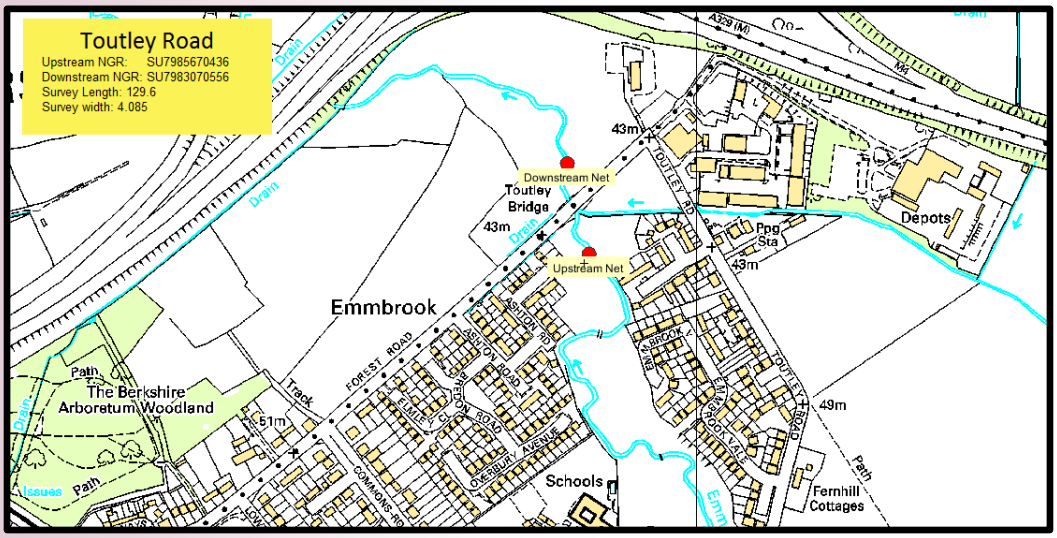
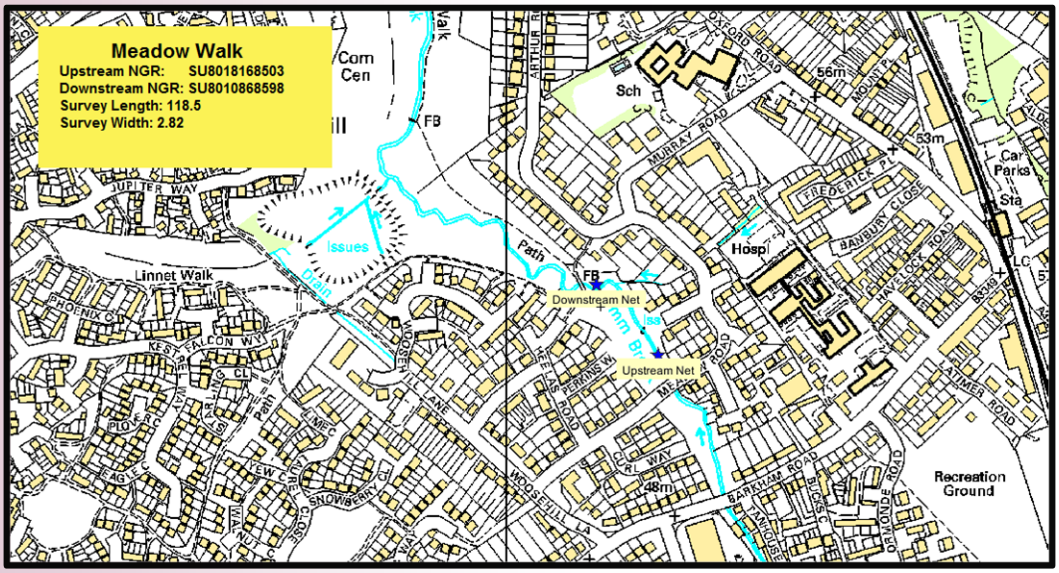
Fish population survey report

Emm brook

This report provides a summary of results from recent fish population surveys on the Emmbrook between Toutley road and Meadow walk. The surveys were carried out by Moore and Moore Carp on the Emm Brook community day on the 6th May 2017.





