



## **River Itchen – Eastleigh River Itchen Fishing Club**



**An Advisory Visit by Nick Lawrence on behalf of the Wild Trout Trust  
November 2017**

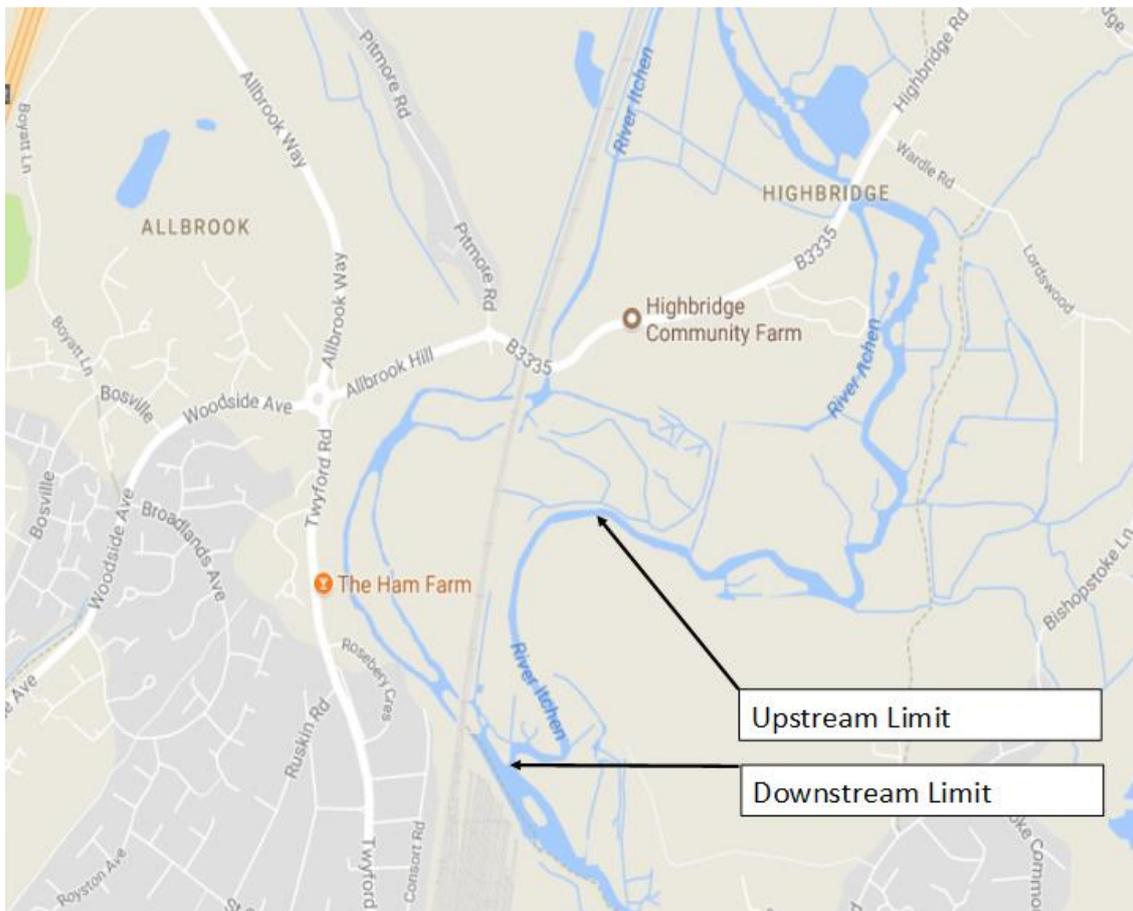
## 1. Introduction

This report is the output of a site meeting and walk-over survey of the Eastleigh River Itchen Fishing Club Fishery (ERIFC) on the Itchen at Eastleigh in Hampshire.

The request for the visit came from ERIFC, who are keen to explore opportunities to enhance and improve the fishery, as well as review management practices. The report assesses habitat for trout and other wildlife and makes recommendations for enhancement. Inevitably creating improved habitat for trout can make access for fishing more challenging. However, a water that is not great for fish is definitely not great for fishing. Striking a balance between good fishable access and improved habitat for trout is the key to creating a high quality chalkstream fishery.

