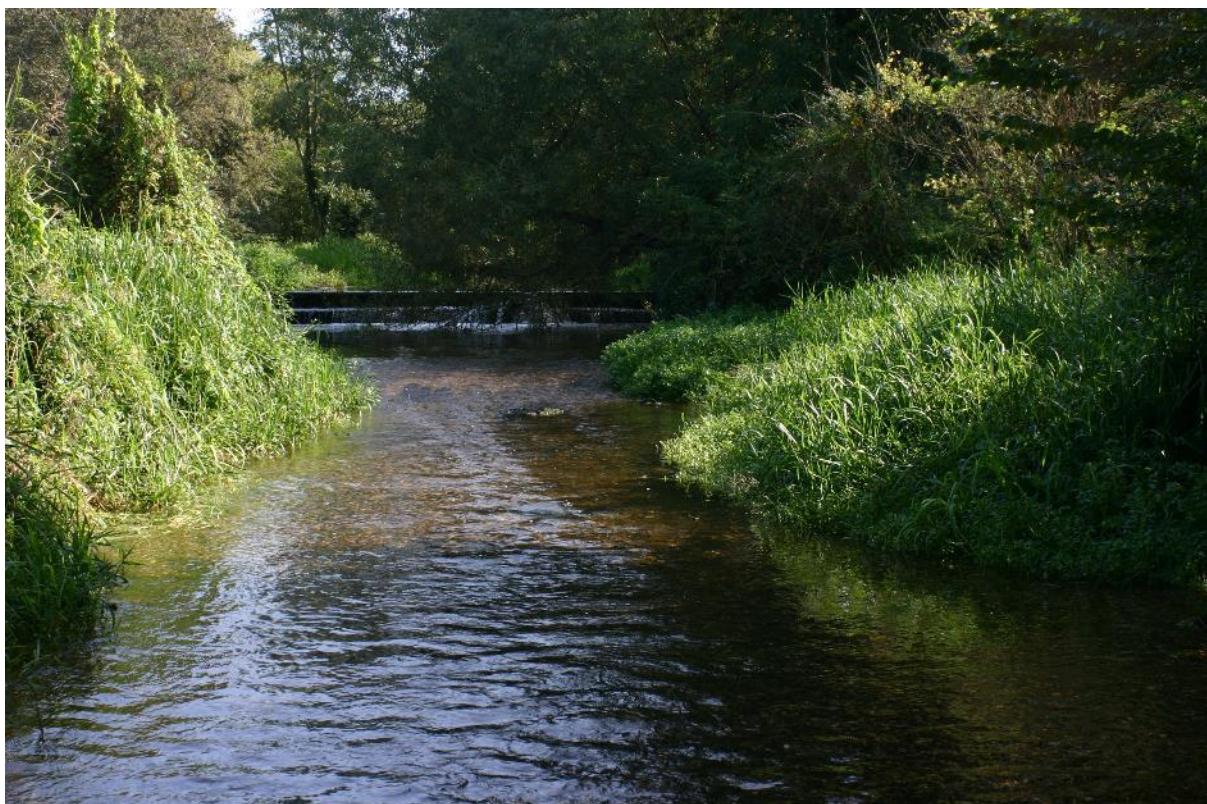




# WILD TROUT TRUST

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Ibsley Stream – Christchurch Angling Club  
Advisory visit October 2020

