Advisory Visit

R. Wharfe, Wetherby & District Angling Club

15/06/2017

Key Findings:

- The majority of the Wharfe at Wetherby has been realigned and canalised, and is severely negatively impacted by the large weir. Its flow regime is also strongly influenced by modifications to the river upstream and insensitive land management throughout the catchment.

- That said, Wetherby & District Angling Club waters in the Wetherby environs have, for the most part, enviable riparian vegetation providing good quality buffer strips which: a) should be protected at all costs; and b) can be managed and used to good effect to enhance instream features for the benefit of the fishery and wider ecology.

- The channel upstream of the weir around Linton Ings is currently little more than trapezoidal in cross-section, and relatively featureless. There is scant refuge for fish from predation and spate flow, and limited spawning habitat, and this area is ripe for enhancement as well as community engagement and education.

- The channel downstream from the weir retains some natural characteristics and energy due to a bedrock pinch-point in the catchment before returning to canalised form. Here, judicious management of the relatively dense stands of mature riparian trees could be used to extend better quality habitat further along the reach.

Index links

Click the relevant section name to link to the content:

1.0 Introduction

This report is the output of a site visit undertaken by Jon Grey of the Wild Trout Trust to the River Wharfe at the request of John Smith of Wetherby & District Angling Club, who attended the walkover. The rationale was to assess in-river and riparian habitat quality, and identify any remedial actions that might be implemented, particularly with regard to a perceived lack of coarse fish.

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.

	Wetherby & District AC
River	River Wharfe
Waterbody Name	Wharfe from Collingham Beck to Tadcaster Weir
Waterbody ID	GB104027064255
Management Catchment	Wharfe and Lower Ouse
River Basin District	Humber
Current Ecological Quality	Overall status of **Moderate** ecological potential based upon an overall ecological status of **Moderate** and overall chemical status of **Good**
U/S Grid Ref inspected	SE 07446 52091
D/S Grid Ref inspected	SE 08193 50303
Length of river inspected	~2400m in total

Table 1. Overview of the waterbody. Information sourced from:
http://environment.data.gov.uk/catchment-planning/WaterBody/GB104027064255

Under the Water Framework Directive, the Environment Agency consider the Wharfe from Collingham Beck to Tadcaster Weir as a heavily modified waterbody (HMWB). Through two cycles of assessment, it has achieved *Moderate Ecological Potential* overall. It is important to note that five ecological classes are used for WFD Water Bodies: high, good, moderate, poor, and bad. These are assessed against 'ecological status' (or 'ecological potential' in the case of HMWBs), and that anything ranked below good is classified as a failure.

The status (or potential) of a waterbody is derived through classification of several parameters: water quality, physical condition and barriers, invasive non-native species, fish, and flows and levels. The overall status is then dictated by the lowest score amongst those parameters. However, it is important to note that, in the case of HMWBs, the status of fish (and benthic invertebrates) are often discounted as the HMWB designation already highlights a potential impact on those biological indicators, but as these are of the greatest immediate importance to angling clubs, they should not be overlooked.

In 2016, the classification of *Moderate Ecological Potential* was based upon an ecological quality of moderate, and a chemical quality of good. Chemical quality has improved from fail in 2013.

2.0 Catchment / Fishery Overview

The River Wharfe is a gravel bed river in a glacial valley, rising on Camm Fell in the Yorkshire Dales National Park and flowing for ~115km to join the Yorkshire Ouse near Cawood. The physical characteristics of the Wharfe and hence the potential of the fishery, by the time it reaches Wetherby & District AC waters, are influenced strongly by processes and interventions occurring upstream. Most Yorkshire Dales' rivers have been affected by drainage and intensive stock grazing within the immediate floodplain and broader catchment, resulting in rapid transit of water and flashy hydrographs with narrow, high peaks and troughs of flow, excessive erosion, and a scarcity of wetland features. There is typically over-supply of cobble and gravel resulting in pools and over-wide channel sections filling in to become uniformly shallow, especially where natural geomorphology is constrained at a fixed width by bank revetment and channel realignment, or interrupted i.e. behind weirs.

