Advisory Visit

Catlow Gill, River Aire, Carleton Village Residents

July 2017

Key Findings

- Catlow Gill is a relatively short tributary of the River Aire (curtailed by a natural bedrock waterfall preventing fish access beyond 1.3km). Despite having an almost completely un-natural banking and channel path forced upon it, numerous resident trout and a relatively diverse macroinvertebrate fauna were observed during the walkover, indicating good potential to improve the beck if connectivity and habitat quality issues can be overcome.

- Access is unimpeded but habitat quality is relatively poor in the lower 50% of the beck. Livestock grazing has left the bank/s 'bald' and exposed, but fencing (while retaining some drinking points) could rectify this situation relatively quickly and easily.

- The beck is a focal point of the village between Brook View and Beck Side, but here it has been impounded and the quality of instream habitat is poor, although some 'large' trout relative to the size of the beck were holding in various pools that did have associated cover. Again, recommendations to improve this reach are relatively simple, and could be achieved using volunteers from the community.

- The long concrete culvert at the d/s edge of the village essentially fragments the beck into two discrete units. While the shallow gradient and structure of the culvert can be made more passable to fish, to do so would require considerably more effort and expense. However, it has been achieved elsewhere, and would certainly increase access to spawning habitat for Aire fish rather than simply resident fish in the beck.

1.0 Introduction

This report is the output of a site visit to Catlow Gill, a tributary of the River Aire, N. Yorkshire, which flows through Carleton in Craven village. The visit was requested by Dave Martin (Bailiff for Skipton Angling Association, SAA) on behalf of a group of village residents who had expressed concerns for the plight of fish in the beck with regard to relatively recent culverting work and removal of accumulated gravels. Jon Grey of the Wild trout Trust undertook a walkover with Dave, along with John Preston (Clerk to the Parish Council, and President of SAA) and Graeme Waterfall (General Secretary of SAA).

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.

