the River Mole.

**Results**

Biological metrics were broadly similar across the five sites surveyed.

The sample taken from the upstream end of the River Mole demonstrated the lowest biological metrics, potentially linked to the presence of floating pennywort which covered the channel at this location.

The invertebrate communities recorded historically demonstrate broad sensitivities to water quality, flow and sedimentation.

Aquatic invertebrates have specific sensitivities to flow and habitat. Being relatively immobile and unable to move away from disturbance, changes to channel hydromorphology or water quality, has the potential to affect aquatic invertebrate communities.

Aquatic invertebrates in the study area do not receive direct legislative protection; however they form a key biological quality element of the Water Framework Directive (WFD) classification for the River Mole from Hersham to River Thames confluence at East Molesey WFD waterbody.

Biological metrics indicate a diverse and sensitive invertebrate community present throughout the Lower Mole. Community conservation scores indicate moderate to fairly high conservation value.

**Contact:**

If you have any queries, we can be contacted on:

FASProject.LowerMole@environment-agency.gov.uk

or write to:

Lower Mole FAS, Environment Agency, Orchard House, Endeavour Park, London Road, Addington, West Malling, Kent, ME19 5SH.

More information and the latest news can be found at https://consult.environment-agency.gov.uk/ksles/lower-mole-flood-alleviation-scheme