



the River Restoration Centre

Working to restore and enhance our rivers

Technical Advice

Durleigh Brook, Somerset

Habitats and Hydromorphological Assessment of Durleigh Book

KEY INFO

Date: April 2018

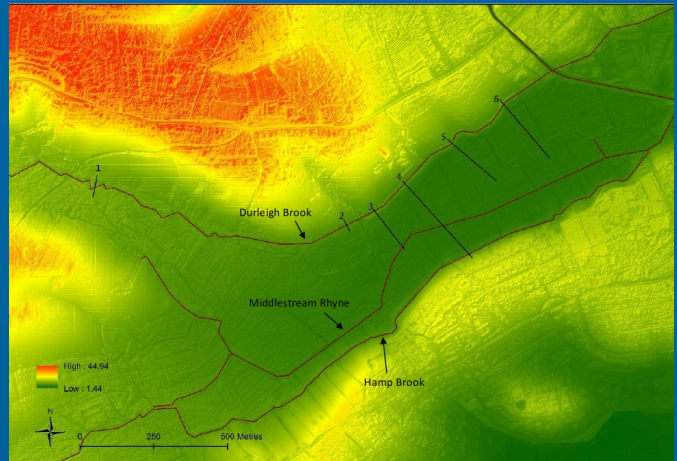
Client: Environment Agency

Type: Habitat and options assessment

Themes: Hydromorphology, NFM, floodplain management



The Durleigh and Hamp brooks were historically diverted and perched on both sides of their floodplain to facilitate flooding of water meadows that are still visible using LiDAR data (see map). The heavily modified perched channels are filled with silt and feature few valuable habitats, fish populations, or hydromorphological diversity (**360° photo**). Along the majority of the surveyed course, a 2m high embankment on the right bank disconnects the channel from the floodplain, and a sluice diverts some water from Durleigh Brook to ease discharge through a siphon downstream.



The Environment Agency commissioned the RRC to determine options to improve the quality of instream habitats so as to attain **Good Ecological Potential (GEP)**.

We carried out a geomorphological walkover survey with 360° photographs, and used information on fish quality from ToolHab and elevation data from LiDAR to analyse the previous course of the river and the potential for restoration/enhancement.

Fish ecological status was poor, with species with a high likelihood of occurrence such as trout and bullhead absent. The analysis of historic maps and LiDAR data suggested that prior to being modified, the Durleigh and Hamp brooks used to join at the beginning of the valley and run as a single stream.

Based on this analysis, we suggested options including instream enhancement, two-stage channel, floodplain reconnection, and reconnection of the Durleigh Brook and Hamp Brook into a single channel for maximum flow and habitat benefits. Considerations to these options include the siphon discharge capacity, flood risk impacts and ecological targets to reach GEP.