



Advisory Visit

River Bollin, Styal Country Park, Cheshire

February 2010



1.0 Introduction

This report is the output of a site visit undertaken by Tim Jacklin of the Wild Trout Trust to the River Bollin, Cheshire on 19th February 2010. Comments in this report are based on observations on the day of the site visit and discussions with Kevin Nash (Fisheries Technical Specialist) and Andy Eaves (Fisheries Technical Officer) of the Environment Agency (EA), North West Region (South Area).

Normal convention is applied throughout the report with respect to bank identification, i.e. the banks are designated left hand bank (LHB) or right hand bank (RHB) whilst looking downstream.

2.0 Catchment / Fishery Overview

The River Bollin is 49 km long and rises in the edge of Macclesfield Forest, flowing west to join the River Mersey (Manchester Ship Canal) near Lymm. The River Dean is the major tributary of the Bollin, and the catchment area totals 273 km². The section of river visited flows through Styal Country Park, downstream of Quarry Bank Mill, and is owned by the National Trust. A previous Wild Trout Trust visit was carried out further downstream at the National Trust property at Dunham Massey.

The Bollin falls within the remit of the Mersey Life Project which aims to carry out a phased programme of river restoration, initially focussing on the non-tidal section of the River Mersey, the River Bollin and River Goyt (<http://www.environment-agency.gov.uk/homeandleisure/wildlife/102362.aspx>). The construction of fish passes on Heatley and Bollington Mill weirs in the lower Bollin catchment means it is now possible for migratory species (e.g. salmon, lamprey) to reach the Styal Country Park section of river.

The river here is not fished by any angling interests, nor are there any electric fishing survey sites in the EA survey programme, hence the current status of fish stocks is not known. The river was walked from the Altrincham road (A538) bridge upstream to Quarry Bank Mill weir, a river length of 3.4 km (Figure 1).



Figure 1 © Crown Copyright 2010 www.ordnancesurvey.co.uk/getamap. Image reproduced with permission of Ordnance Survey and Ordnance Survey of Northern Ireland.



Photo 1

3.0 Habitat Assessment

The river here lies within a steep-sided, wooded valley, and flows over Triassic sandstone and mudstone geology, with many areas of shale bedrock exposed on the banks and bed of the river. The nature of the geology means the river bed sediments contain a high proportion of sand (Photo 1).

The river has a moderate gradient here and a relatively natural planform, which means there are some excellent natural in-stream habitat features present including riffles, glides, lateral scour pools, shoals and point bars. There are some superb examples of stable large woody debris (LWD) within the river channel where mature trees have fallen into or across the channel (Photos 2 – 5).

The retention of LWD in the river channel is important for a number of reasons:

- Creating a diversity of flow patterns which in turn cause localised scour and deposition, promoting diversity in the shape of the river channel and hence habitats;
- Promoting the sorting of bed substrate which makes the right-sized spawning gravel available to a variety of fish species;
- Retaining leaf litter and other organic matter which supports shredding invertebrate species and the species which predate upon them;
- Providing refuge habitat for white-clawed crayfish (if present), a nationally threatened BAP species;
- On a catchment scale, checking the flow of water and reducing downstream flood risk.

Many land managers or land drainage / flood defence authorities routinely remove LWD from the river channel. In a situation such as Styal Country Park, the in-stream LWD should be retained.



Photo 2 Stable LWD creating local bed scour and deposition of sorted gravel downstream



Photo 3



Photo 4



Photo 5

The naturally sandy nature of the river bed is less than ideal for fish such as trout and salmon to use for spawning. The eggs of these species are buried in gravel nests (redds) in the autumn and spend several weeks incubating within the gravel before young fish emerge in spring. The in-filling of the spaces between the gravel (the interstices) with fine sediment reduces water flow to the eggs and they can suffocate.

In this section of the Bollin, spawning within the main channel of the river is likely to be important because the few tributary side streams are very steep and inaccessible to fish, and the option of migration further upstream to the upper reaches of the catchment is prevented by the weir at Quarry Bank Mill. The strategic placement of woody debris could help to scour areas of clean gravel that can be used for spawning in the main river channel. Providing fish passage facilities at the weir should also be a priority.