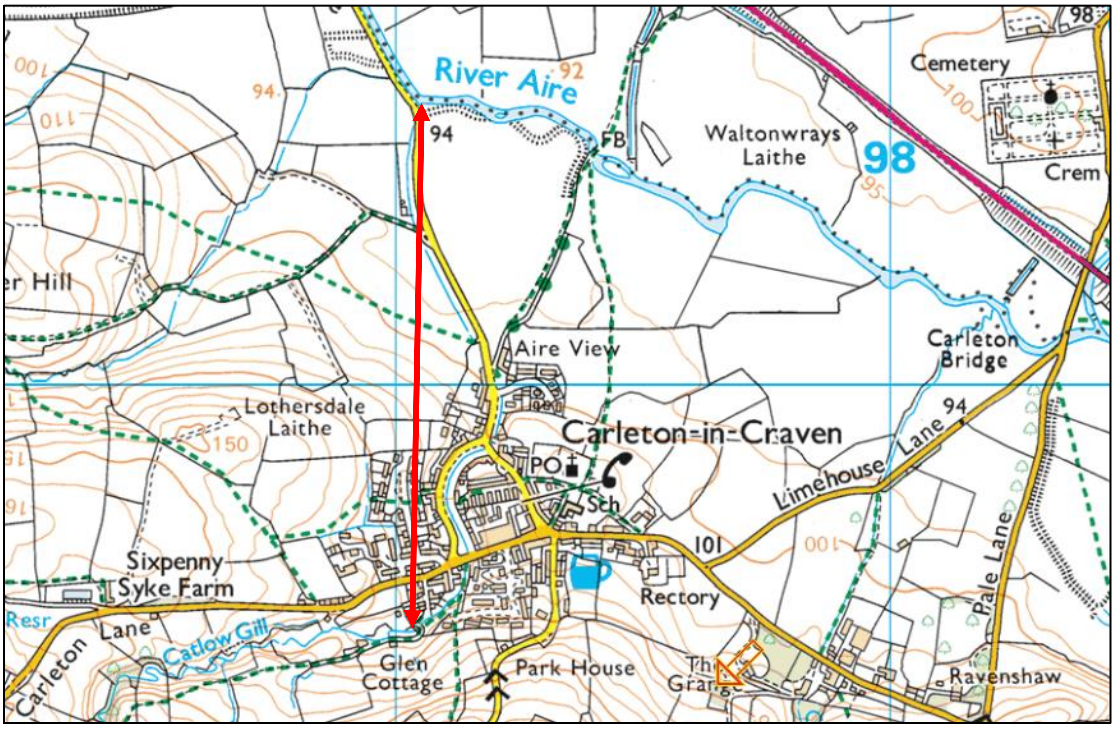

Fig 1. Red arrow heads depict u/s and d/s limits of walk along Catlow Gill through the village of Carleton-In-Craven to its confluence with the R. Aire.

2.0 Catchment / Fishery Overview

Catlow Gill is a relatively short tributary of the River Aire (Aire: Eshton Beck to R Worth; Environment Agency waterbody ID# GB104027063033), tumbling rapidly from the eastern side of Carleton Moor through mostly fields of rough pasture but occasionally protected from livestock access by thin strips of deciduous woodland. A natural bedrock waterfall has been accentuated, probably originally for a mill offtake and now a water feature for a private property on the outskirts of the village; this would have probably been the natural u/s limit of fish in the beck (SD 97095 49527).

John Preston, a resident for considerable years, has observed brown trout spawning within the village but not in great numbers in recent years, and anecdotally the size of fish, as well as numbers of observed throughout the year, has decreased. The Catlow Gill is the largest tributary between Broughton Beck and Eller Beck, u/s and d/s separated by ~3km on the mainstem Aire, respectively. It enters on the Aire RB at the limit between Skipton AA and Bradford City AA waters (although Skipton AA have access to all).

Small tributaries contribute disproportionate benefits to main river systems (partly because their length contributes enormously to the total of the whole network) and because the ratio of marginal habitat to open water is greater. While the River Aire flows over carboniferous limestone geology which has a significant influence in providing a nutrient base and typically good clarity water for plant (primary) productivity that further supports a diverse ecology, including abundant invertebrate communities, habitat appears to be a bottleneck for fish populations. In particular, suitable spawning habitat is in relatively short supply because of quality and connectivity issues on the tributaries. Diffuse pollution issues are slowly being addressed via, for example, the Upper Aire Project, winner of a previous Wild Trout Trust Conservation Award. Connectivity at industrial era weirs is being addressed via The Environment Agency, Wild Trout Trust, and Aire Rivers Trust throughout the catchment, particularly on Eastburn & Eshton Becks.

3.0 Habitat Assessment

Catlow Gill (hereafter, the beck) has a confluence with the River Aire at SD 97057 50555, and appears to maintain a shallow but reasonably accessible mouth (Fig 2). The very lowest sections will always be a zone of deposition as spate flows down the beck typically hit the more substantial flows in the main river and lose their velocity causing fine sediment to drop out. The confluence was formerly well protected u/s by a large crack willow which was heavily coppiced earlier in 2017 by Northern Power. Although the stumps are sprouting again, the beneficial cover provided by substantial low trailing branches will take many years to regenerate, and the deposition of sediments around the mouth will probably change substantially over the coming winters, so it is worth monitoring change at this location. It is also worth making a concerted effort to keep this area free from Himalayan balsam. This invasive non-native species tends to outcompete native vegetation and develops a monoculture before dying back to leave banks bare during the winter, and hence more susceptible to erosion. Fish are more likely to pass across shallower water into the tributary if they feel safe and protected by low cover over or into the water provided by native plant species, especially important at spawning time for trout when balsam is dying back.

Fig 2. The confluence of Catlow Gill with the River Aire (SD 97057 50555) is crossed by a footbridge, popular with dog-walkers as well as anglers. Note stands of Himalayan balsam here. Immediately u/s, the culvert beneath Heslaker Lane retains a natural substrate throughout and is not a major issue for fish passage.