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## **Key Findings**

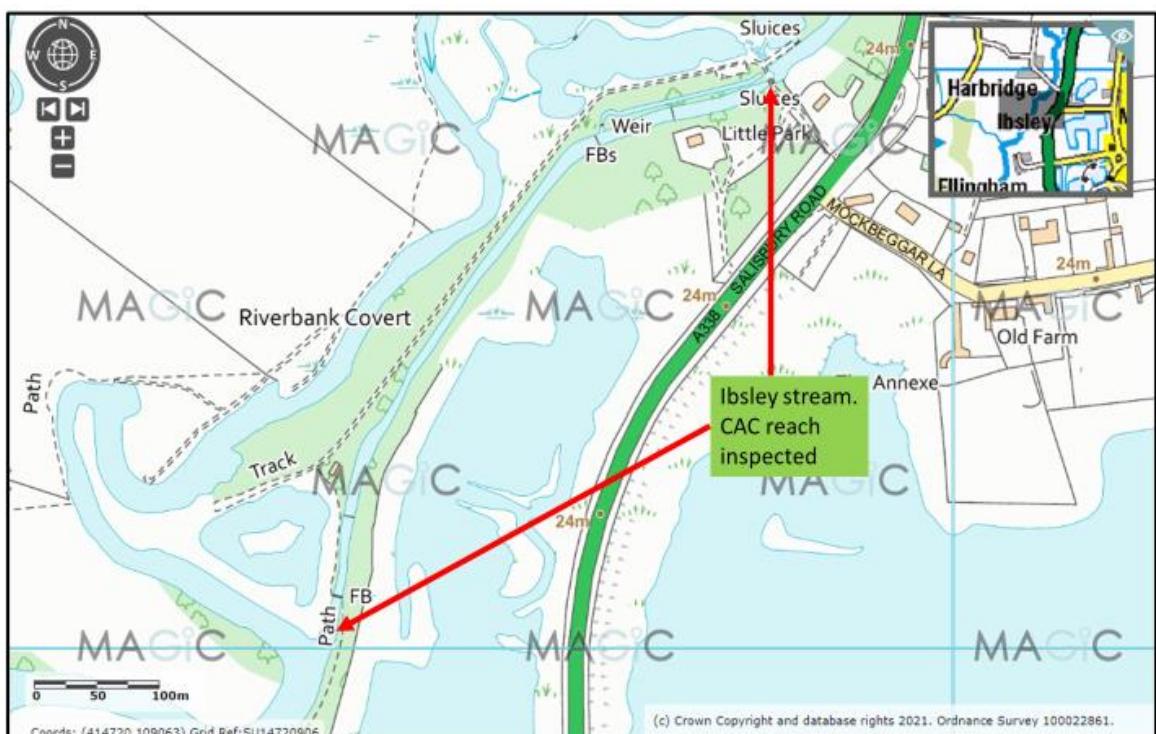
- **The stream lends itself to being a mixed coarse and game fishery and provides opportunities for spring and summer game fishing (catch and release) and winter coarse fishing, particularly when the main river is in flood.**
- **The water level control structures at the head of the system represent a barrier for free fish movement, other than perhaps for salmon and large sea trout.**
- **Flow into the stream is currently throttled during the period when overall flow is at its lowest. Securing a greater share of the available flow will help to improve local habitat quality for gravel spawning fish species.**
- **Habitat quality in the stream is generally good, thanks mainly to an unmanaged left bank margin.**
- **Fallen and partially fallen trees present habitat opportunities with some careful intervention.**
- **Stocking farm reared trout into this stream is not recommended.**
- **The top half of the fishery provides good spawning and nursery habitat but lacks deeper pool/pocket water for holding adult fish pre and post spawning.**
- **The upper reach could benefit from the creation of improved holding water via the creation of a series of “pool and run” features.**

## 1. Introduction

The Ibsley Stream is a man-made distributary of the Hampshire Avon located in the middle reaches of the river near Ibsley in Hampshire. The stream is owned by the Somerley Estate and the fishing rights leased to the Christchurch Angling Club (CAC). The fishery was until comparatively recently managed as a stocked trout fishery but in recent years has been managed as an unstocked mixed beat for both game and coarse anglers.

The request for the visit came from Mr. Bob Moody, who is a serving CAC committee member with a special interest in managing the club's game fishing portfolio. The club are particularly interested in exploring opportunities for improving the fishery, both in terms of its potential as a trout fishery but also to ensure that it performs for coarse fish.

Comments in this report are based on observations made during the site visit and discussions on the day with the management team. 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 specific locations.



<b>River</b>	Ibsley Stream
<b>Waterbody Name</b>	Hampshire Avon
<b>Waterbody ID</b>	GB1080043015840
<b>Management Catchment</b>	Hampshire Avon
<b>River Basin District</b>	South West
<b>Current Ecological Quality</b>	Moderate status
<b>U/S Grid Ref inspected</b>	SU 1485 0945
<b>D/S Grid Ref inspected</b>	SU 1448 0900
<b>Length of river inspected</b>	1.0km

Table 1. Overview of the waterbody. Information sourced from:  
<https://environment.data.gov.uk/catchment-planning/WaterBody/GB108043015840>

## 2. Catchment Overview

The Avon rises in Wiltshire east of Devizes draining the Vale of Pewsey. From here it cuts through the chalk scarp at Upavon, flowing southwards across Salisbury Plain through Durrington, Amesbury and Salisbury. To the south of Salisbury it enters the Hampshire Basin, flowing along the western edge of the New Forest through Fordingbridge and Ringwood, meeting up with the river Stour at Christchurch, to flow into Christchurch Harbour at Mudeford. All the significant tributaries of the Avon including the Nadder, Wylye, Bourne and Ebble converge within a short distance around Salisbury.

The Avon enjoys the highest level of nature conservation protection being designated as a Special Area of Conservation (SAC) under the European Habitats Directive. A number of habitats and key species, including Atlantic salmon (*Salmo salar*) are cited as being key features of interest of the SAC.

## 3. Fishery Overview

The Ibsley Stream is one of many man-made Avon side streams. Most of these streams were historically dug as either milling leats, or as high-level flow carriers designed to feed water into the valley's plethora of ridge and furrow water meadows. The flow characteristics associated with most of these artificial loops means that they are often throttled during high flow periods by water level control

structures. This has resulted in many of these streams being attractive winter refuge areas for coarse fish species and are often targeted by anglers when main river beats are in full flood. In addition, many of these side streams are actively used as spawning and nursery sites for both cyprinid and salmonid fish species which migrate into these systems from main river beats.

The Ibsley stream was regularly stocked with farm reared trout but the shallow, relatively fast-flowing nature of the beat may well have resulted in poor site fidelity for fish that are reared in benign stew ponds.

It is understood that the Ibsley Stream has played an important role in the hugely successful Avon Roach Project, with this stream being one of the very few locations where spawning roach could still be found in the middle reaches of the river.

#### **4. Habitat Assessment**

The Ibsley Stream was most likely constructed to be a by-wash channel of an ancient mill. There is no sign of any remaining mill buildings at Ibsley but there are references to an ancient milling structure being located there in the Hampshire Mills Web site:

<http://www.hampshiremills.org/index.htm>

As a milling by-wash channel, the stream has two water level control structures (photo1 & 2) at the head of the reach, which are under the control of the Somerley Estate. It is understood that the amount of flow that passes into the system is managed by the estate keeper. It is possible that control of the boards and hence local water levels are set out in a local Water Level Management Plan, which is a statutory requirement for rivers with a conservation designation and may well be linked to the management of the local grazing meadows.

At the time of the site inspection (October 2020) the amount of water available to the stream was being restricted be a control board. The autumn period is usually the period of lowest annual base flow and negotiating a more equitable share of the available resource is important if the stream is to maintain high quality habitat, particularly for flow loving, gravel spawning fish species. Ideally a naturalistic pattern of flow should be maintained to mimic those available during a typical season. For artificial stream channels, the amount of water resource available will drive geomorphological and ecological processes and ideally the flows available for the stream should be a simple proportion of those available for the main river. The amount of water available for the stream is currently dictated by several control structures, including two large upstream weirs, which regulate flow into the main river channel. It is assumed that these large main river structures also have adjustable hatches.

Unless there is already a written agreement in place, it is recommended to make enquiries as to how and when structures are manipulated and what is the criteria used for dictating how flow splits are maintained. Depending on the time of year, the target species and life stage will all influence how best to locally manage flow splits and local water levels.



Photo 1. Chained drop board throttling flow into the head of the stream



Photo 2 Inlet structure with what appears to be an old eel rack.

Opportunities for fish to migrate up through these structures are probably limited to large salmonid species via the eel trap hatch (photo 2).

In addition to the two hatch structures at the head of the beat, there is also a stepped weir located a short distance downstream (photo 3). This may well have been constructed to manage the significant head loss between the inlet structures and the downstream water levels. This structure also acts a significant barrier for migrating fish.

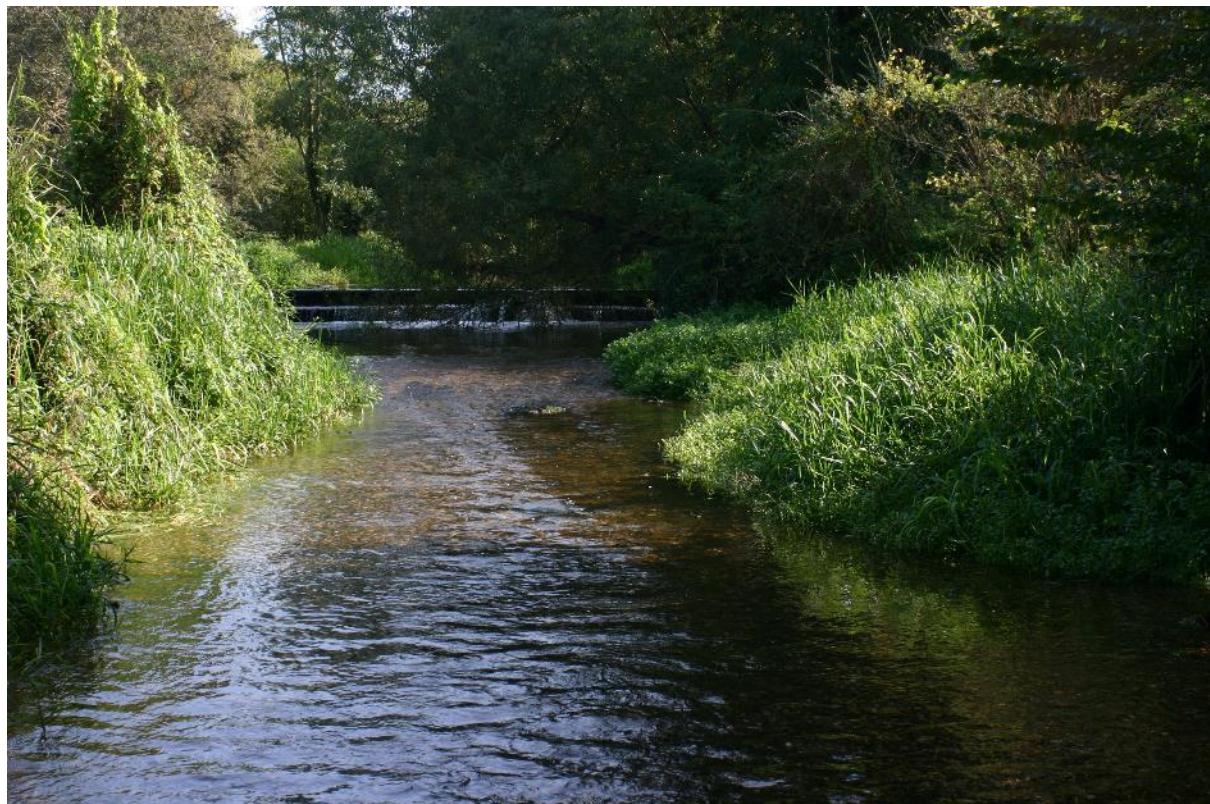


Photo 3. Stepped weir located approximately 50m downstream of the main hatches; also a barrier to free fish migration.

Immediately downstream of the stepped weir the river is mainly shallow riffle and provides both spawning and nursery opportunities for salmonids. This particular section, along with a smaller side channel may also be important for dace, chub and possibly barbel spawning.