Comments in this report are based on observations on the day of the site visit and discussions with Mr Robert Coombes (ERIFC representative) and myself, Nick Lawrence.

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.



Map 1 ERIFC reach on the River Itchen

The ERIFC fishery lies downstream of Winchester, on the main stem of the River Itchen, near Eastleigh. The main river here is bypassed by the old Itchen navigation channel that rejoins the river adjacent to the club's bottom boundary. The upstream end of the fishery is opposite Highbridge Community Farm [SU462208](#) and the downstream end opposite Consort Road, where the river meets the Itchen Navigation Canal [SU460203](#).

The fishery itself consists of one section of main river channel. There is a weir structure below the bottom limit, which was not visited. In all, the fishery extends to approximately 1 mile of channel.

The middle Itchen water body classification is available on the on the Environment Agency website: <http://environment.data.gov.uk/catchment-planning/WaterBody/GB107042022580>.

## **2. Catchment and fishery overview**

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 (*Salmo trutta*) 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 Alre, 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.

The river is largely managed as a stocked trout fishery downstream of Winchester but does have good wild populations throughout, the upper reaches showing that this river can be managed successfully for wild fish. The potential for truly wild trout fisheries on the Itchen is proven, with several fisheries now enjoying high quality angling experiences following a move away from stocking and the development of improved habitat for salmonid fish species. If managed carefully and not overfished, fishing will improve, as shown in other reaches of the river.

A significant area of concern for the Itchen is nutrient pollution, especially phosphorous, reportedly elevated from sources such as domestic sewage, agriculture and fish and watercress farming. Monitoring is ongoing and a number of initiatives (e.g., the multi-partner Upper Itchen Initiative) are attempting to address the issues, but the ecological status of the river is thought by some to have deteriorated, despite the river's 'good' classification by the Environment Agency.

### 3. Habitat assessment

The habitat quality within the River Itchen is mainly determined by flow, channel morphology, geology, riverbed gradient and local river maintenance regimes, both historical and latter day.

The majority of channels which form the River Itchen are man-made and vary enormously in terms of habitat quality. Many of the habitats which support the SSSI are associated with high water levels, maintaining comparatively damp riparian habitats. However, some of the key features of interest cited under the SAC are dependent on flow velocities within the channel (see Appendix 1). High quality in-channel habitats require the river to run relatively fast in order to achieve favourable condition. Chalkstream reaches that have more variety in channel shape and form (pools, riffles and glides) provide more valuable wild trout and salmon habitat than long sections of impounded channel, usually uniformly characterised by a smooth glide and laminar flows. The latter explains the majority of the ERIFC reach and the lower section is possibly impounded by the Bishopstoke lock structure that leads into the navigation canal.

The fishability of small reaches like this is often questioned, as some club members will find it hard to embrace sections of water that might prove more challenging to fish. Space is required for anglers to cast (no problems here with the lack of trees) but if the number of good quality holding lies for fish is compromised by a lack of cover then easy access for casting will not result in improved catches. Lies can be created in a number of ways, the easiest method is with woody material. These adult trout lies are equally valuable to a stocked fish as they are to a wild fish.

When the visit took place the very top section upstream of the footbridge just above the club's top boundary was one of the most habitat rich areas on the whole reach (Photo 1). A willow from the LB had fallen into the river and pinched the channel by 50%. This had speeded up the flow dramatically and created a long fast run and in time will accentuate the natural meander. This was a prime example of light touch management that when trees fall into rivers they should be seen as a gift from nature and should be left to scour the riverbed and allow the river to narrow naturally. Note the pipe reed, *Schoenoplectus* sp. encroaching from the LB. Potentially this area was sorting gravels and would have been a likely spot for salmonid spawning. Unfortunately, this tree has now been removed, which is to the river's loss. These are exactly the type of practices where raised awareness is key if habitat improvements are to prevail.



Photo 1. View upstream from the bridge on the top boundary, a fallen tree on LB pinching the channel and deflecting flow that was providing a valuable variation in habitat prior to recent removal.