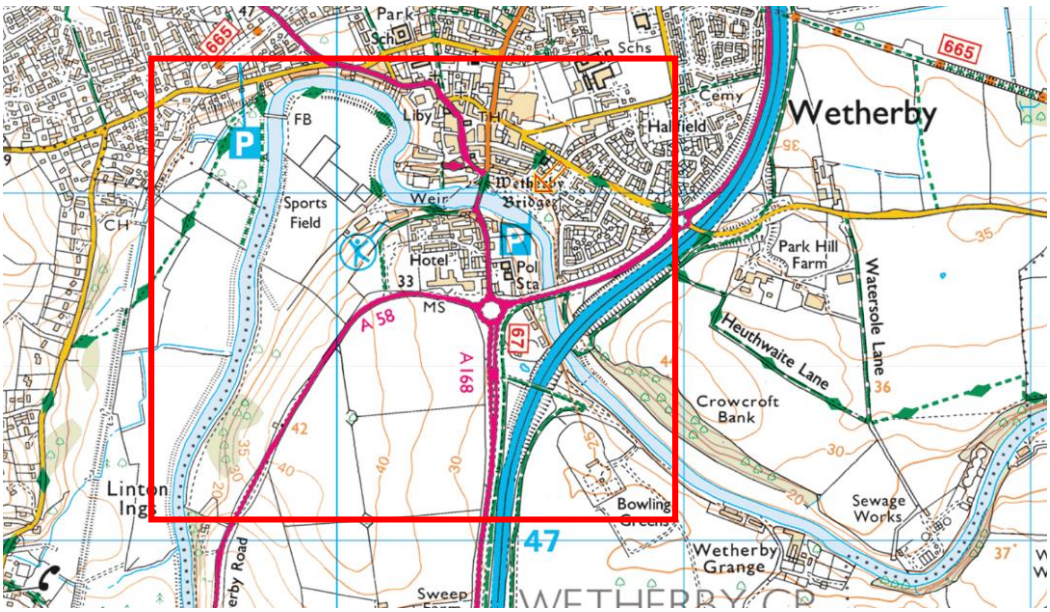

Fig 1. Map showing extent of Wetherby & District AC waters walked for this report (bounded by red) on the R Wharfe, between Linton Ings and Crowcroft Bank.

The Club undertook regular stocking of coarse fish species in the past along Linton Ings (i.e. above the weir) but this ceased ~20y ago. The Environment Agency stocked 400 small barbel ~8-10y ago, and 500 each of skimmer bream and dace immediately prior to the unprecedented flooding of 2015/16.

3.0 Habitat Assessment

The character of the Wharfe immediately above and below the town of Wetherby is dominated by its reinforced bank profile and historical realignment, clearly contributing to its designation as a heavily modified waterbody. The banks are typically uniform in height (see Fig 2), and the channel is of consistent width, having been constrained to a straightened or smoothly-curving path by stone revetment. The increased gradient and lack of natural meanders has resulted in almost uniform deposition of sediment throughout the channel, creating a relatively featureless trapezoidal cross-section. Hence, the predominant habitat is one of continuous 'glide' rather than a mosaic of 'pool-riffle-glide' sequences and a natural meandering path with depth variation caused by scour and deposition. There are precious few areas for weaker swimming species to seek refuge in from spate flows, and similarly a lack of submerged aquatic vegetation which is important spawning substrate and juvenile habitat for those same species.

Fig 2. The banks at Linton Ings are uniform in height and profile which points to historical alignment and revetment to restrict meandering. In places, the boulder reinforcement is more obvious at the bank toe. It creates a typically trapezoidal channel devoid of features and flow variation. Riparian vegetation is generally diverse although riddled with invasive Himalayan balsam in some sections.

