

# The Lower Mole Flood Alleviation Scheme

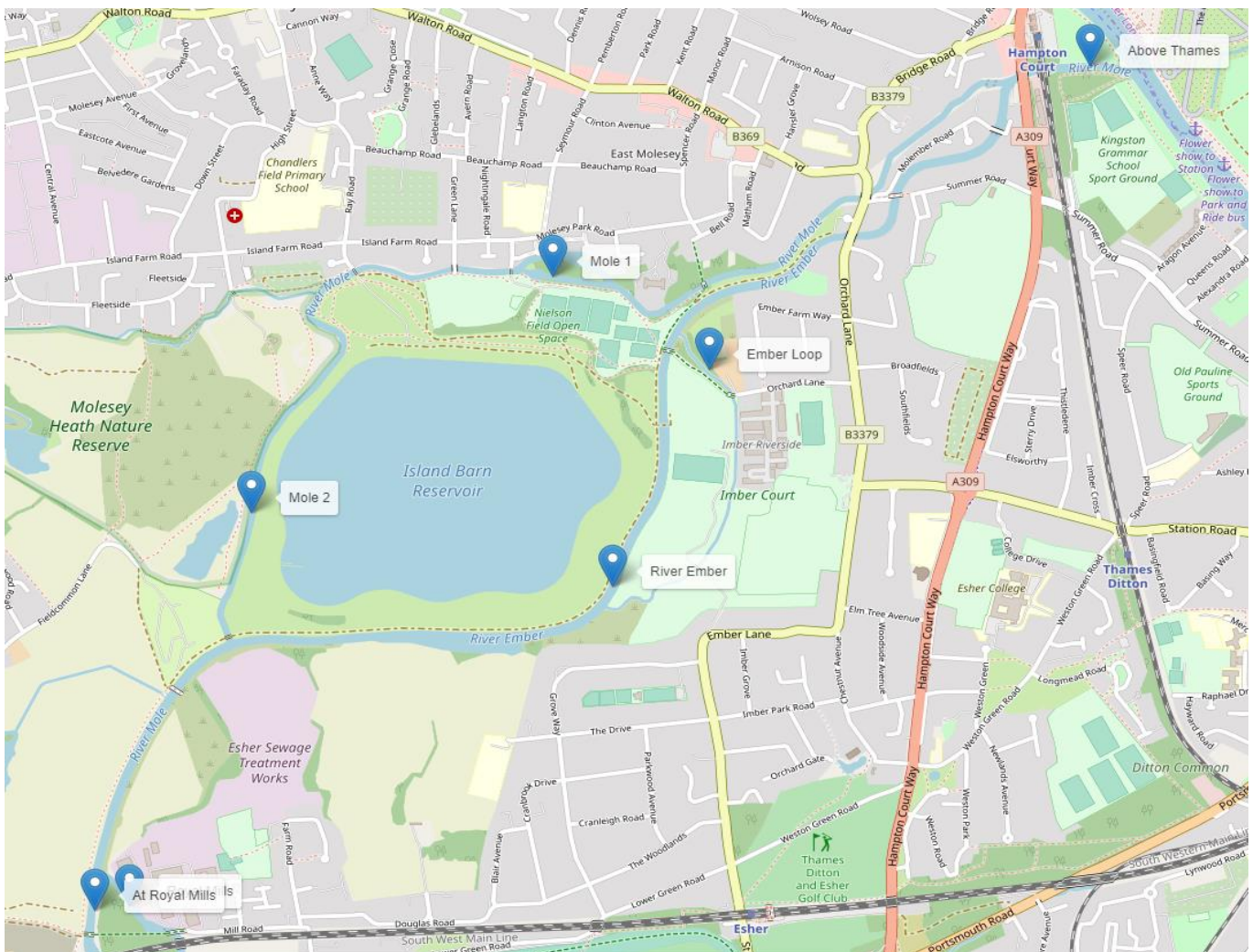
March 2020

## Survey Fact Sheet: Fish

Between October and December 2019 we surveyed fish within the Flood Alleviation Scheme which included areas along;

- The River Mole channel
- Ember Loop
- River Ember

The map below shows the specific sites along the Scheme where it was programmed for the fish surveys to take place.



customer service line  
03708 506 506

incident hotline  
0800 80 70 60

floodline  
03459 88 11 88

Fish surveys were conducted using a standard electric fishing technique, which passes a mild electrical field through the water to temporarily immobilise the fish. We can then lift the fish from the water using a net and place them in a holding tank where they recover straight away.

We can then record the information we need – for example, species type and body length. Our team are very experienced at this work and the process causes no harm to the fish.

On the River Ember we supplemented electrofishing with towed nets to survey fish – this was due to the width of the river.

Historically, 25 surveys were conducted between 1986 and 2013 therefore our survey locations were chosen to be consistent with where these previous studies took place.

We were unfortunately unable to survey the Royal Mills loop. At this location the high flows at the time of the survey made it unsafe to carry out this work.

## Results

A diverse range of fish typical of lowland managed watercourses were reported.

Roach were the dominant species reported on the Ember Loop.

Minnow (*Phoxinus phoxinus*) were numerically dominant on the River Mole.

The deeper waters of the River Ember held a number of large pike (*Esox lucius*) and chub (*Squalius cephalus*).

### Ember Loop

The highest number of fish were recorded at the Ember Loop site.

Habitat and flow diversity at this site were observed to be greater than at the River Ember or River Mole sites. The presence of fallen trees, deeper marginal areas (areas along the edges of the river rather than the centre) and depositional features (sediment build up in areas of slower flow) created a number of discrete habitat types capable of supporting a diverse range of species at higher abundances.

Roach were the dominant species (75% of the total catch), and were particularly concentrated in an area of deeper water immediately downstream of Orchard Lane.

Chub and minnow represented a further 18% of the observed community at this site.

### River Mole

The highest diversity of fish (13 species) was reported from the River Mole site including minnow (33.2%), chub (22.3%) and roach (21.3%).

This was the only site to record ruffe (*Gymnocephalus cernua*) and stone loach (*Barbatula barbatula*), both in small numbers.

Pike and perch were present in lower numbers than either the River Ember or Ember Loop. This is likely to be because larger fish may choose to favour the deeper water of the weir pool and are less likely to drop in to this shallower, faster flowing water downstream.

### River Ember

This study area was lower in species diversity than the other monitoring sites, although perch, pike and roach were reported at similar levels.

Incidental observations were made of adult European eel and adult pike moving into deeper waters during the electric fishing.

When the invertebrates study took place, three spined stickleback and roach were recorded. The stickleback were all larger than those caught by the electric fishing method and it is therefore expected that the numbers found during fish survey is an under-estimation of total population.

## Legislation

Fish receive protection under the Salmon and Freshwater Fisheries Act (1976, as amended) and The Eel (England and Wales) Regulations 2009.

The current arrangement of sluices and water level management structures within our study area restrict the free movement of migratory and coarse fish species through the catchment. Eel passes fixed to main sluice structures have helped eels move upstream, however Viaduct Sluice is still poses a barrier for fish and eels to move further up into the River Mole catchment



Seine net placed in the River Ember as part of the fish survey



Adult pike caught during electric fishing of marginal areas

## 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>