Author(s)	Tom Meier
Date	17th May 2017

Summary

- Two sites on the Emm Brook were surveyed by electric fishing (catch depletion) on the 6th May 2017;
- Five species of fish were recorded and a total of 105 fish were captured;
- Roach were the most widespread species, being recorded at both sites;
- An average total density estimate of 10.2 fish per 100m^2 and biomass estimate of 796.9 grams per 100m^2 were recorded across all sites;
- Roach were the most numerous species, whilst also having the highest biomass.

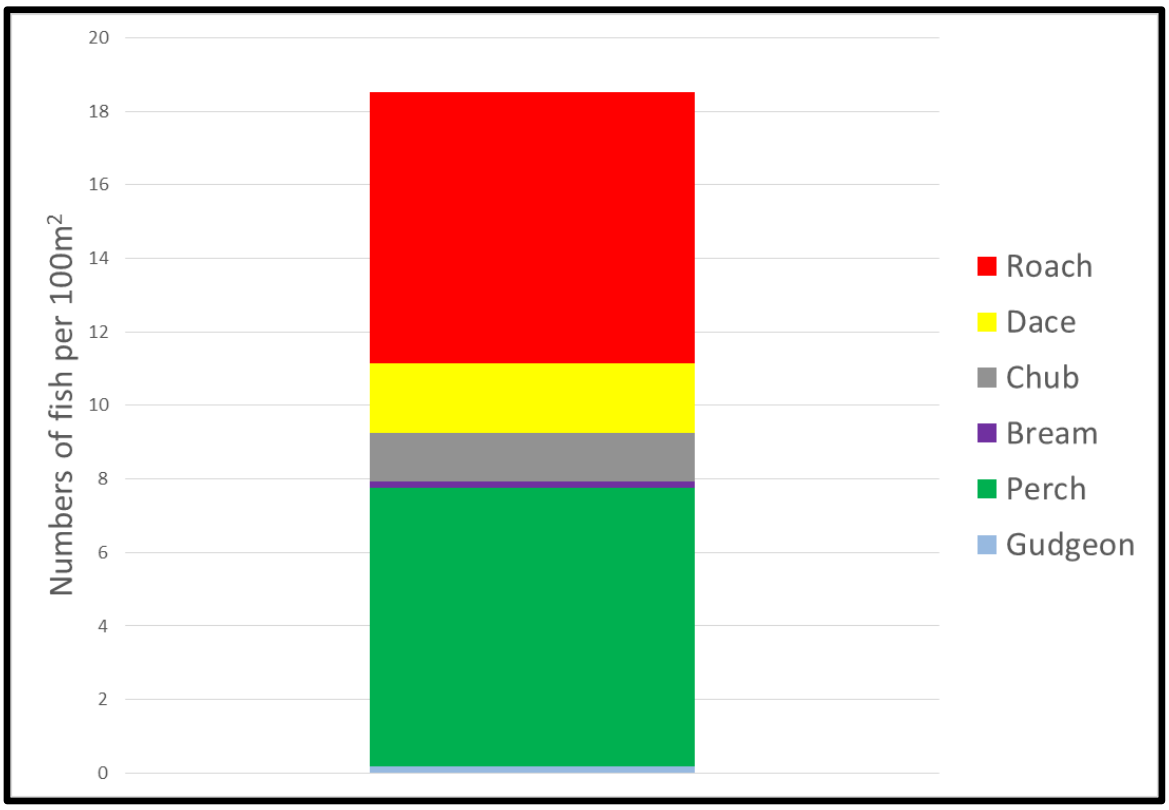
Survey results

Population density estimates (number of fish per 100m^2) and size range (min – max, mm) recorded during the survey for key species.

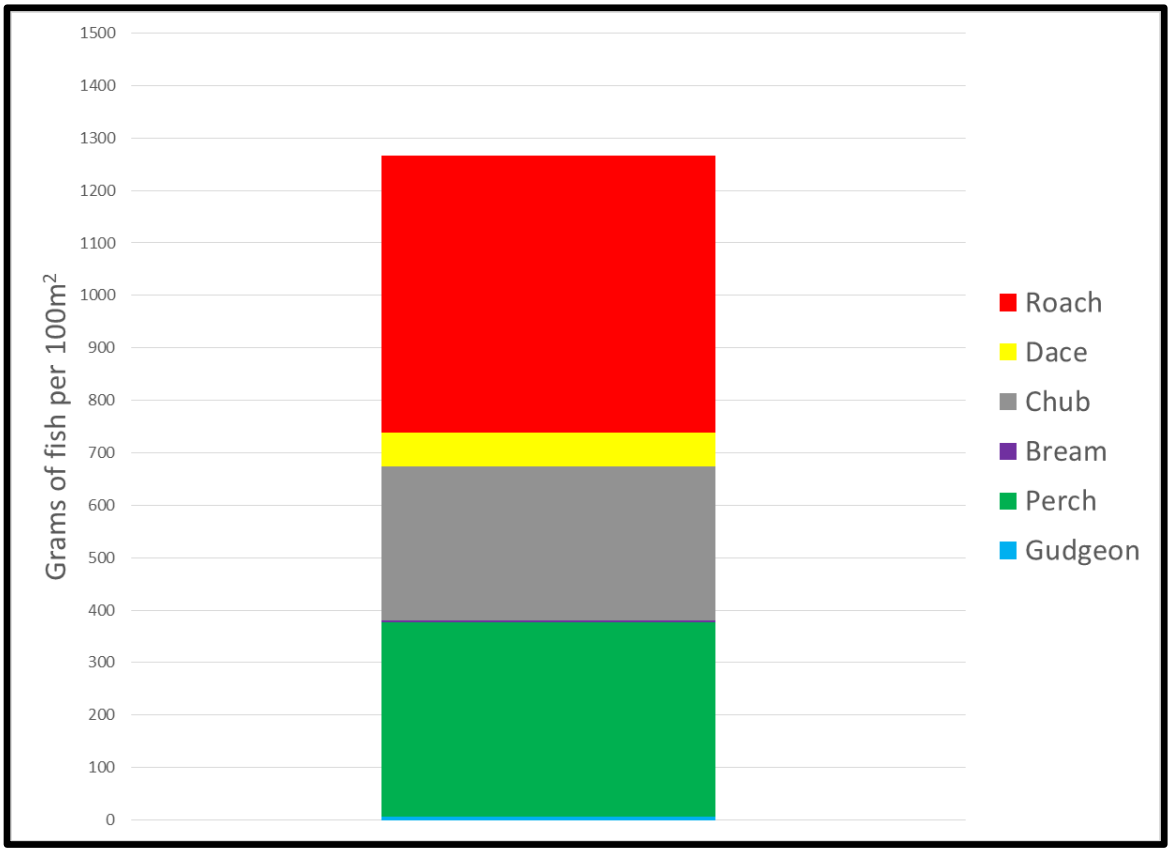
		Toutley Road	Meadow Walk
Roach	Density	**7.37**	**2.09**
	Size range	**84 - 263**	**115 - 158**
Perch	Density	**7.56**	**Not present**
	Size range	**65 - 233**	
Chub	Density	**1.32**	
	Size range	**98 - 369**	
Dace	Density	**1.89**	
	Size range	**100 - 167**	
Gudgeon	Density	**0.18**	
	Size range	**130**	
Bream	Density	**0.18**	
	Size range	**84**	
Bullhead*		**100 - 999**	**1000 - 9999**
Stone loach*		**10 - 99**	**10 -99**
Minnow*		**100 - 999**	**100 – 999**
3 Spinned stickleback*		**Not present**	**100 - 999**

***** These minor species are not caught, but an estimated abundance is recorded. As precise numbers and lengths are not collected, estimates cannot be calculated for biomass and densities, and are therefore not included in the analysis.

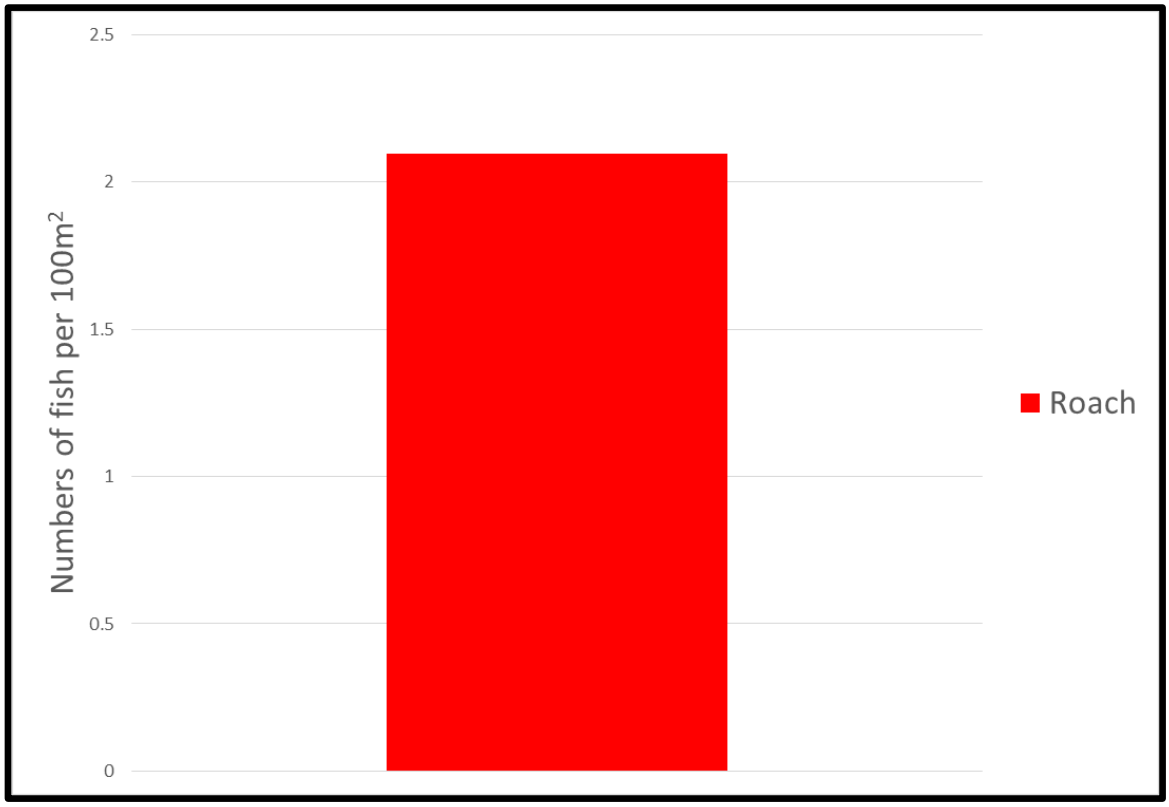
Population density estimates (number of fish per 100m^2) at Toutley Road