This top section is quite shallow and water depth slowly increases along the course of the stream. The lack of any significant sinuosity in the channel planform (photo 4) may explain the relative uniformity in both channel depth and width. Overall, the stream can be mainly defined as shallow glide habitat, although there are one or two areas where the bed drops away to form slightly deeper glides but overall, the reach does lack deeper pool habitat, which is normally associated with naturally meandering channels where deeper pools are scoured away on the outside of bends.



Photo 4. A winter shot of the Ibsley Stream showing the straight nature of the channel form.

Habitat quality for wild brown trout throughout the reach is reasonably good, mainly due to the rich gravel substrate found throughout this reach of the Avon Valley. These rich gravel deposits provide good winter spawning opportunities for trout and salmon and are highly likely to be used by dace, chub and possibly barbel from late March to June.

Some excellent holding habitat is also available, thanks mainly to the cover provided by the unmanaged left bank margin. The trees and shrubs on the left bank will help to provide some cooling shade, with the stream running on a north-east to south-west axis, with the mainly open aspect of the right bank ensuring some direct sunlight is available to help promote luxurious beds of water crowfoot *Ranunculus spp* which are evident here in the summer.

There were several examples of high-quality habitat being promoted via fallen (photo 5) or partially fallen trees (photo 6). The brushwood tops of fallen trees provides complex cover for small fish and are particularly favoured by species such as trout and chub, who actively seek out these areas as refuge sites from predators. In addition to the cover provided, fallen trees help to promote local changes in flow patterns by elevating flow velocities through the narrowed channel cross-section. This in turn encourages river-bed and/or bank-toe scour but also provides areas of sediment deposition in slack margins behind the fallen tree. These areas can be valuable refuges areas for juvenile fish in high flow conditions, particularly for some of the weaker swimming species such as roach.

The mix of habitats generated by naturally fallen trees also provide diverse opportunities for a wide range of invertebrate species as well as satisfying the habitat requirements for fish species at different stages in their life cycle.

Occasionally when trees fall like this there will be additional erosion pressures on the opposite bank. Unless the erosion threatens to undermine local infrastructure (paths or structures) then the club should be relaxed about losing short sections of bank. During the action of eroding the bed or toe of the bank, fresh gravels will be mobilised and potentially become available for improved spawning opportunities immediately downstream of any naturally occurring flow deflectors. In a very straight section of channel such as here on the Ibsley Stream, any flow deflectors that encourage meandering flow patterns are to be actively encouraged.



Photo 5. Naturally fallen tree providing valuable complex cover and variations in flow patterns

The temptation on fisheries is to automatically remove fallen woody material, especially as many anglers just see these valuable habitat features as an impediment to fishing. The more complex and diverse the habitat is then the more likely it is that the stream will support healthy populations of wild fish of all species.



Photo 6 A partially fallen tree that could be easily “hinged” into the channel. If deemed too large, the tops can be taken off and packed in around the hinged trunk to help form a natural flow deflector.

Towards the bottom third of the fishery the flow velocities tail off (photo 7) and the margins become areas for fine sediment deposition. This results in the margins becoming suitable areas for emergent reed growth. The potential for sediment deposition in this bottom reach is compounded by the probability that the stream backs up and slows when the main river is in bank-full flood.

Beds of marginal reeds provide excellent cover and habitat for a wide range of bug, fish and fowl species and only light intervention is required if emergent plants start to become established in mid channel locations, or long sections of bank become impossible to access. Here cutting just the odd gap for access is recommended over cutting or removing long swathes of reed or rush.

Overall this lower section looks to be more important as a winter refuge area for coarse fish and may not be that attractive as a holding area for trout during summer months.