Below this area, the river gradually widens, and problems associated with reduced flow velocities become more evident. Initially, there is a nice scrubby margin on the RB (Photo 2) which provides some rare marginal cover for fish and angler alike and also provides valuable habitat for invertebrates, as well as robust bank defences. The most serious issue impacting the fishery is the distinct lack of fish cover, whether that be marginal plants, low, overhanging tree cover or tree cover *in* the water. The reduced flow velocities associated with the wide channel compound these problems. Photo 2 is a prime example of how the river is overwide compared to Photo 1. In summer, the rampant growth of pipe reed in this reach is testament to its over-wide nature.



Photo 2. Overwide reach on a bend, heavy poaching and grazing evident on the LB, insufficient fenced area in an attempt to limit cattle poaching. Lack of trees and shading.

The first issue that needs to be addressed is fencing the river from cattle grazing. As seen in Photo 2, there has been an attempt to fence part of the bank that has been suffering from excessive grazing and to provide cattle drinking. In time, this will work for this area but there are numerous areas elsewhere along the river that need a similar intervention. Attitudes have changed towards fencing and DEFRA guidance is in favour of actions designed to reduce sediment input. Where animals (cows, sheep & horses) have access, unless they are in low numbers, the whole riverbank should be fenced with as large a buffer area between the grazing and the river as possible: 5-10 meters would be adequate. Either pasture pumps should be installed or sacrificial cattle drinking areas incorporated within the fencing. (Photos 3 & 4)



Photo 3. An example of a pasture pump on the river Lyvennet in Cumbria



Photo 4. An example of a fenced cattle drinker on the river Coln in Gloucestershire

This fencing would allow marginal plants to establish and prevent poaching of the riverbank. These plants will provide cover for fish and insects thus improving the habitat for fish and insects alike. Also, this would help the river to self-narrow once the marginal plants start to encroach.



Photo 5. A prime example of an overgrazed margin and poached river bank. This would be a good site for a cattle drinker if a fence was installed.

Photo 5 again reiterates the need for fencing. This picture could have been taken again and again as the LB has some serious bank poaching issues, the RB which is grazed by horses is not much better. Note the lack of marginal growth. The easiest and cheapest fix for establishing marginal plants would be to install coarse woody material or faggot bundles backfilled with brushwood to protect the exposed bank, these areas would then collect silt and enable a marginal reed bed to establish. This could be combined with strategic narrowing with either some brushwood mattresses, or log deflectors (Photo 12 & 13) where the channel is currently overwide to energise flow velocities in the centre of the channel.

The second big issue for this reach is the lack of trees, whether that is low cover or actual shading of the river. Photos 2 & 5 are again prime examples of the lack of trees: if the river is fenced this will provide an opportunity to plant lots of trees next to the river and introduce small scrubby willows where the river meets the bank, providing refuge for fish.



Photo 6. A small oasis of low cover from a Goat Willow.

The low cover issue is really a critical niche of habitat that should be encouraged, as fish of all sizes on this reach have very few places of refuge. Photos 6 & 7 are prime examples of the types of habitat that are required. Of 60 pictures taken on the day, there are really only 2 examples of this; more areas should be encouraged.

These areas could actually be improved further by encouraging some of the lower limbs into the water, hinging some of the low limbs down so they deflect some flow and collect organic matter. This will create more cover for fish, providing a refuge from predators, as well as potential lies for fish to sit while allowing the rest of the tree to grow to produce shading. Shading is vitally important for moderating water temperatures and reducing excessive weed growth; without shading, the environment will be undesirable for cool water fish species.



Photo 7. Another example of good low cover on the LB.

Photo 8 is the only shallow riffle on the whole reach, this area looks like prime wild trout water as well as being potentially the best area for salmonid (and grayling) spawning, but there are still some issues with it. The river is not fenced so there are very few marginal plants, and again no tree cover to provide shading or low cover.

This area is prime for installing some brushwood mattresses to help encourage marginal plants to establish and provide juvenile fish cover in a spawning area. Some large logs incorporated into these structures would promote scouring of the gravels in typical spawning areas. Ideally, these structures would be staggered so the flow can be pushed from one bank to the other and create some variety in flow patterns. These structures will also help with boosting *Ranunculus* growth, as well as promoting enhanced lies for adult trout.