Heslaker Lane crosses the beck within 20m of the confluence, but the relatively recently installed box culvert is of adequate design and retains a natural substrate throughout its length to facilitate fish passage. The beck then runs parallel to Heslaker Lane (i.e. it has been straightened, realigned, and dredged / bunded to do so) all the way to Carleton-in-Craven village. The lower ~150m has good riparian cover (Fig 3), especially on the RB which is lined with a mixture of mature and younger native tree species (ash, alder, sycamore, hazel, willow). The LB also retains a beneficial fringe of tall herb species which overhangs the channel, providing excellent low cover for fry and juvenile fish, as well as feeding, resting, and egg laying opportunities for a host of invertebrate species (which benefit the fish and wider ecology).

Fig 3. The lowest sections of the beck run close to Heslaker Lane but there is an excellent riparian buffer strip of mature trees and mixed herbage on the RB. The LB is also reasonably well buffered by native herb species on the top of flood bunding.

The riparian cover also provides shade to keep the water cool (something sorely lacking on the mainstem Aire), and introduces an element of hydraulic roughness - under higher flows, the water has to flow around and through the vegetation, thereby slowing the flow and trapping debris.

Fig 4. Further u/s, as the beck deviates away from the Heslaker Lane boundary, and unfettered livestock access becomes an issue, there is a distinct lack of riparian cover. Note the 'perching' of the beck caused by flood bunds / dredging.

Unfortunately, this riparian fringe rapidly disappears due to the attentions of both cattle and sheep in the fields u/s. Indeed, where the beck deviates from the walled boundary of Heslaker Lane, the banks are bald, a monoculture of grazed short-sward grasses (Fig 4). Such an exposed section leaves fish vulnerable to predation and may actually contribute to the fragmentation of populations as they are less likely to traverse the distance except at night or under higher flows. This section would benefit from some livestock exclusion fencing to allow riparian regeneration, limiting stock to a drinking bay or offline solution – see Recommendations.

On the outskirts of the village, the channel is formalised into a box-shaped, walled cross-section (Fig 5). It is over-capacity for the majority of flows experienced during the year and, especially as it is located just below a pinch-point on the system (the second Heslaker Lane culvert), acts as a gravel trap. It is believed that Craven Council organised for the removal of a considerable volume of accumulated sediment in August 2016. While there remains some natural substrate in the channel, it is still effectively an unsorted ‘cake-mix’ retaining a flat bottomed topography and hence, devoid of features for trout. If this is an ongoing requirement, then following removal, the remaining substrate could be sculpted more sensitively to encourage a more sinuous, narrower and hence deeper route through the section. The beck has re-established a narrow meandering channel where it has the energy to do so at the u/s end (see Fig 5, next to the runner) but as the energy dissipates, its ability to move and sort substrate is lost towards the d/s end (Fig 5, foreground)

Fig 5. Looking u/s at the first walled section parallel to Heslaker Lane as it enters the Carleton-in-Craven. This is the site of recent gravel extraction.

The second culvert under Heslaker Lane (Fig 6) is older than the first, and now inadequate in terms of aperture to cope with very high flows; holes in the LB wall originally installed to divert flooding from the lane into the beck now allow the beck to escape into the road. There is sufficient depth of water through the culvert, but then the beck is routed along ~90m of low gradient concrete channel (Fig 6; lower panels). A two-stage channel has been created under the Leys Close bridge, presumably to keep a focal flow through the centre and prevent build-up of sediment or debris at the bridge pinch-point.

Fig 6. Upper panel: immediately u/s of second Heslaker Lane culvert, the aperture of which appears under capacity for peak flows. There is adequate depth of water through the culvert for fish to move through. Mid panel: smooth concrete and walled culvert of very shallow gradient, devoid of features. Lower panel: more recent culvert modification beneath Leys Close bridge is designed with a two-stage channel.

The shallow, mostly laminar flow along the concrete channel is a major issue for fish passage but due to the low gradient, one that can be overcome with the installation of some off-set and paired baffles in appropriate places – see Recommendations. The walled sides are less than ideal for allowing low-growing vegetation to provide cover, but in places, trailing plants like blackberry have established, and small willow species could be planted.