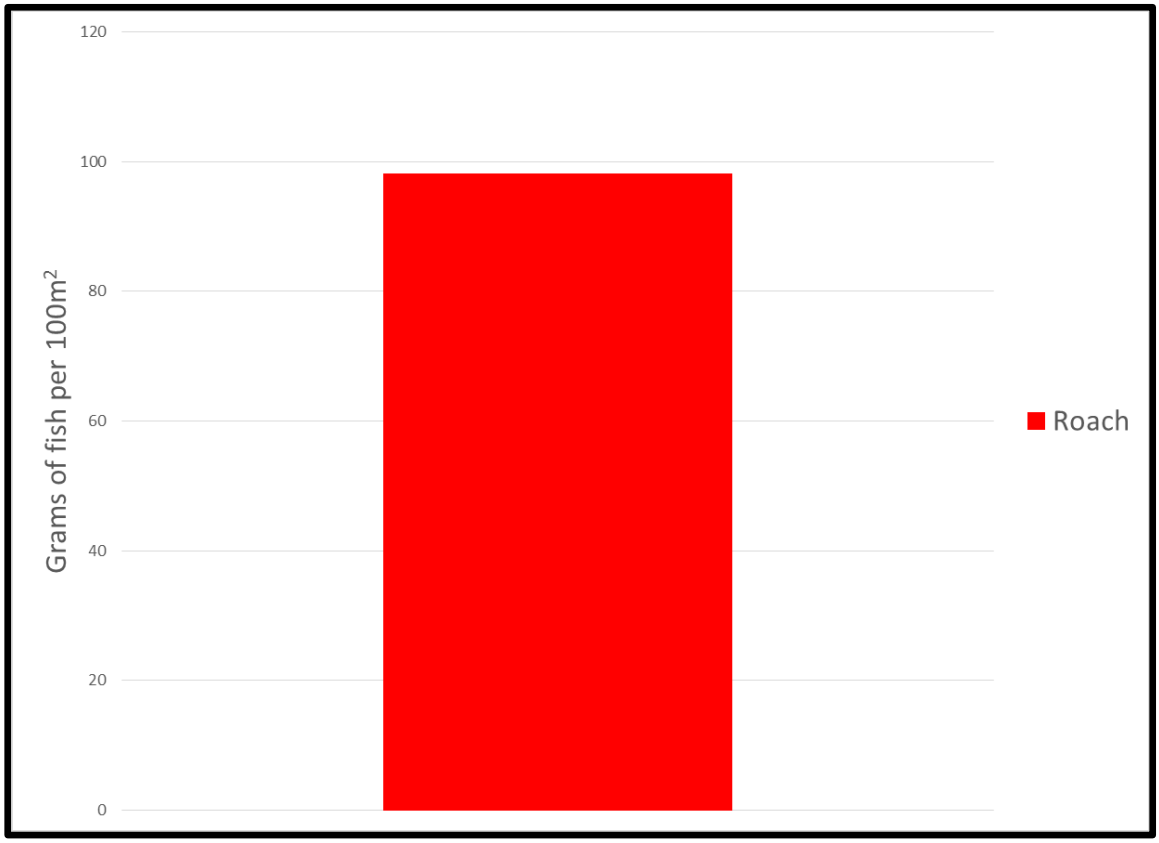
Population biomass estimates (grams of fish per 100m^2) at Toutley Road



