

Dorset is blessed with many rivers that are fed by their downland chalk aquifers. The unique characteristics of these rivers are derived from the springs that feed them; cool, clear water from springs supports a range of aquatic species. River fly larvae, such as mayfly, which provide a food source for salmon and trout, are normally abundant. For a number of reasons that is not always the case in the Devil's Brook and Cheselbourne stream.

The clean, abundant source of water is at the heart of the issue facing chalk streams in Dorset and other areas. The chalk aquifer is used by water companies to supply homes with drinking water because it requires minimal treatment before it is put into public water supply, but the increasing demands from all of us for water in our homes can be linked to increased lengths and duration of the dry phase in ephemeral or winterbourne chalk rivers.

Low flows were recognised in Dorset's chalk streams some years ago, both the Environment Agency and Wessex Water have investigated the impact of abstraction on flows in rivers, including the Devil's Brook and the Cheselbourne stream, because of concerns raised by local residents. The character of the underlying fractured geology causes reaches of both the Devil's Brook and the Cheselbourne Stream to become 'winterbourne'. Winterbournes are common in the chalk geology of Dorset, and the term describes a river that dries up in the summer months. This type of river is rarer than the chalk streams that feed them and can support a unique group of plants and animals that are adapted to living their life in drying rivers.

We cannot change the geology through which the rivers flow, but our past management has created some problems and can be improved. Rivers have been moved, culverted under roads, encased in concrete gullies and dammed to suit our needs. All these measures prevent rivers from behaving in a natural way. They are no longer allowed to spread across a floodplain, as a result of development of communities and farming, and so flooding has become a problem for people living and working close by. The same fractured geology that allows the winterbournes to disappear when the ground water level is low in summer also causes ground water to rise causing flooding after prolonged winter rain refills the aquifer.

Working with natural processes in the catchment for each river can help to deliver benefits for fish and biodiversity, as well as flood mitigation and improved water quality. Working with landowners and local people would help us achieve this.

Water efficiency is not a new idea, it saves both money and the ecology of the river. We can manage our village reaches to slow the flow, keeping enough vegetation to support life during the dry times but limit risk of vegetation blocking culverts during high flows. We can work to ensure water is retained in the soil and slow the flow of rain water from the land, paths, roads and gardens.

The Farming and Wildlife Advisory Group, Dorset Wildlife Trust, Wild Trout Trust, Environment Agency, Wessex Water and local volunteers are together delivering a project in the Devil's Brook catchment. The Wild Trout Trust has visited farms and villages in the Devil's Brook and Cheselbourne Stream, primarily to see what measures can be used to benefit fish. Local volunteers have been undertaking regular monthly surveys of river fly larvae to help gauge the health of the rivers. Native brown trout should be common in the river, but a common comment is how they seem to have disappeared over recent years. We hope to understand the problem and deliver some projects that improve the river for fish, and in the longer term reduce the risk of high flows converging on the villages. We aim to work in the catchment so that when the rivers start to dry, any surface water that runs into the rivers is of good quality.

If you would like to find out more about the Devil's Brook project, email Nicola - nicola.hopkins@fwagsw.org.uk.

There is information about projects on other Dorset rivers and the partners working to improve them on the Dorset Catchment Partnership webpages.
www.wessexwater.co.uk/environment/catchment-partnerships/poole-harbour-catchment-partnership