The concrete channel continues through metal bars and a small paddock before entering the more developed area (Fig 7). Cattle graze the field and have complete access to the channel. Due to the steep nature of the RB, this seems to be quite hazardous and a real health risk as several cattle were observed to slide awkwardly as they entered to drink. Restricting access to only the most d/s end (next to the metal bars) for drinking, and fencing off the remainder of the steep RB would reduce sediment ingress and promote better riparian growth along the edge of the channel where it is only walled by ~0.2m as opposed to >1m.

Fig 7. Continuation of the concrete channel through a field to the north of Church Street. Cattle have access to the full length, ~50m. Note small parcel of land on the LB (right side of image) which could be protected from grazing or modified for flood storage.

Indeed, if livestock was excluded, the low lying area on the LB (Fig 7) could be formalised as a flood storage area which might help alleviate problems at the bridge culvert d/s (Fig 6; upper panel). The aperture currently housing the metal bars is bounded by substantial walls which would restrict high spate flows, thereby backing-up water over the low-lying LB. By skimming off the soil to just above the level of the current channel wall, there is a conservatively estimated 125m^3 capacity for flood water (assuming a 0.5m depth), probably more.

Fig 8. Upper panel: a series of wooden board step weirs installed by the householder, which severely hamper fish passage. Lower panel: redundant weir causing erosion and hampering fish passage immediately u/s of Church Street bridge.

The first of two ornamental wooden weirs is installed u/s from the paddock (Fig 8; upper panel). There are wide-ranging, less appreciated environmental issues with weirs aside from fish passage - see a WTT video outlining key impacts, here:
https://youtu.be/ILofBcLiDts

On a completely artificial, concrete channel (such as here), they do introduce some much required depth of water but are a poor substitute for natural pool habitat. Unfortunately, the concrete apron below the first of these also means that there is insufficient water depth for fish to approach, let alone jump from. The impounded reach above is devoid of features and a perfect spot for predators to pick off trout as they move through, and plus will only fill up with sediment over time. Removal is the best option but would require the installation of artificial baffles throughout the reach to create depth of water again. Another option to explore would be to notch each weir crest to provide a focus under low-flow conditions, and especially for fish moving downstream. There would be a further requirement to install some pre-barrage structure below the first weir to increase the depth. All of these options will require engagement with the owner of the structures.

Immediately u/s of Church Street bridge, there is another weir which was allegedly built to trap sediment and prevent it moving d/s to block the bridges (Fig 8; lower panel). It has performed that function historically to almost the level of the crest of the weir and now it has no further capacity to do so; sediment is currently transported over the top and it is, therefore, redundant. It serves only to impede fish passage, and eddies in the pool d/s are causing erosion to the channel walls. In the u/s impounded section, the sediment has been deposited in a uniform layer leading to a flat topography devoid of features, and if it were not for a substantial overhanging bush covering the entire width of the channel, it is highly unlikely any trout would remain here. Here, complete or partial removal should be considered.

The channel is constrained by gently sweeping walls between Brook View and Beck Side residential roads (Fig 9). The riparian zone is assumed to be variously controlled by private landowners or the Parish Council. The LB is heavily protected as it forms the outside of the bend. Currently, it is mostly mown grass at the wall top with only the occasional tree. At the lower end, there is better cover afforded by native plants; a welcome splash of colour in the village, and a valuable resource for pollinating insects. This should be encouraged. The RB on the inside of the bend has more natural plant cover, some of which reaches over and trails into the water. At various points, large stone blocks have been introduced, formerly as sediment trap weirs and now used as stepping stones. Again, their original function is redundant, and they should be relocated to generate channel sinuosity or pinch points.

Fig 9. The beck between Brook View and Beck Side. While both banks are walled, the LB (on the outside of the sweeping bend is protected by a concrete step-toe. The RB is better vegetated, but note close mowing on both banks. There are a number of stepping-stone structures which hamper sediment transport more than fish passage

An old stone footbridge spans the beck between Brook View and Beck Side. The combined effect of the bridge footings and the weir immediately u/s effectively starving the beck of substrate d/s has led to the creation of a scour pool and a substantial head-loss (i.e. step in water level) across the structure.