Photo 8. The only shallow riffle on the whole reach but still room for improvement

Management practices were touched upon during the visit and it was suggested that fringes, as they are already under pressure from grazing, should be left as long as possible and only cut to provide fishing access and left at least waist high. The stocking is only around 200 fish for the whole reach, which is fairly light and if there can be further reductions in this, the wild fish will benefit.

As Photo 9 shows, an attempt has been made to install some flow deflectors, which is forward thinking. Ideally, these should be at larger preferably a third of the river channel (Photo 13) because unfortunately, as they are, they are having little or no effect on the river. Nevertheless, the structures do show that the club is willing try some habitat improvement ideas.



Photo 9. The flow deflectors here are a great idea but need to be far larger to have any influence on habitat quality.

The lower section is actually the most diverse in terms of woody habitat. On discussing this, it was suggested that it is not really fished by many members and because of this, there is very little management as a result. As seen on many other rivers where you get little management, you sometimes get a huge improvement in fish habitat as there is less 'tidying up' going on. This lower reach is comparatively deep and slow flowing and is highly likely to be adversely impacted by the impounding structure at Bishopstoke lock. The lack of flow energy in this lower section is compounded by the comparatively deep glide habitat which may well be why this lower reach fails to consistently hold good numbers of fish, despite improved riparian cover.

The margin was thick and no strimming or cutting back had been done and there were numerous bits of wood in the water. The cover picture is a case in point, and it should be noted how the alders on the RB are shading and the roots are deflecting flow, whilst the beautifully self-hinged willow on the LB has pinched the flow and provided some lovely low cover for fish.

Photo 10 is a close up of what can happen when natural processes are allowed to take hold. This willow has fallen into the river and created a nice oasis of low cover and deflected flow as well as providing the distinct possibility of a large trout lie. In time, the regrowth from this tree could be hinged over to create a larger oasis. These areas should be left to flourish and attempts to create more areas like this should be prioritized for habitat improvements.



Photo 10. Close up of cover shot on LB, fantastic living deflector providing habitat for fish and insects.

The beauty of the lower section is that it is more wooded and less managed. If some habitat improvements were planned for the upper and middle reaches because of the lack of trees, the material for these improvements would have to be won from this lower area. There is lots of alder coppice that is set back from the riverbank that could be used, some of these would make fantastic flow deflectors.



Photo 11. Alder coppice has produced a gift for the river. Perhaps this might need to be cut near the bank and repositioned and then secured with posts and wire.

As the bottom section is not visited that much, the alder coppice has produced a little habitat gift for the river resulting in some low cover (Photo 11). It is not essential to provide angling access to every yard of river bank but creating improved lies for trout, both wild and stocked, will significantly improve the overall fishery performance. If a fallen tree is too much of an obstruction where it lies, then it would be best repositioned to a more favourable location so the habitat can be retained.

#### **4. Conclusions and Recommendations**

The ERIFC reach has enormous potential as a mixed fishery. It is more diverse in terms of fish species than some of the upper river.

This reach is really in a poor condition in terms of fish habitat, due mainly to the wide, uniform channel shape, lack of trees and poor state of the banks from cattle grazing. Cattle can also damage trees, so this could be another reason why trees are lacking. With the addition of some solid cattle fencing the difference would be noticeable within one year and after 5 years, the river would be unrecognisable to what it is now. The fencing would give the river a generous buffer zone to allow marginal plants and trees to grow unimpeded by cattle (with strategic cattle drinking areas incorporated into the fencing programme thus minimising the damage to the river banks).

These long-term commitments to the health of the river will benefit the river in so many different ways. The plant life will become more diverse and the insects and fish will follow suit, thus improving the environment as a whole.

Once the banks are protected with fencing, a programme of strategic tree planting should be worked out. This should include the addition of small goat willows planted where the river meets the bank to provide low cover, which will be most valuable while the bigger trees grow and establish. (Suggested trees to

be planted Ash, Alder, Willow (Cracked & Goat), Hawthorn, Blackthorn and Black Poplar)

The river in places is far too wide for the average flow discharge and the river bed is very uniform. These areas could be drastically improved with the addition of large tree limbs or even whole trees ("big and bold"). If this is done strategically, the river could scour new depressions in the river bed to produce more holding lies for fish and where shallow gravel shoals develop, possible new spawning opportunities.