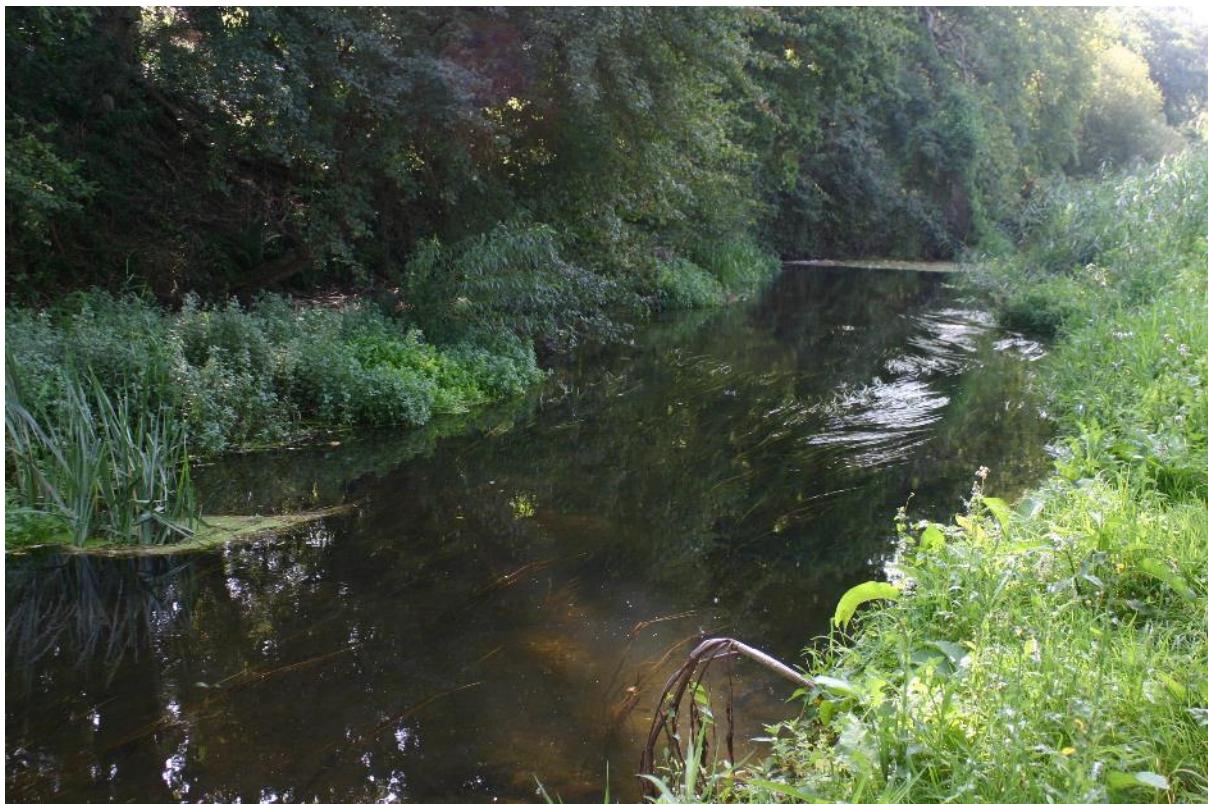


Photo 7. The lower end of the stream is naturally backed up by the main river confluence. Here beds of burr reed, common club rush and Norfolk reed all thrive in the slower flow velocities. This reach is likely to be valuable as a winter refuge area for coarse fish when the main river is in bank-full flood.

## 5. Conclusions and recommendations

The Ibsley Stream is a delightful mixed fishery and complements the CAC portfolio. The fishery is likely to support a modest population of wild browns and occasional sea trout, especially later in the season. The WTT recommends that this should be managed as a wild “catch and release” fishery and we would not advocate supplementary stocking with farm reared fish. Stocking would reduce the fisheries’ potential to support healthy numbers of wild trout and may well be deemed damaging on a section where salmon are known to occasionally spawn and also where salmon parr are known to reside. Avon salmon stocks are currently well below conservation targets and it is highly unlikely that the EA would support or encourage any stocking on this sensitive section of river.