Fig 10. The footings of the footbridge between Brook View and BeckSide have caused substantial erosion downstream. Coupled with a redundant step weir immediately u/s inhibiting supply of sediment, they pose a significant fish passage issue.

Above the footbridge, the beck has created its own more natural narrow channel with some slight meandering even within the confines of the walls; this could be encouraged and emphasised with some rearrangement of larger boulders. A small patch of native woodland on the LB provides some welcome cover from low branches and trailing ivy. The RB is heavily shaded by the close proximity of the mill buildings, now converted into flats, and some large mature trees;

there is little understory. A narrow riparian strip on the bank wall tops is managed by various properties, some more sensitively than others. Runoff across the rough Brook View track and over bare bank-top soil is likely to introduce excess fine sediment which will clog the gaps between gravels and reduce their quality as spawning habitat for fish, and as living and feeding areas for many invertebrates. Unfortunately, there was also disappointing evidence of dumping of garden waste onto the banks (where it will maintain bare earth and leach nutrient-rich liquor into the channel) and directly into the channel itself (of a size which could block or contribute to blockage of the bridges below). Plus, such cuttings are one of the routes by which invasive plants end up along river ecosystems. Engagement is key in such situations.

A large pool has formed d/s of the West Road bridge, for exactly the same reasons as noted for the footbridge. The culvert apron beneath the bridge is degrading and quite pock-marked in places with some variation in depth of water. The step onto the apron would require addressing (as before) with a pre-barrage to effectively drown out the height differential. Associated with the bridge infrastructure were two pipes, both discharging water of dubious origin (Fig 12).

The walling of the channel continues for ~50m u/s of the West Road bridge, but the width of the artificial channel is very much over capacity to the extent that the wetted channel at the typical summer flow (observed) is ~30% (Fig 13). As a consequence, the sediment deposited and now effectively forming the LB has been consolidated by encroaching vegetation. This will probably extend as some reasonably mature trees growing through walling at ~3-4m above the beck bed on the RB have been coppiced, presumably to prevent any damage to that wall. Hence, there will be more light to the developing understory on the LB.

An increasing gradient associated with the underlying geology and narrow valley, and the presence of more, large boulders, has created a series of pools and cascades in the final section (Fig 14). A natural bedrock waterfall probably forms the upstream limit to fish passage, ~100m further. The RB supports excellent natural deciduous woodland which introduces woody debris and leaf litter, as well as providing shade and low cover. Hence, the habitat for trout at the 'top' of Catlow Gill is very good quality.

Fig 11. Upper panel: u/s of the footbridge (in Fig 10), the beck has created a more natural channel morphology via deposits of larger sediment to the sides, despite still being bound by walls. Unfortunately, some riparian owners are treating the beck as a disposal system for their garden waste (lower panels).

Fig 12. Two pipes at the West Road bridge with dubious discharges (despite relatively low flow conditions) point to misconnections in the sewerage-drainage system.

Fig 13. Upper panel: West Road bridge culvert is eroding badly and presents a challenge to fish passage on the d/s apron. Through the bridge culvert itself, there is sufficient water depth and some natural deposition of sediment. Lower panel: looking d/s to the West Road bridge, trees have recently been coppiced to protect the wall, which might actually promote more beneficial understory herbage and bushes at beck level. Note the more natural bed sediment structure around larger boulders.