Population density estimates (number of fish per 100m^2) at Meadow Walk

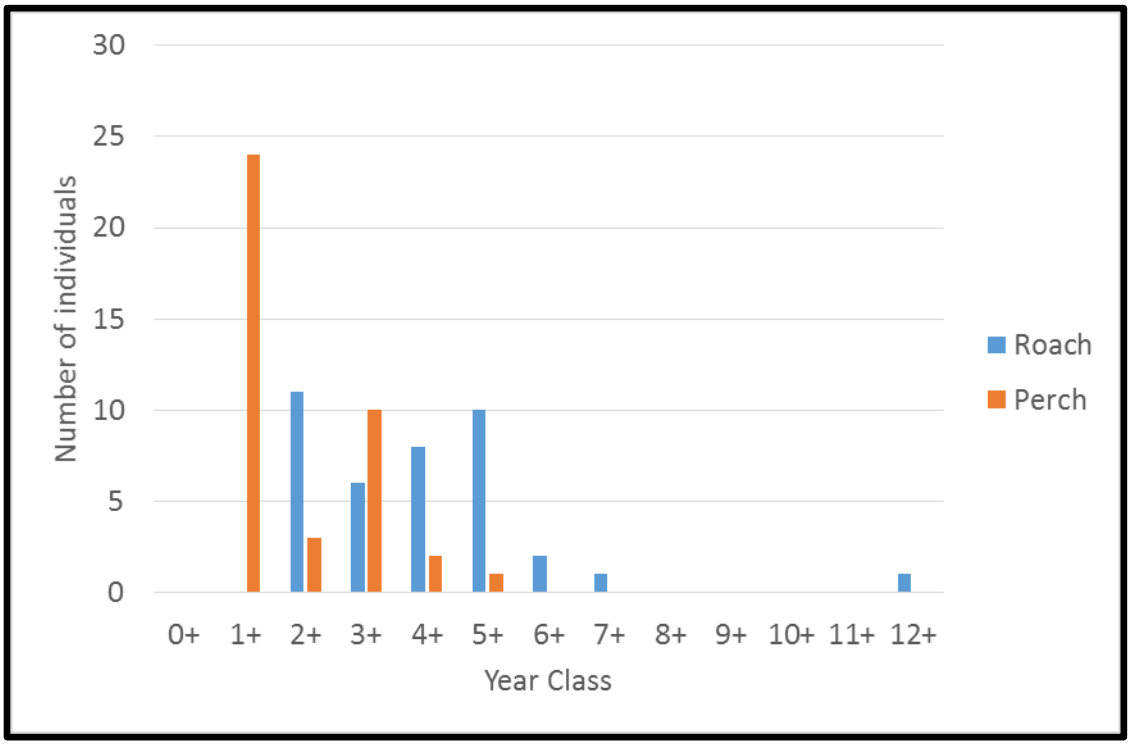


Population biomass estimates (grams of fish per 100m^2) at Meadow Walk



Length Frequency Data

Fish age is determined in years by growing seasons with the growing season ranges from April – September. For example a fish captured in October would be analysed as having a full year's growth. The age class stated is estimated using historical data from the National Fisheries Laboratory to establish the suspected growth rates of the species in the catchment. Below is the data for both sites combined.



Summary of fish population survey

- At Toutley Road, with the exception of the minor species, all fish were caught in areas of cover, around the woody debris structure as well as under the bridge
- At Meadow Walk, all the roach were caught in the deeper pool by the submerged debris. Numerically there was a very significant population of Bullheads, which was notably increased when the contents of the kick sample were examined. This showed the presence of a number of Bullheads, that due to their small size, would have been undetectable by the electrofishing survey.
- Roach and perch can be seen to dominate the population within the surveyed areas of the Emm brook. This is an expected result due to the hardiness of these species which at times may be subject to less than ideal conditions in an urban aquatic environment.
- The length frequency data suggests a dominating presence of 2+ - 5+ fish, this is due to the settled weathers and good summer of 2012 aswell as the consistency of 2014. The reduced numbers of 1+ fish may be as a consequence of unsettled weather throughout 2016, with heavy rainfall, flooding and cold early temperatures likely to have impacted the year's survival rates. Alternatively the presence of perch may be the result of reduced diversity of 1+ fish through predation. This is only a theory due to the lack of significant numbers to provide confidence in the data set.

Planned actions

- [If there are any actions planned to improve the sites/catchment summarise these here. This should include any relevant WFD activity such as investigations or programme of measures.]

If you would like to discuss the information presented in this report, or, future management of this fishery please contact:

- Adrian Bicknell, Fisheries
- 03708 506 506
- enquiries@environment-agency.gov.uk

Before you go fishing don't forget:

- You must have a valid Environment Agency rod licence and permission from the fishery owner;
- You must comply with the fisheries byelaws;
- The coarse fish close season (15th March to 15th June inclusive) applies to all rivers, streams and drains in England and Wales but not most stillwaters. Stillwater fishery owners can still have their own close season and rules, so please check with them before setting out.

Report illegal fishing:

If you see any fishing, netting or trapping you think may be illegal, please do not tackle it yourself. Call us immediately on 0800 80 70 60 and tell us:

- Exactly where the alleged offence is taking place;
- What is happening;
- How many people are involved and their descriptions;
- The registration numbers of any vehicles involved.

If you prefer to remain report an environmental crime anonymously call Crimestoppers on 0800 555 111 or https://crimestoppers-uk.org/give-information/give-information-online/.