Despite the presence of Himalayan balsam, the riparian buffer strips on either bank are, for the most part, quite rich and diverse in herbaceous vegetation and native tree species, such as willow and alder. These impart multiple ecosystem benefits:-

- The plants introduce 'hydraulic roughness' – under higher flows, the water has to flow around and through the vegetation, thereby slowing the flow and trapping debris.
- Trailing vegetation on the water surface provides low cover and refugia for fish and invertebrates from predators and spate flow, some shading, egg-laying substrate for river fly species (and some coarse fish), as well as structure to help insects emerge from the water. Submerged and low growing willow branches may diffuse flow to such an extent as to encourage deposition of sediments downstream and hence diversify channel cross-section (Fig 3).
- A diverse assemblage of plants will also impart greater physical stability to bank soils and resilience to erosion during spates via a diverse root matrix 'knitting' the soils together. Hence, it is important to control Himalayan balsam which, as an invasive annual plant, outcompetes native vegetation and develops a monoculture before dying back to leave banks bare during the winter.
- A rich riparian fringe provides feeding, reproduction sites, and shelter for a host of insect and other invertebrate life which may ultimately contribute to the diet of fish and birds, and support important ecosystem services such as pollination. Leaf litter deposited directly into the river provides sustenance for many shredding and filtering species such as *Gammarus* shrimp and caddis flies.

Fig 3. The upper reaches of Linton Ings have some low growing willow trees which provide limited shade, and refuge from predators and spates. Diversity and abundance of trees increases d/s on both banks.

Deposition bars of fine and coarser sediments were evident, predominantly downstream from low-lying willow. Emergent and pioneer (early colonising) plant species were consolidating the fine sediment bars, providing good spawning habitat for coarse fish species and nursery habitat for fry (Figs 4&7). The silt substrate also provides a different habitat for colonisation by burrowing invertebrates like chironomid (non-biting midges) and true mayflies (*Ephemera danica*), along with brook and river lamprey.

Fig 4. Looking d/s (upper panel) and u/s (lower panel) at the impact of a deposition bar which has formed in the lee of a mature willow. The low bar is well vegetated and will continue to stabilise and consolidate. Planting of some willow whips will aid this process and provide further low cover. The backwaters make ideal nursery areas for young-of-year fry.

In contrast, on the more exposed sides of the river, deposition of coarser gravels and small cobbles (Figs 5&6) provides habitat for different invertebrate species residing in the gaps between the stones that require a steady stream of oxygen-rich water (e.g. *Gammarus* shrimp and stone flies).

Both types of bar perform an important role in terms of the channel profile. They are evidence of the river returning to a more natural

meandering course at low flows by pinching or narrowing the channel cross-section and introducing variation in depth. This function has been accentuated at several locations by short stone groynes that clearly diversify the flow structure (seen as a seam on the surface) and modify the depth profile through localised scour at the point of each groyne (Fig 5). Such features are not natural or as aesthetically pleasing as something created naturally. Subtle changes to bankside trees (even through modest pruning) can have knock-on effects to these deposition bars, so any planned riparian management should be reviewed carefully to consider the wider environmental ramifications. However, trees can be managed to create and emphasise such features too (see Recommendations).

Fig 5. Evidence of one or two short groynes constructed from local boulders which have been in place for 'a considerable time'. These provide some localised deflection of flow and depth diversity from scour at the point of the groyne in a channel otherwise devoid of features.

Fig 6. A shallow gravel deposition bar in the lee of willows on the far (left) bank is evidence that the river is attempting to return to more natural channel width. Note the extent of the seam in the water emanating from the rock groyne (out of shot, bottom left) from Fig 5.

Fig 7. More valuable refugia for fry, and potentially spawning habitat for some of the coarse fish species, provided by emergent reeds on a silt deposition bar between two outcrops of overhanging willow trees.

Seemingly dead branches and trunks should be retained wherever possible as they still perform vital functions. The submerged branches in Fig 8 provide the majority of benefits listed in the bullet points above, and the standing trunks (Fig 9) are an important component

of the detrital food chain (food for many terrestrial beetle larvae), as well as nesting and/or roosting sites for species of conservation interest (e.g. bats).

Fig 8. Lower branches of willow which are frequently submerged. While they may look dead, they provide valuable refuge and spawning habitat for fish, food, shelter and egg deposition substrate for invertebrates, and diffuse spate flow to cause deposition bars d/s. Such structure should be encouraged (e.g. by hinging / laying) and definitely not removed.

Fig 9. Dead standing wood should be left rather than tidied up, as it provides food and shelter, and nesting sites for a whole host of species, some of which end up as fish food.

At Scaur Bank, the river has been widened, apparently for bathing and boating; there is a series of wide steps on the LB. Approximately 200m d/s, the river encounters the 'natural' left side of the valley, an outcrop of bedrock which has been developed for (currently) housing. If the river was subject to a natural flow regime, then one might expect a narrower channel with downward scour creating depth on

the outside of the bend (LB) and marked deposition on the inside, but the impounding effect of the weir is already evident (Fig 10).

Fig 10. From the footbridge at Scaur Bank (King George's Field; upper panel), the impoundment effect of the weir can be seen as the river deepens (mid panel) and becomes more canal-like (affectionately known as the 'Dead Zone'). Erosional scour still occurs under spate flow as evidenced by the loss of several trees from the RB (lower panel). Again, removal of these should be resisted as they provide valuable cover and may re-stabilise the bank given time.

As a consequence, there is virtually no detectable flow in an overly deep, relatively featureless section. The quality of riparian vegetation is retained on the RB and should be protected and enhanced to introduce some otherwise scarce habitat heterogeneity. The fallen trees (Fig 10: lower panel) contribute multiple benefits as outlined previously and any suggestion to remove these should be contested.

Fig 11. The weir is a considerable barrier to fish passage in both directions, and geomorphological transport of bed material d/s. A crude fish pass has been installed but efficiency is not monitored; from a cursory observation, it has been designed for salmonids only as the height differential between the pools and flow velocities are likely to be outside the capabilities of many coarse fish, particularly smaller individuals/species.

The weir is a substantial structure which has fragmented the fish assemblage and interrupted the geomorphology of the river, including starving the river d/s of its natural supply of gravel and cobble substrate (Fig 11). It was repaired in the early 1980s and a fish pass was introduced which only appears to have been designed for salmonids. It is highly unlikely that coarse fish species would be able to ascend. Since the trapezoidal, canalised sections of river u/s of the weir lack fish holding habitat (especially for the weaker swimming coarse species), spate flows are likely to push many fish d/s below the weir where they are essentially trapped. Anecdotally, this appears to have happened to 'silver' species stocked by the EA prior to the 2015/16 floods, further highlighting the futility of stocking fish into waterbodies where there is insufficient suitable habitat for all life-stages.

Immediately d/s of the weir (Fig 12), in an overly wide embayment, the Wharfe has to negotiate a path through the multi-arched Boston Road bridge. As a consequence of the weir 'tripping up' or dissipating the flow of water, and the widened channel available, there is

considerable braiding of the river into multiple channels between deposition bars which are highly dynamic, changing rapidly and often in response to spate flows according to John Smith.

Fig 12. The close proximity of the weir and the multi-arched Boston Road bridge (from where the photos were taken looking u/s and d/s), cause substantial variety in channel form and flow patterns which remain highly dynamic; depositional features wax and wane in response to different spate and summer flows.

Despite the proximity to the town centre and a large car-park on the LB, the Wharfe is most natural in character for ~200m between Boston Road and the A168 (Fig 13) as the river is pinched by bedrock. Downward scour on the LB as the river butts up to the bedrock, and subsequent extensive deposition of cobbles and gravels in bars along the RB have created much needed pools and riffles to break up the glides. While not inspected closely, the gravels appeared well sorted (deposited according to size with respect to flow velocity), and hence

should provide good quality spawning habitat for various species, not simply the salmonids. Barbel, chub and dace all require clean gravels of various sizes, and even roach and bream will spawn on gravels in relatively fast water in rivers like the Trent (T. Jacklin, pers.comm.).

Fig 13. In a natural pinch to the valley, the river is held tight to bedrock on the LB, so there is more natural pool, riffle, and glide sequence and ample diverse tree cover along the majority of both banks for ~200m between Boston Road and the A168. Note the extensive gravel deposition bar.

Downstream from the A1M flyover (Fig 14), the reinstatement of bank alignments reverted the river to the same characteristics as along Linton Ings (beginning of the walkover; see Fig 1). However, the width of the well-vegetated buffer strip and the presence of both mature trees and self-set bushes and saplings regenerating in the gaps is a fabulous asset which needs to be protected.

Fig 14. From the A1M flyover, the channel reverts to trapezoidal shape as the bank reinforcements resume. However, diverse riparian vegetation, from grasses to shrubs and trees is extensive and provide good buffering from agricultural land.

