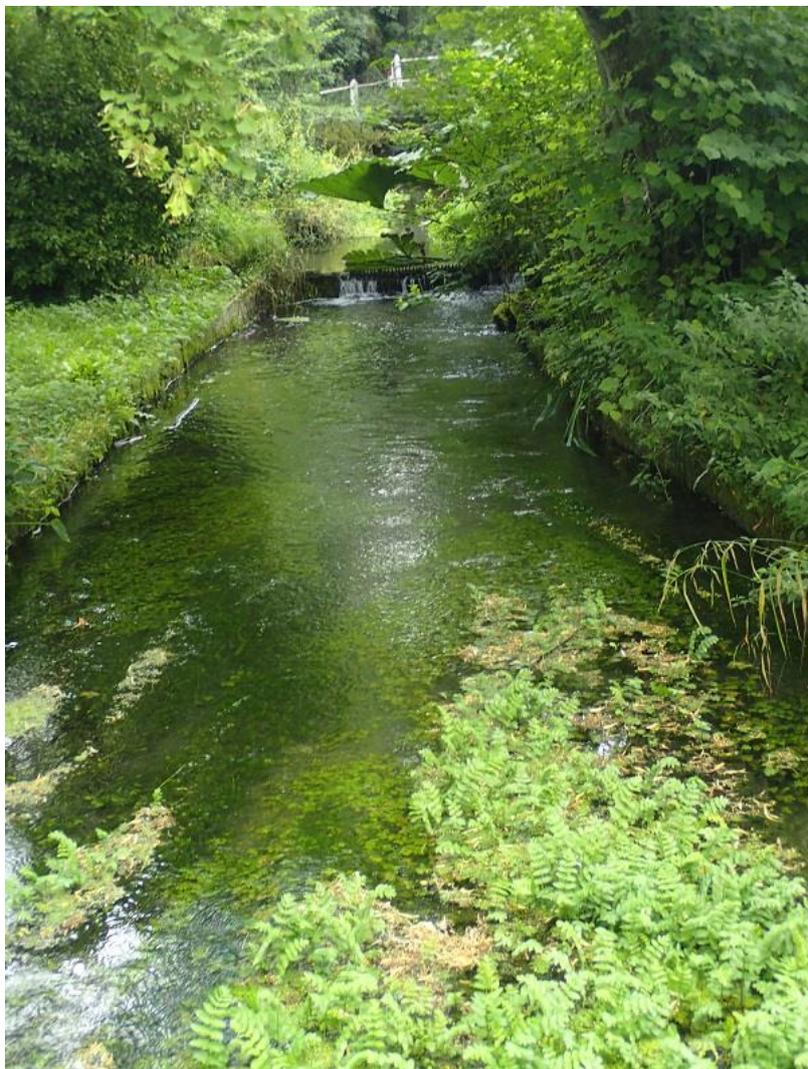




## **Ovington Carrier, River Itchen**



**An Advisory Visit by Nick Lawrence for the Wild Trout Trust August 2016**

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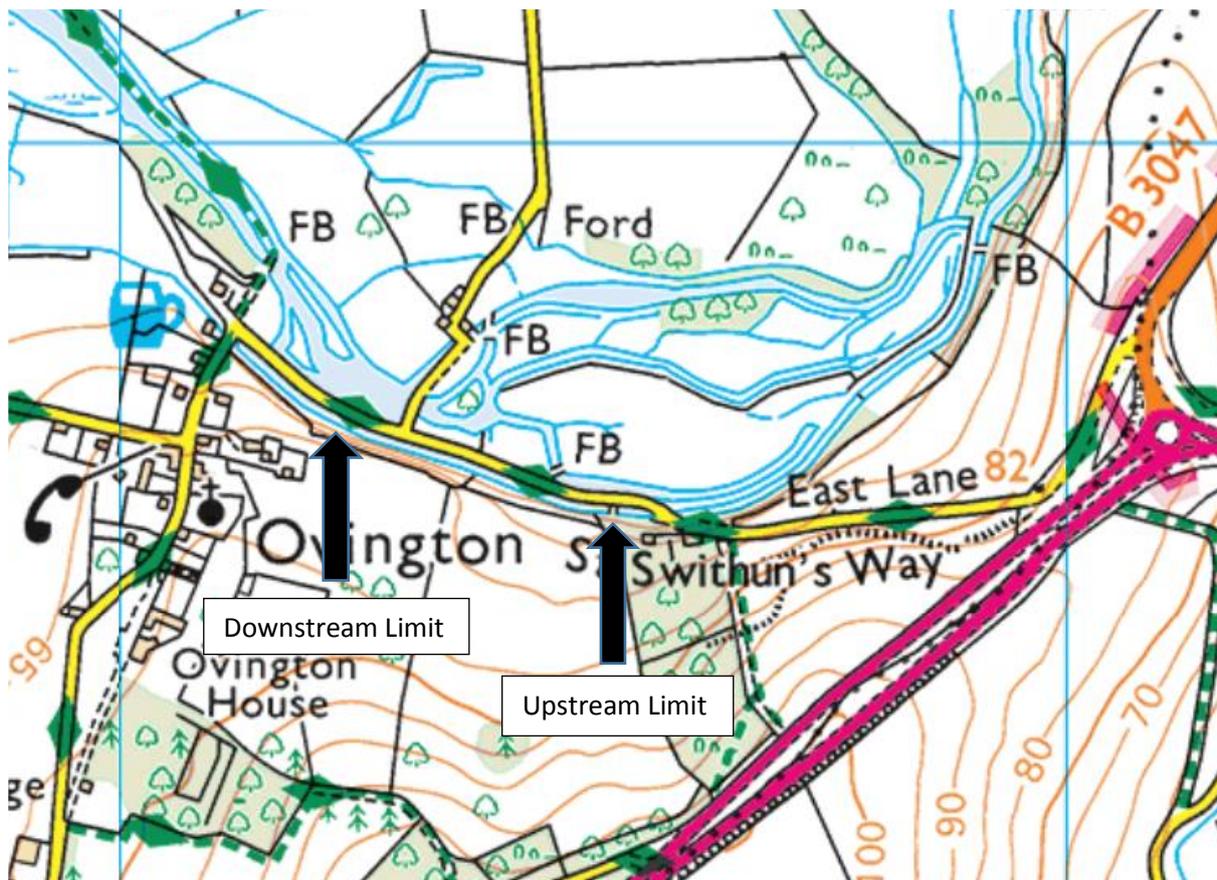
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## Introduction

This report is the output of a Wild Trout Trust visit undertaken on a carrier of the river Itchen, in Ovington, Hampshire (national grid reference (NGR) SU 56447 31622). A walk-over of the site was requested by Mr Jim Murray, who had acquired East Lane House a few years ago, and was primarily focussed on assessing the river habitat for wild trout (*Salmo trutta*) and for wildlife in general.

Comments in this report are based on observations on the day of the site visit and discussions with Mr Murray and Nick Lawrence (Wild Trout Trust). Throughout the report, normal convention is followed with respect to bank identification i.e. banks are designated Left Bank (LB) or Right Bank (RB) whilst looking downstream.

Figure 1: Map showing the area visited on the reach of Ovington Carrier



## **Catchment and Fishery Overview**

The Ovington Carrier is a small side stream that flows from the River Itchen at Ovington, opposite to Itchen Stoke, along the road to the Bush Inn pub and back into the river just downstream of the pub.

The exact source of the stream is fed from a small carrier itself that is taken off the main river on the Itchen Stoke fishery and is approx. 250 metres in length.

Mr Murray expressed interest in enhancing the habitat for wildlife and fish. Trout were spotted in some number on the visit.

The stream is not designated main river by the Environment Agency and as a result does not have a classification under the Water Framework. A consultation with Winchester City Council (WCC) will be required before any proposed works. As its very close to the SSSI Natural England should be consulted too.

The River Itchen is considered to be one of the finest examples of a chalk river in Europe and one of the most famous brown trout fisheries in the world. The river is designated as a Special Area of Conservation (SAC) and a Site of Special Scientific Interest (SSSI) (Appendix 1).

The Itchen rises from the chalk aquifer to the east of Winchester where groundwater-fed springs feed into three headwater streams: the Arle, the Candover and the Tichbourne, or Cheriton Stream. The streams converge near Alresford and flow south west, through the centre of Winchester and on to join the sea in Southampton.