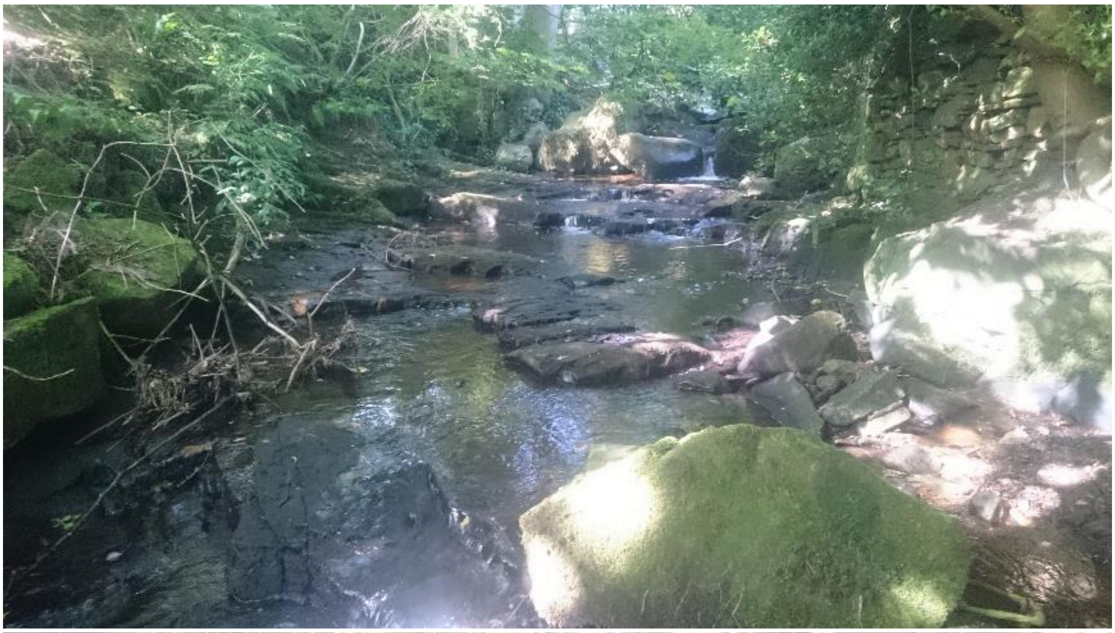

Fig 14. More natural pool and cascade channel structure through a short wooded section up to a natural barrier of bedrock, now modified, at SD 97095 49527.

4.0 Recommendations

Quite a few trout were observed within the pooled sections between Brook View and Beck Side where there was either undercutting of the bank, or some low vegetative cover. A cursory stone-turn revealed a substantial number of cased caddis, gammarid shrimp, and various baetid, ephemerillid and heptageniid mayfly species. Hence, Catlow Gill is clearly capable of supporting trout, but with options to improve connectivity and cover, as well as specific work to improve retention of spawning gravels, there could be many more resident trout within the beck and more fish moving in from the Aire to spawn. The following recommendations not only benefit trout, but a much broader range of both aquatic and terrestrial species reliant upon functional river corridors, as well as providing ecosystem services from which we benefit. Many of the recommendations could be undertaken by a keen group of volunteers under some experienced guidance, and are hence ideal for engaging / educating interested community groups or the village school, and especially those who might directly enjoy the aesthetic improvements.

The WTT produced a useful case study video based on the River Wandle in SE London, but with many similar issues as Catlow Gill, so it is worth watching to place some of the following recommendations in context: https://vimeo.com/32283449

4.1 Fish passage issues

4.1.1 Concrete channel

The extent of concrete channel that does not retain any natural bed substrate and hence presents a shallow, relatively laminar skim of water is considerable, but because of its shallow gradient, is not insurmountable. Fixing a series of alternating u/s deflectors of ~1m in length and 0.1-0.2m in height along the length of the open concrete channel would retain a greater depth of water throughout the reach for fish to swim in and create slack water refugia for fish to rest in. These do not increase flood risk as under spate conditions, the water simply passes over the top, and the u/s angle ensures that when each deflector is over-topped, the water (leaving it at a perpendicular angle) is directed toward the middle of the channel and hence, not causing erosion at the sides – see Fig 15. The major restriction to peak flow capacity in the system is the aperture of the culvert under Heslaker Lane in Fig 6 (upper panel).

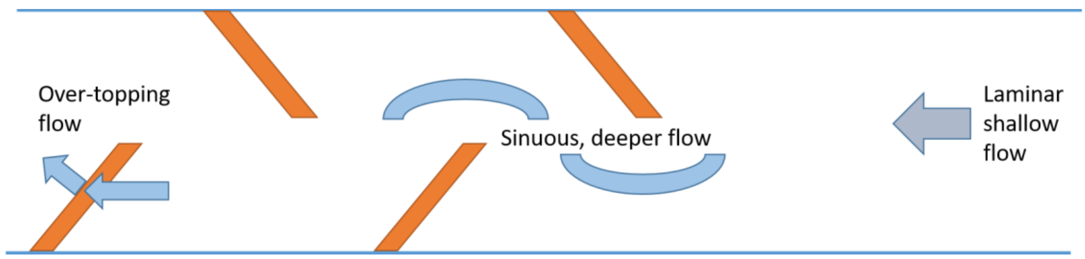

Fig 15. Schematic of offset u/s deflectors which convert a shallow, laminar skim of water into more sinuous path with deeper water maintained by the baulks. Any flow over-topping these is deflected toward the centre of the channel. Fixing is normally achieved using threaded bar, resin-fixed into pre-drilled holes in the concrete

4.1.2 Weirs

Notching of the two ornamental wooden weirs would probably provide the simplest solution. Cutting a 0.6-0.8m wide and 0.1m deep notch into the crest will focus flow, especially under summer flow conditions, thereby providing a target for fish moving in either direction. Under high flows, the weir behaves exactly the same as it currently does. A pre-barrage is required for below the first wooden weir as there is no plunge pool on the concrete channel for fish to leap from; paired deflectors (i.e. directly opposite each other with a narrow aperture between) at the head of the series of alternating offset structures (outlined above; Fig 15) will probably suffice.

The stone and concrete weir (Fig 8) could be fully removed and if broken into large blocks, these could be arranged in the channel, partly to slow the transfer of accumulated sediment and partly to provide some much needed physical variability in between the channel walls. Each of the buried stone weirs should be treated in the same manner, the blocks rearranged to allow free transport of sediment and movement of fish, or removed and used elsewhere to better effect (see below).

4.1.3 Bridge footings

As noted in the habitat assessment, bridge footings and aprons typically have a step and plunge pool below them caused by accelerated flow and subsequent increased erosion, coupled with a reduced supply of substrate from upstream. Often the simplest way to address the step issue is to effectively drown it out by increasing the d/s water level with some sort of pre-barrage. In the case of the two bridges, some of the large block stones currently in place as defunct step weirs (lower down the beck) could be arranged at the tail of the existing plunge pools, with a focal notch to sufficiently raise the water level but not create further issues for fish passage.

4.2 Spawning habitat

Gravel retention for spawning habitat is an issue in the lower, straightened and impounded sections, essentially from the footbridge and d/s. To emulate natural pinch-points and treefall where there is no living wood available (i.e. through the fields), paired deflectors or individual stub deflectors could be installed: short (<1m), well anchored / pinned trunks of wood (<300mm diameter); see Fig 15. The purpose of such installations would be to cause small-scale, localised scour and 'hummocking' of the bed, thereby focussing and retaining smaller gravels in their lee (see WTT video, here: https://vimeo.com/32317564).

Wood of this size can also be installed under Environmental Permitting Regulations exemptions. Such wood might also introduce an element of sinuosity to the flow under low-flow conditions. Angling the deflectors u/s focuses flow toward the middle of the channel (i.e. away from the bank and hence reduces erosion risk there) when they are overtopped. In terms of perceived flood risk, because these structures are relatively small (<5% of bank height) and occupy <50% of the cross-sectional channel width, they are completely overtopped during high spate flow. The stone blocks from the defunct stone weirs (See 3.1.2) could be arranged to perform the same function in the sections of beck through the village.