4.0 Recommendations

The factors affecting the abundance of coarse and game fish in this section of the river are not restricted to the inspected reach but are wide-ranging due to the channel modifications and fragmentation of habitat both u/s and d/s of the Wetherby & District AC boundaries. At the local scale, fragmentation of the fish assemblage and populations by the weir is of concern, especially as there has been some historic consideration of salmonid species but not coarse fish. At the wider catchment scale, it is important that support for organisations like the Yorkshire Dales Rivers Trust (YDRT) is maintained to help tackle broader issues. On the longer temporal scale, the Club should look to support any initiatives that provide better lateral floodplain connectivity such as scrapes, backwaters, and even connected gravel pits, that will ameliorate spate flows and provide surrogate habitat which supports recruitment of coarse fish.

However, one of the greatest assets the Club has is the condition of the riparian fringe for the majority of its waters and notable areas of overhanging and trailing tree cover. It is paramount that this is maintained, protected, and well managed to maximise the potential of the fishery.

4.1 Riparian Management

Unlike the upper reaches of the Wharfe, which are all too often subject to intense livestock grazing and subsequently reduced to a short sward monoculture of grass susceptible to erosion, the riparian fringe around Wetherby is generally diverse in terms of community structure and age of canopy. Striking a balance between access for coarse anglers and maintaining the vegetation in as natural a state as possible is key. Any repeated use of a 'peg' will cause compaction of the bank soils and trampling of the vegetation, ultimately exposing soils to erosion, so the creation or installation of peg platforms or steps to cater for different river heights might be worth considering in an attempt to minimise the impact upon vegetation. Any 'hard' structure introduced, however, will affect the flow of water during spates and potentially cause erosion; this can be minimised if pegs are created in depositional areas or taking advantage of existing structures such as tree trunks. Access footpaths between pegs should either use current public footpaths, or modest high level strimming (10-20cm above ground) of a narrow path parallel but set back from the river by 8-10m is ideal.

As noted in the main report, trees and their low-lying or submerged branches provide the majority of fish holding features in the u/s and d/s reaches that were observed. But they are also crucially responsible for some of the deposition features. Pruning or 'tidying up' of such material should be resisted. While there may be occasional lost tackle, and the requirement to remove that from public view, far better to have a feature to cast to that holds fish than no feature with few or no fish.

On the lower section of the fishery (Crowcroft Bank), where the age of the tree canopy is more uniform and now quite mature, some judicious rotational coppicing of one or two trees would be beneficial to create a mosaic of cover and essentially increase the quantity of 'edge' – see Fig 15. Coppicing retains the living root, thereby retaining the bank stability function, but also encourages fresh low-level growth.

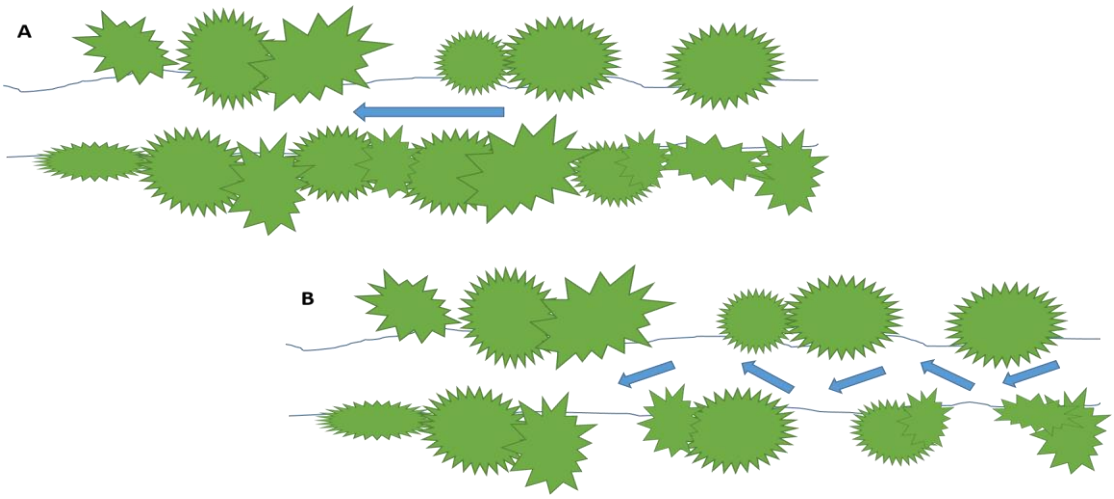

Fig 15. Schematic of a) mature uninterrupted canopy with relatively linear flow along the edge versus b) coppicing of one or two mature trees to complement existing gaps on opposite bank, and in conjunction with some laying of branches into the water, will encourage more sinuous flow.

Conversely, some of the more exposed sections of bank along Linton Ings that are currently without any trees would benefit from some planting. The simplest, quickest and cheapest way to achieve some low cover is to introduce willow 'whips' (sourced from the bankside of existing trees up or downstream). This can be undertaken at any time of the year, but will have the greatest success within the dormant season, shortly before spring growth begins (ideally late Jan-March). Whips should be pushed into soft, wet earth/sediment at the toe of the bank so that there is a greater length within the ground than out of it, *and at a low angle,* to minimise the distance that water has to be transported up the stem; 30-40cm of whip protruding from the ground is sufficient, providing that it receives light past the other bankside vegetation. Live willow stakes can be hammered deep into the bank and may provide greater structural stability under spate

conditions. Willow takes readily and may require some future management to keep in check but the material removed can be used for remediation work elsewhere (see Spawning habitat provision).

The species of willow used is dictated by the required result. Small shrub willow / sallow species, particularly grey willow and goat willow (*Salix cinerea and S. caprea*) are best for creating low, dense, fish holding cover, with larger individual trees eventually growing out into the channel (see Fig 4-6); larger specimens are ideal for laying into the margins (see below). Crack willow (*Salix fragilis*) tends to grow fast and collapse under its own weight, thereby naturally introducing woody material and structure into a channel, but may require maintenance in areas with flood risk.

Insert whips in bunches to (hopefully) form clumps of young trees, especially on bare banks immediately adjacent to where there is sufficient water depth to potentially hold fish. Staggering clumps of willows on alternate banks creates more lies and refugia from predators, ie creating the scenario in Fig 15B. Further advice can be found in the WTT video on tree management:

http://www.wildtrout.org/content/how-videos#tree

Non-native vegetation such as Himalayan balsam should be removed. Only one giant hogweed plant was noted during the visit; no Japanese knotweed was seen. It would be useful to have several designated monitors within the Club, trained in the ID and control of Invasive Non-Native Species. If problematic, help should be sought from Yorkshire Dales Rivers Trust and the EA.

4.2 Instream habitat diversification

The lack of a natural pool and riffle sequence (discrete morphological features) and altered bed-bank profiles has created a distinct paucity of gradually graded and wetted river margins and a consequent lack of spawning, juvenile and refuge habitat for coarse fish. In conjunction with the riparian management above, existing trees can be used to diversify that instream habitat. Laying or hinging of appropriate pliant species such as willow or elm at a downstream angle <30° to the bank retains a living attachment point and reduces undue stress on the hinge during spate flows. This essentially recreates the conditions required for sediment deposition seen in Figs 4-6 but provides the other benefits listed in the bullet points as well.

A larger scale solution is to use a tree-kicker, to increase flow diversity by creating narrower pinch points where bed scouring and sorting will occur and create areas of slack water immediately d/s to encourage more deposition. A tree kicker secured within a river margin (Fig 16) has accumulated sediment within the crown and in its lee d/s, providing beneficial channel narrowing.

Fig 16. A tree kicker causes flow to be focussed to the far side of the channel resulting in deposition along the protected, nearside margin.

A tree kicker is created by felling a tree to lay in the margins almost parallel to the bank and preferably already in an area of modest deposition to encourage stability of the ensuing structure. However, it must be cabled securely to an appropriate anchor point (usually its own living stump) to prevent any risk of future mobilisation and transport d/s. Installation of tree kickers requires consent under the EA environmental permitting regulations. WTT has produced a video on secure tree kicker installation:

http://www.wildtrout.org/content/how-videos#tree%20kicker

As the Wharfe naturally contains boulders, and some of those have been used to create the short groynes, introduction or relocation of some individual larger boulders towards the head of some of the glides and riffles will create some localised scour and sorting of sediments immediately d/s. These relatively small 'pockets' of deeper water are valuable holding features. Introduction of boulders >0.4m diameter requires EA consent; in a river with the power of the Wharfe, individual boulders of <0.4m would be tossed around like marbles during a spate unless they can be 'interlocked' in groups.