The fishery is ideally suited for fly fishing, requiring only minimal management to facilitate access for the angler. The top half of the fishery in particular supports good habitat for all life stages of brown trout, however, slightly deeper pool habitat in amongst the shallow riffles and glides would be beneficial and create attractive holding areas for adult trout and possibly pre-spawning salmon and perhaps adult coarse fish.

There is the opportunity to install naturalistic woody flow deflectors via hinging of existing trees or pinning complex trunk and branch systems imported from

elsewhere. Flow deflectors here will help sort gravels and fine sediments but the controlled nature of the water supply into the stream, coupled with the backing up effect of the main river during high flow events means that the stream has only limited capacity to form naturally deeper pool habitats. It is possible however to create these slightly deeper pool habitats in the upper reaches by mechanically lowering the bed and using the gravels won from the bed to form an upstream flume, or narrowed neck to the pool. WTT has successfully used this technique on straight, man-made channels to instantly create diversity in the bed topography and there is scope to create three or four “pool and run” features in the top half of the Ibsley Stream beat. Work of this nature will require a Flood Risk Activity Permit (FRAP) from the Environment Agency and also in this case a consultation with Natural England, as the river here has such a high conservation status. Generally, the NE consultation is carried out by the EA as part of the FRAP process.

The easiest way of creating these features is with a tracked long reach excavator during the late summer/early autumn period. No imported materials are needed, with any additional materials required to create the flume at the neck of each pool potentially won from nearby tree work. A project like this could be delivered in a single day with a skilled machine operator and environmental supervision. Preparing the FRAP submission would take an additional day and a budget of approximately £1000 would be required to deliver the project. It might be worth having a chat with the local EA fisheries team to explore whether a project here might attract Fisheries Improvement Programme funding. The WTT can potentially help with project design and delivery.

For the stream to perform as a spawning and nursery channel, as well as a wild trout fishery, it is essential to retain as much summer weed growth and marginal riparian cover as possible. Any attempt to “tidy” the reach and make it more accessible for fly fishing will simply result in the reach supporting fewer fish for the angler to target.

Treat any naturally fallen trees as an asset. Trim and reposition if necessary, remembering that any erosive flows will always be at right angles to the structure. Therefore, trees that fall square, or slightly upstream are less likely to cause bank erosion.

It is recommended to have a dialogue with the Somerley keeper to bottom out an equitable share of the flow resource. There may be perfectly logical reasons for managing the water level control structures in the way that they currently are but there is no doubt the stream would benefit from a greater share of the available resource, especially during the summer and early autumn period.

The hatches and stepped weir near the top of the beat are problematic for free fish migration. Even under comparatively high flow conditions as depicted in photo 8, the weir poses a series problem for fish on spawning migrations and is likely to be a complete barrier for coarse fish. Structures like this can be modified to improve fish access and the health of the river system is dependant on fish being able to migrate freely in both directions and for the structures to be able to convey fine sediments as well as water.

A conversation with the EA may determine whether there are any long term plans to improve fish migration at this location.



Photo 8. The stepped weir below the main hatches are a barrier for fish migration even under the high flow conditions depicted above.

## Making it Happen

Further assistance from the Wild Trout Trust is available in the form of:

Helping obtain the necessary consents for carrying out in-stream works, from either the Environment Agency, or in the case of river not designated as "Main River Watercourse" from the local authority.

A practical visit from a WTT Conservation Officer to demonstrate the simple habitat improvement techniques outlined above. This enables recipients to obtain on the ground training in the appropriate use of conservation techniques and materials, including Health & Safety, equipment and requirements. This will then give projects the strongest possible start leading to successful completion of aims and objectives. Recipients will be expected to cover travel expenses of the WTT attendees.

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

[www.wildtrout.org/content/library](http://www.wildtrout.org/content/library)

The Wild Trout Trust has 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 [www.wildtrout.org/shop/products/rivers-working-for-wild-trout-dvd](http://www.wildtrout.org/shop/products/rivers-working-for-wild-trout-dvd) or by calling the WTT office on 023 9257 0985.

## **Acknowledgement**

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