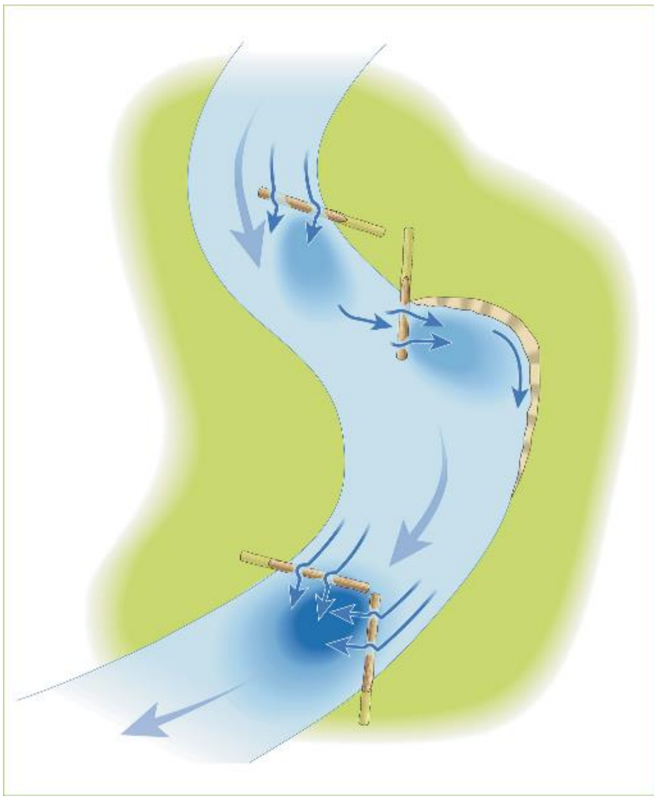

Fig 15. Conceptual diagram of use of woody (or stone block) material as deflectors. From the top of the figure:

Upstream angled – diverts flow to the centre of the watercourse, and creates localised scour; locating deflectors on opposite banks of a straightened section, but off-set in position can create sinuosity of flow without eroding the banks.

Downstream angled – diverts flow toward the bank, increasing likelihood of erosion and can be used to increase sinuosity of the entire channel. Not recommended on Catlow Gill

Paired upstream angled – focuses more flow to the centre and creates a deeper scour pool with associated ramp of sorted substrate (gravels) further downstream.

4.3 Riparian habitat

4.3.1 Fencing of field sections (with drinking access)

Within the fields that have been subject to prolonged livestock access, the bank vegetation has been reduced to a short sward monoculture of grass. Excluding the stock from the bank while retaining a couple of formalised access points for drinking could provide numerous benefits to both the livestock (safer, formalised access; limiting disease or parasite transmission; grazing of herbage 'through' fence), and beck ecology and bank stability (more diverse vegetation providing multiple ecosystem services). Simply excluding livestock will allow a naturally diverse array of plants to recolonise rapidly.

4.3.2 Mowed banks & bank tops

Within the village, especially between Brook View and Beck Side, there are lengths of bank edge and wall top where the grass has been mowed and maintained as a lawn. The negative impacts are similar to that of grazing by livestock (lack of cover, diversity, loss of bank resilience, etc). Ideally, the bank edges should be left unmanaged, or could be positively managed to encourage native flowering plants to form a swathe of colour in the centre of the village; an attractive focal point. It will also encourage and support insects such as butterflies and bees that are suffering serious population declines in many areas.

Where low tree branches and bushes currently overhang the beck, these should be left rather than tidied back; these areas are essential for fish to hide in. The long reach of concrete culvert especially would benefit from more low cover planted along the bank top.

4.3.3 Garden waste and invasive species

It is worth engaging with those residents who are using the beck to dispose of their garden waste, to highlight how the beck is a central feature to the village, how planned improvements elsewhere on the beck will be to the wider benefit of the village residents, and the potential negatives (causing blockage, pollution, introducing invasive species) resulting from their actions.

Himalayan balsam was the only invasive plant identified during the walkover, and that was at the confluence with the mainstem Aire suggesting that the beck itself is not a source as yet. It will be extremely useful to have several key people within the village that can identify and know how to manage the main problem species. Help can be sought from Yorkshire Wildlife Trust.

4.4 Pollution

Diffuse pollution from soil ingress where livestock is trampling the banks should be addressed by the measures suggested above. The two point sources identified in Fig 12 should be monitored and any instances of discoloured or foul-smelling water reported immediately to the Environment Agency Incident Hotline (0800 807060).

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 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/index

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.