The river is characterised by a plethora of man-made channels, some dug to provide milling power, some to support the old Itchen Navigation Canal and others to feed the network of water meadow carriers.

## **Habitat Assessment**

The Ovington Carrier is fairly straightforward in that it was possibly once an on-line stew pond, long since derelict. It is fed by another carrier a few hundred metres upstream of Mr Murray's reach. The area would benefit from some habitat improvement work.

The carrier does suffer from a lack of flow and some heavy shading for the majority of the reach. As seen in the cover photo, the carrier has shear-sided walled/ cladded banks which limits marginal habitat. The section as a whole lacks sinuosity, highlighting the man-made nature of the channel.



Figure 2: The top of the reach of Mr Murray's boundary is 3 metres upstream of the old fish farm grate. The old grate is holding back water impounding the reach above and will defiantly be interrupting natural sediment transport. It is recommended that its impoundment is removed permanently.

As seen in Figure 2, one of the main issues with the reach is the impoundment by the old fish farm grate, with this removed it will leave the river 'free' (a subsequent email from Mr Murray explains that this has now been removed). This will make a marked difference on the flow over the winter, hopefully scouring out the river bed and flushing silt to the edges of the stream.

As shown in the cover picture, there is reasonable gradient, good weed growth and good gravel. With some habitat enhancements, this could be the best section of the whole reach. Removing the bank shuttering and allowing the river to reconnect with the river bank, along with placing woody material in the margin, would allow marginal growth to establish - improving the habitat as a whole.

This is the prettiest section, it has the most diversity of in stream weed and is probably the most valuable in terms of trout habitat. This particular reach has a good gradient, which promotes energetic flow velocity, which in turn helps to keep the gravel bed silt free and provides an ideal environment for *Ranunculus* growth. This section supports good quality trout spawning habitat and is critically important in helping to augment the population for the whole reach. As mentioned above, there is a vertical cladded bank which unfortunately cannot support valuable marginal growth and fish cover to complement the in-channel spawning habitat.

Some strategically placed woody material to promote gravel cleaning and provide marginal cover for juveniles could contribute to resolving this issue. Further, one suggestion could be to remove the wall, re-grade the bank and

introduce a woody toe into the margin to promote plant growth and allow the bank and the stream to reconnect. More information on the value and use of woody material can be found on the WTT website at <http://www.wildtrout.org/content/wtt-publications>



**Figure 3: Lovely natural woody structure pinching the flow and scouring riverbed underneath and downstream of the structure.**



**Figure 4: Lower section looking upstream, note heavy shading and one sunny area, more of these sunny areas should be encouraged in conjunction with addition of woody material.**

Figure 3 and 4 shows the lower part of the stream which Mr Murray has been given permission by the owner to take on as his own. There are a few nice natural habitat features (Figure 3). However, it is heavily shaded by large, mature trees and any opportunity to take trees out to give the stream some much needed light should be taken i.e. coppicing willows, alders and hazel.

More information on this can be found on the WTT website:

[http://www.wildtrout.org/sites/default/files/library/Managing\\_Trees\\_Apr2012\\_WEB.pdf](http://www.wildtrout.org/sites/default/files/library/Managing_Trees_Apr2012_WEB.pdf)

There were trout spotted along the whole reach so the potential to promote little oases within the stream would be fairly simple to achieve.

### **Recommendations:**

In order for the Ovington carrier to achieve its full potential as a good quality river habitat, capable of supporting healthy, self-sustaining populations of fish, the following actions are recommended:

