

# Annual Fisheries Report 2017 to18: Cumbria and Lancashire



We are the Environment Agency. We protect and improve the environment. We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

We can't do this alone. We work as part of the Defra group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

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# Foreword

**In each of our 14 areas we carry out a wide range of work in order to protect and improve fisheries. Below are some examples of what has been happening in the Cumbria and Lancashire (CLA) Area, much of which benefits fisheries from funding from both fishing licence fees and other sources. For a wider view of the work we do across the country for fisheries please see the national [Annual Fisheries Report](#).**

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# Fishing licence checks and prosecutions

During the 2017 to 2018 financial year (the last complete year of data) a total of 64,702 fishing licence checks were carried out by our fisheries enforcement staff across the country. Our checks show us that evasion was relatively low with a national average of 3.97%. Below are details from CLA:



**36,615** rod  
licences sold



**£922,933.50**  
income generated  
from rod licence sales



**1794** rod  
licences checked



**61** successful  
prosecutions



**£8,759** fines  
and costs imposed

## Illegal fishing

Illegal fishing remains a threat to game and coarse fish stocks in England and the fisheries they support. The Environment Agency uses a combination of covert and overt patrols to deter and detect poachers, as well as responding to reports of illegal fishing where there is a credible threat to fish stocks and where we have a realistic chance of apprehending the alleged offenders. We cannot respond to every report of illegal fishing so we must prioritise where we focus our efforts. For CLA:

**79** illegal fishing incidents  
were reported to our incident  
hotline (0800 80 70 60)



## Fishing licence checks and prosecutions

We target our fishing-licence enforcement in a variety of ways. Throughout the year we strategically focus our efforts. Our patrols give high visibility across popular waters and waters where we have high evasion rates. This means enforcement patrols attend busy commercial fisheries during the summer months and attend quieter 'out of the way' fisheries at times when anglers wouldn't expect officers to be patrolling. We also target waters where we know there is a tendency for specific offences such as byelaws and multiple unlicensed rods.

In March 2018, officers were on an enforcement boat patrolled at Lake Windermere (we can reach all areas easier using a boat). We approached two anglers who were licenced to fish with 2 rods. However, both anglers were fishing with a third unlicensed rod, all 6 lines were hooked and baited. Both anglers were issued with an offence report form and were prosecuted. The three rod licence costs just £45 annually which is only £15 more than the two rod licence. Possession of the two rod licence demonstrated to the magistrate that the anglers knew the law yet they still didn't buy the correct licence. The anglers were found guilty of fishing with an unlicensed instrument resulting in fines and costs of £790 between them.



Preparing for a boat patrol with the Angling Trust

### Combatting fisheries crime with a partnership approach

Our local officers work closely with the Police forces across Cumbria and Lancashire. Together we form part of the North West Rural Crime Group and regularly meet our Police counterparts to discuss problem areas, people and to share intelligence. Last year we provided specific training on Fisheries legislation, the theft act and how we can work together to reduce crime, improve fisheries and recruit new anglers.



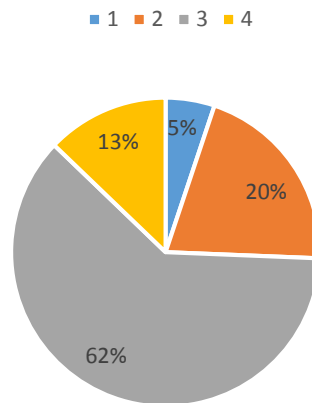
Refresher Training for Wildlife Focussed Police officers

## