



Advisory Visit

River Wharfe, Bradford City Angling Association

05/01/2017



1.0 Introduction

This brief report is the output of a walkover of the Bradford City Angling Association (BCAA) waters on the upper River Wharfe, N. Yorkshire, undertaken by Jon Grey of the Wild Trout Trust. The visit was accompanied by various members of the committee (Jim Munden, Phil Bailey & Mick Curtin) and keen members (Steve Rhodes & Francis Dines).

Normal convention is applied with respect to bank identification, i.e. left bank (LB) or right bank (RB) whilst looking downstream. Upstream and downstream references are often abbreviated to u/s and d/s, respectively, for convenience. The Ordnance Survey National Grid Reference system is used for identifying locations.

Recommendations for particular techniques can be found in previous AV reports for BCAA (e.g. R Aire; <http://www.wildtrout.org/av/river-aire-bradford-city-angling-association>).

Summary data for the BCAA waters are collated in Table 1.

	Bradford City AA Buckden & Hubberholme sections
River	River Wharfe
Waterbody Name	Wharfe from Oughtershaw Beck to Park Gill Beck
Waterbody ID	GB104027069290
Management Catchment	Wharfe & Lower Ouse
River Basin District	Humber
Current Ecological Quality	Classified as Good Ecological Status (2009 & 2015)
U/S Grid Ref inspected	SD 91612 78395
D/S Grid Ref inspected	SD 94671 75571
Length of river inspected	~4600m in total

Table 1. Overview of the waterbody. Information sourced from:

<http://environment.data.gov.uk/catchment-planning/WaterBody/GB104027069290>

2.0 Habitat Assessment

The starting point for the walkover was BCAA's lower fishing limit, d/s of Buckden at SD 94671 75571. The true RB was followed as BCAA have almost continuous rights along that bank. It is fenced for the entire lower Buckden length, and this should be monitored to maintain its efficiency in excluding livestock. Despite the fencing, there is very little evidence of self-set tree regeneration, and the club should explore the possibility of tree planting within the fence to bank buffer zone as it is quite wide in places; Dan Turner at Yorkshire Dales RT would be a good point of contact regarding taking this forward, as he has been responsible for planting work locally. It may even be that the Woodland Trust can supply BCAA with trees for free). Much of the bank has been historically rock-armoured to constrain the channel within the floodplain.



Fig 1. Typical banking, with scattered mature alder trees on the true right bank. Note the lack of cover on the left bank where livestock access (sheep) has reduced the riparian vegetation to a short sward of grasses.



Fig 2. Area of deposition on the inside of a bend leaving a good width of buffer zone, ideal for planting of trees. The LB is rock armoured here; the sinuous channel has good variability in water depth but lacks riparian cover (and shade), greatly reducing its fish-holding capacity.



Fig 3. A short section of willow spiling to reduce erosion scour on the RB (upper). While this has started to grow and the roots will help retain the structure, the tail end of the spiling has been undermined by flow and scour is beginning again (lower). The hole should be packed with living willow brash and wired into position, continuing the brash ~2m further d/s to prevent re-occurrence. Living willow whips inserted through the spiling at the waterline and from the river side will help soften the force of the water working against the spiling. The roughness and diffuse nature of brash often makes it more applicable than willow spiling for bank protection work on upland rivers.



Fig 4. The lower sections offer good riffle, glide and pool sequences. Better cover could be achieved by laying some of the more mature goat willow stems over the water at a downstream angle ($<30^\circ$ to the bank) so that the branches are touching the surface. Willow whip planting at strategic locations is a cheap, quick and easy method of establishing low cover; whips can be sourced from the bank side of the larger established willows, ensuring not to take the valuable riverside/trailing cover.



Fig 5. The d/s end of a very long straightened section (about mid-way along the lower Buckden length) where armouring on both banks is obvious. The armouring and associated drystone wall have failed in several locations and introduced large boulders which bounce the water flow away from the edge, actually introducing some sinuosity at low flows. This could be encouraged in further locations. The banks require some willow whip planting as there is a distinct lack of cover. NB: mink tracks were observed here.



Fig 6. An interesting area of braiding as the river weaves in multiple channels across an enormous deposition of cobble and gravel. There were some good patches of salmonid spawning-sized gravels deposited here, and the diversity of flows and pockets of deeper water offer refuge habitat for juveniles. Some brash bundles could be pinned in the more protected pools to further enhance fry and juvenile refugia. Colonisation of the exposed bars by shrubby vegetation could be augmented with some willow whips to provide low cover.