In the longer term and at a much greater scale, it is worth the Club investigating the potential to create or enhance 'backwaters' to promote coarse fish recruitment. These can be ephemeral or permanently wetted, with a functional entrance to the river that will not isolate fish, but obviously requires considerable and careful design to operate sustainably (as well as an amenable landowner!). From work on the River Trent, even 'strong swimmers' like barbel and dace actively use connected floodplain stillwaters; growth rates of fry were significantly greater in the backwater areas, and growth rate (rather than size at the end of first growing season) was positively correlated to year class strength (T. Jacklin, pers. comm.).

4.3 Spawning habitat provision

For substrate spawning fish, a lack of appropriate spawning substrate is inherently limiting and limited access to suitable spawning habitat will lead to population collapse. Specific spawning habitat can be created or enhanced as a means of mitigating or offsetting the harmful effects of human development such as the canalisation and weir combination affecting the coarse fish populations along Linton Ings.

Brash bundles can easily and cheaply be created using willow or sycamore branches sourced locally, and tied with jute string or other biodegradable material. Bundles up to 1.5m in length and 0.5m in diameter (of varying density – tie some loose and some tightly packed to give fish options) should be anchored to a suitable sized stone or existing tree branch in slack flow areas, or pinned into the shallow margins against the outskirts of the emergent vegetation (e.g. Fig 7). These can be made and installed immediately prior to the spawning season and only need last for 2-3 months. Brash substrates have been successfully used to promote fish populations in otherwise habitat poor water bodies like the Salford Quays (Nash et al 1999). Strips of garden windbreak netting bundled together has also been successful for roach on the River Avon (http://www.avonroachproject.co.uk/avon-roach-project-roach-spawning.html) A longer term, sustainable solution might be the installation of low willow spiling (weaving of long strands between short posts) out of the main flow, which has been trialled on the River Tyne. Used in conjunction with other habitat improvements to protect the fry stages (above), these simple approaches can help reinstate a sustainable population of, for example, roach or perch.

4.4 Connectivity

The magnitude and location of the weir, plus the more recent spread of development around its infrastructure means that it is highly unlikely to ever be removed (the ideal situation to reinstate connectivity for both fish and geomorphology). The current fish pass is not fit for purpose; there are designs that are far better suited (e.g. Larinier) for the various species inhabiting the Wharfe and these should be considered as part of a full appraisal of improving fish passage for salmonid, coarse, eel and lamprey. This is especially pertinent given the improvements elsewhere in the Wharfe catchment (e.g. funding announced in mid-2017 for tackling fish passage d/s at Tadcaster. It is worthwhile initiating a dialogue with the local fisheries officer to investigate this and raise awareness of interests from the Club to improve fish passage.

4.5 Pollution

There were no obvious point sources of sewage pollution seen and little evidence of any further excess nutrient influxes. Any suspicious discharge of discoloured or malodorous water should immediately be reported via the EA hotline (0800 807060). It is good to see that the Club is partaking in the Riverfly Partnership's Anglers Riverfly Monitoring Initiative, and this could be usefully extended to above the town at Linton Ings (http://www.riverflies.org/rp-riverfly-monitoring-initiative).

5.0 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 report. This would usually detail the next steps to take and highlight specific areas for work, with the report forming part of an Environmental Permitting Regulations 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/index

We have also produced a 70 minute DVD called 'Rivers: Working for Wild Trout' which graphically illustrates the challenges of managing river habitat for wild trout, with examples of good and poor habitat and practical demonstrations of habitat improvement. Additional sections of film cover key topics in greater depth, such as woody debris, enhancing fish stocks and managing invasive species.

The DVD is available to buy for £10.00 from our website shop http://www.wildtrout.org/product/rivers-working-wild-trout-dvd-0 or by calling the WTT office on 02392 570985.

6.0 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.

7.0 Disclaimer

This report is produced for guidance only; 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 guidance made in this report.