1. The metal grate that was once used to impound fish in the stew ponds should be removed as it is impounding the flow upstream and would definitely be interrupting natural sediment transport and could contribute to habitat uniformity (and resulting flow diversity) downstream. (The understanding from Mr Murray is this has now been removed).
2. Most importantly, the reach flowing downstream of the old metal grate has the most potential in terms of habitat for fish. Improvements should initially be concentrated in this area. Brushwood berms could be staggered in strategic areas to create flow sinuosity and marginal vegetation as well as providing habitat for juveniles. Log deflectors (Figure 7) could be used in this area where the spawning riffles are identified to keep gravels clean and scour out depressions in the river bed. Examples of how staggered berms can be introduced to a straightened channel can be seen in Figure 5, and their functions in Figure 6.
3. The lower section is heavily shaded and does have small areas where quality natural habitat features appear and small areas of lighting. This area could benefit from some coppicing of willows, alders and hazel. There are some mature trees which would undoubtedly remain in place, but the material from these small coppiced areas could be placed in the river as woody material to pinch the river in some strategic areas, and the light generated from these areas would help to create more of a habitat mosaic.
4. Do some detective work as to the source of the carrier and find out if there are any impoundments that might be responsible for flow being diverted elsewhere.

5. Remove hard, vertical revetment where applicable to reconnect river bank to the margin and the stream.



Figure 5: An illustration of how alternating brushwood berms could introduce marginal habitat and also increase sinuosity along a straightened channel. Notice the similar situation.

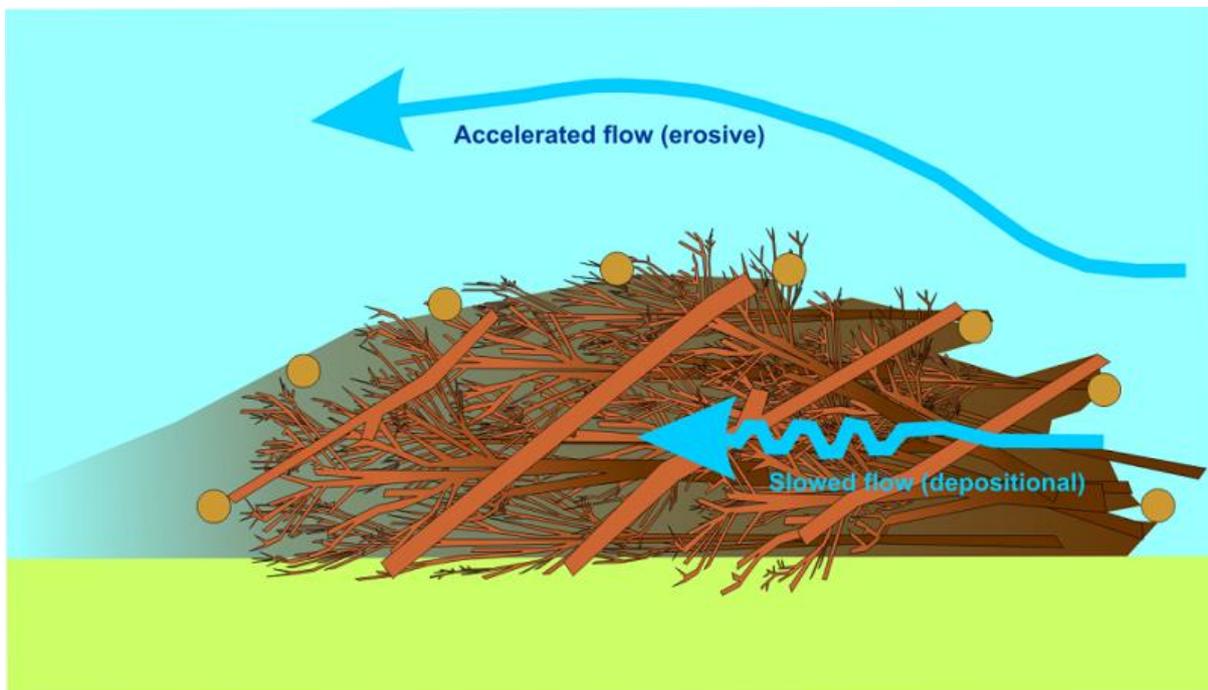


Figure 6: An illustration (plan view) of how brushwood berm structures can help manage in-stream fine sediment



Figure 7: A simple log deflector installed pointing upstream and keyed into the bank will deflect flow out into the centre of the channel, this will help to scour gravels and keep them clean, useful on a spawning riffle. For clarity, the river in this picture is flowing from left to right.