Photo 6 The huge weir at Quarry Bank Mill

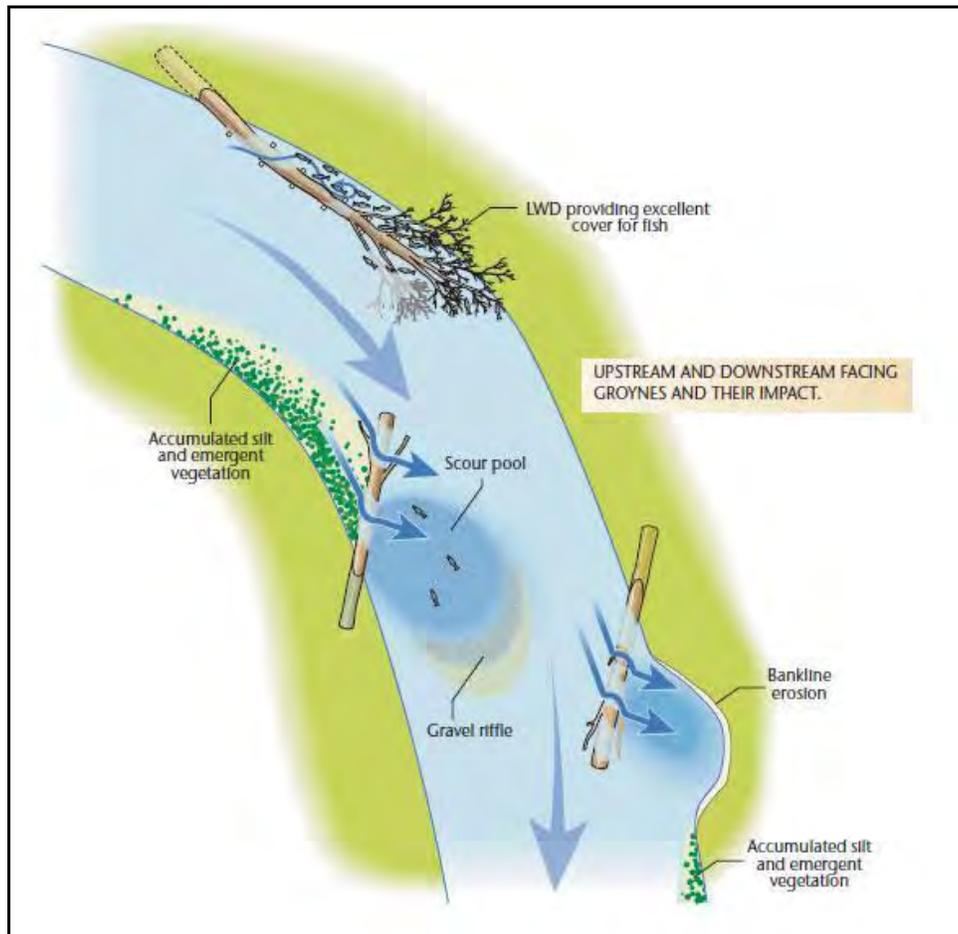


Figure 2



Photo 7 Fixing LWD flow deflectors in place with rebar



Photo 8 Tree kicker secured to its stump with cabled wire

4.0 Recommendations

- There should be a policy of retaining large woody debris within the river channel.
- LWD structures (groynes, flow deflectors, tree kickers) should be introduced at certain locations to promote better sorting of the gravel substrate to provide better spawning opportunities (Figure 2, Photos 7 – 8).
- A fish pass at the weir at Quarry Bank Mill should be provided. It is understood that the Mersey Life Project are pursuing fish pass improvements here, and an initial survey has been undertaken.
- A controlled trial of angling access should be held in order to assess fish stocks and the potential of the stretch for lease as a fishery. A number of days could be organised using invited anglers who would be allocated different sections of the river and asked to fill in detailed catch records. This information would complement fishery survey data collected by the EA, and cover a longer length of river. Angling has

been used successfully as a monitoring tool by groups in the WTT's Trout in the Town project, for example on the River Don in Sheffield:

<http://urbantrout.blogspot.com/2009/09/dont-it-always-seem-to-goyou-dont-know.html>

<http://urbantrout.blogspot.com/2010/02/frosty-grayling-and-101-of-his-friends.html>

Wild Trout Trust may be able to help facilitate this if the National Trust and EA wish to pursue the idea.

5.0 Making it Happen

The Wild Trout Trust can assist in implementing the above proposals by preparing a project proposal and consent applications for introduction of LWD, and by demonstrating the methods used. It may be possible to use National Trust volunteers to assist with this.

6.0 Acknowledgement

The Wild Trout Trust would like to thank the Environment Agency for the support that made this visit possible.

7.0 Disclaimer

This report is produced for guidance only and should not be used as a substitute for full professional advice. Accordingly, no liability or responsibility for any loss or damage can be accepted by the Wild Trout Trust as a result of any other person, company or organisation acting, or refraining from acting, upon comments made in this report.