Fig 7. The d/s end of another long straightened section that ends abruptly in the enormous cobble deposition (RHS of Fig 6) that has blocked the channel and impounded the water for ~100m u/s. The majority of water now slews to the left (see Fig 8).



Fig 8. Erosion scour of the LB caused by the redirection of the main flow around the deposition bar (Fig 7). Leave this to allow the river to naturally restore sinuosity.



Fig 9. Another section of willow spiling on the LB that appears to be intact, functional and alive. Some of the taller stems could be laid d/s to provide low cover. NB: mid picture is a solar panel providing power for a drinking trough.



Fig 10. The Dales Way is reasonably screened from the river by dense, shrubby hawthorn and willow. However, these do not appear to provide any low cover on the river side, and some trunks should be laid over the water.

The upper Buckden length has better mature tree cover on both banks, and even some woody debris in the river providing some very attractive habitat. Both banks are still stone-reinforced, and in areas, erosion has caused collapse. Short sections of fencing are in place but in a poor state of repair. It would be worthwhile investing in these before they are lost completely. The very u/s reaches could benefit from tree planting on the RB.



Fig 11. Mature ash and alder lining both banks of the upper Buckden length. Natural introduction of woody material has created favourable holding habitat. There are relatively natural pool-riffle-glide sequences.



Fig 12. Consider reinstating this fence line as a priority to protect the bank from grazing, and discourage walkers from the adjacent Dales Way Path from disturbing the fish / fishing.



Fig 13. The confluence of Cray Ghyll with the Wharfe (LB). Yorkshire Dales RT & WTT have conducted instream and riparian habitat work along the lower 400m of Cray Ghyll. Tree sleeves can be seen toward the LHS of the image. The RB, from where the image was taken would benefit from further tree planting.



Fig 14. Long, sweeping bend resulting from channel realignment and rock armouring of the RB; devoid of cover, the RB would benefit from tree planting. These unnaturally long, sweeping bends tend to create elongated riffles and prevent pool formation.

The Hubberholme length was walked (on the LB, the Dales Way) from the Church at Hubberholme to the u/s limit of BCAA fishing. This is classic headwater habitat, full of pockets around large boulders, deep pools and runs against bedrock, with some shallow riffles. The fence on the LB is in better condition than that on the right, and sheep are clearly accessing the RB as there is a distinct lack of self-set trees which are evident on the LB. Integrity of these fences should be checked regularly and investments made to keep them functional. Willow whip insertion will be the most efficient method of introducing cover up here, although increasing species diversity would also be of benefit, especially alder which helps to increase the productivity.



Fig 15. Channel heterogeneity increased by bedrock around the mid-point of the Hubberholme length. Fencing here is in poor condition and should be replaced. Cover is poor on the RB; willow whips should be inserted at the toe of the bank, and consider planting trees when the fence has been reinstated.



Fig 16. Scope for tree planting on the LB inside the good quality fence that borders the Dales Way.

3.0 Making it Happen

The WTT may be able to offer further assistance:

- WTT Project Proposal
 - Further to this report, the WTT can devise a more detailed project proposal. This would usually detail the next steps to take and highlight specific areas for work, with the report forming part of a flood defence consent application.
- WTT Practical Visit
 - Where recipients are in need of assistance to carry out the kind of improvements highlighted in an advisory visit report, there is the possibility of WTT staff conducting a practical visit. This would consist of 1-3 days' work, with a WTT Conservation Officer teaming up with interested parties to demonstrate the habitat enhancement methods described above. The recipient would be asked to contribute only to reasonable travel and subsistence costs of the WTT Officer. This service is in high demand and so may not always be possible.
- WTT Fundraising advice
 - Help and advice on how to raise funds for habitat improvement work can be found on the WTT website - www.wildtrout.org/content/project-funding

The WTT officer responsible for fundraising advice is Denise Ashton: dashton@wildtrout.org

In addition, the WTT website library has a wide range of free materials in video and PDF format on habitat management and improvement:

<http://www.wildtrout.org/content/advice-and-practical-help>

4.0 Acknowledgement

The WTT would like to thank the Environment Agency for supporting the advisory and practical visit programme in England, through a partnership funded using rod licence income.

5.0 Disclaimer

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