## **Making It Happen**

The creation of any structures within most rivers or within 8m either side normally requires a formal Environmental Permit from the Environment Agency. However, as the Ovington carrier is not classified as 'Main River', the consenting authority will be WCC. An application will have to be submitted, probably along with a methodology and drawings detailing the proposed works. This enables the WCC to assess possible flood risk, and also any possible ecological impacts. Contacting the council early and informally discussing any proposed works is recommended as a means of efficiently processing an application. The area seems not to be in the SSSI/ SAC classification that the River Itchen falls under. This should be double checked with Natural England before any work is carried out.

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>

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 <http://www.wildtrout.org/product/rivers-working-wild-trout-dvd-0> or by calling the WTT office on 02392 570985.

There is also the possibility that the WTT could help via a Practical Visit (PV). PV's typically comprise a 1-3 day visit where WTT Conservation Officers will complete a demonstration plot on the site to be restored.

This enables recipients to obtain on the ground training regarding 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 and accommodation (if required) expenses of the WTT attendees.

There is currently a big demand for practical assistance and the WTT has to prioritise exactly where it can deploy its limited resources. The Trust is always available to provide free advice and help to organisations and landowners through guidance and linking them up with others that have had experience in improving river habitat.

### **Appendix 1 – River Itchen Conservation Designations**

The River Itchen is a Special Area of Conservation (SAC) and a Site of Special Scientific Interest (SSSI).

Special Areas of Conservation (SACs) are strictly protected sites designated under the EC Habitats Directive. Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended).

The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). Of the Annex I habitat types, 78 are believed to occur in the UK. Of the Annex II species, 43 are native to, and normally resident in, the UK. Details of the process of SAC selection and designation are available on the Joint Nature Conservation Committee's web pages at [www.jncc.gov.uk](http://www.jncc.gov.uk)

The habitats and species present on the River Itchen leading to its designation as a SAC are:

- Annex I habitats that are a primary reason for selection of this site
- Water courses of plain to montane levels with the *Ranunculus fluitans* and Callitriche-Batrachion vegetation

The Itchen is a classic example of a sub-type 1 chalk river. The river is dominated throughout by aquatic *Ranunculus* spp. The headwaters contain pond water-crowfoot *Ranunculus peltatus*, while two *Ranunculus* species occur further downstream: stream water-crowfoot *R. penicillatus* ssp. *pseudofluitans*, a species especially characteristic of calcium-rich rivers, and river water-crowfoot *R. fluitans*.

- Annex II species that are a primary reason for selection of this site
- Southern damselfly *Coenagrion mercuriale*

Strong populations of southern damselfly *Coenagrion mercuriale* occur here, estimated to be in the hundreds of individuals. The site in central southern England represents one of the major population centres in the UK. It also represents a population in a managed chalk-river flood plain, an unusual habitat for this species in the UK, rather than on heathland.

- Bullhead *Cottus gobio*

The Itchen is a classic chalk river that supports high densities of bullhead *Cottus gobio* throughout much of its length. The river provides good water quality, extensive beds of submerged plants that act as a refuge for the species, and coarse sediments that are vital for spawning and juvenile development.

□ Annex II species present as a qualifying feature, but not a primary reason for site selection

□ White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes* □ Brook lamprey *Lampetra planeri* □ Atlantic salmon *Salmo salar* □ Otter *Lutra lutra*

Further details on the River Itchen SAC can be found at [www.jncc.gov.uk/protectedsites/sacselection/sac.asp?eucode=uk0012599](http://www.jncc.gov.uk/protectedsites/sacselection/sac.asp?eucode=uk0012599)

Notification as a SSSI gives legal protection to the best sites for wildlife and geology in England. Natural England has responsibility for identifying and protecting the SSSIs in England under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000). Each SSSI has a citation which details the 'features of interest' for which it has been notified. Each citation shows details of the SSSI location, size and the date of notification. It also describes the general reasons for notification and the habitats, plants and animals that are found at the site. The citation for the River Itchen can be viewed at [www.english-nature.org.uk/citation/citation\\_photo/2000227.pdf](http://www.english-nature.org.uk/citation/citation_photo/2000227.pdf)

The SSSI is sub-divided into units and these have been the subject of a review by Natural England to assess their status in relation to the original designation.

The Government's Public Service Agreement target is for 95% of SSSI land to be in 'favourable' or 'recovering' condition by 2010.

## **Disclaimer**

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