The middle riffle, which is potentially the most valuable in terms of salmonid spawning (providing as it does the only good spawning habitat on the reach), needs to have some introduction of brushwood to provide juvenile cover and help marginal plants to establish. Some large flow deflectors could also be installed here to help promote gravel cleaning for enhanced spawning success.

The introduction of gravel to other areas of the river, providing an extra riffle or two, would further enhance the spawning habitat of the reach. An alternative is to engage with the EA to ask if there might be opportunities to reduce the impounding effects of the Bishopstoke Lock structure which could potentially expose shallow glide habitats upstream.

The ERIFC reach, with care, could be a fantastic mixed fishery; it is crying out for a full-scale, carefully planned and managed, restoration project, but there is plenty of scope for more localised work to make things better for the river and all its wildlife. At present, little to no regular maintenance is required, and effort should be focused on carefully thought out habitat improvements.

## **5. Suggested Action Plan**

- **Invite an Environment Agency representative to the reach for an assessment, and discuss the possibilities of a full-scale restoration project, with the farmers who own the land and fishing rights invited to attend. Discussions could be had to see whether some funding would be available. This funding can potentially also include the cost of fencing. (Heb Leman from the Environment Agency currently manages a Test and Itchen habitat improvement programme funded by NE and designed to improve the quality of the SSSI).**
- **Continue to employ light touch management, e.g., leave fallen trees in the river if they are not impounding the river or causing excessive bank erosion. If a fallen tree does fall in a place where it might cause a problem, adjust it into a more favourable position and secure it with posts and wire to retain the ecological (and fishery) benefit.**
- **Explore possibilities of adding large woody material, tree limbs or whole trees, (big and bold) in the upper and middle section to encourage variation in flow and depth. Approximately 6-10 structures could change this reach and drastically improve it. When building these, the general rule is not to encroach more**

than a third of the existing channel width. Photos 12, 13 and 14 show some examples of the type of structures that could be installed.



Photo 12. Brushwood mattress constructed with coppiced willow.



Photo 13. Log deflector.



Photo 14. Log deflector combined with folded willow.

- **Install brushwood structures and log deflectors in the riffle area: the brushwood to provide juvenile fish cover as well as helping establish marginal plants; the log deflectors to scour and help keep the gravels clean.**
- **Consult with the landowner, tenant and NE over the possibility of fencing the river. Investigate the pricing of fencing and installing strategic cattle drinkers. Discussions will have to be had with the farmer about how much of a buffer strip he is willing to give to the river. If a full restoration was considered to be acceptable to the landowner and tenant, then fencing would be the last job to do; if it is not, it's probably the first. Grants for projects that are guaranteed to protect the nature conservation value of the river may attract government funding. (Henry Robson, of Robsons Rural, has experience of fencing riverbanks and carrying out bank management on the River Test, 07739 546958).**
- **Once the reach is fenced a strategic programme of tree planting can be established. The general rule of thumb is "light the runs and shade the pool areas". Trees that are recommended to be planted are Cracked Willow, Goat Willow, Alder, Ash, Hawthorn and Blackthorn. The reach really does need a lot of trees. Again, the price of this could be costed out and possible funding could be found for it. The WTT has a modest budget available for 'keeping rivers cool' which could be tapped into to purchase root stock and whips. Any willow can be cut and transplanted for virtually no cost other than labour.**
- **Plant small scrubby trees (Goat Willow) where river meets riverbank, concentrating on the upper and middle section, where no trees or low cover is evident. Staggering them would be best, one or two clumps in an area on the RB, then go downstream 30-**

**50 metres and the same on the LB. It is recommended that only 20-30 whips of goat willow are used in this process. Care should be taken to make sure it does not look too uniform.**

**Note: All work within 8m of the top of the bank will require a consultation with the EA and may require a formal, written Bespoke Environmental Permit prior to any work being carried out.**

## **Acknowledgement**

The WTT would like to thank the Environment Agency for supporting the advisory and practical visit programmes.

## **Disclaimer**

This report is produced for guidance only and should not be used as a substitute for full professional advice. Accordingly, 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 comments made in this report.

## **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 EU 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 fluitantis* 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*

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.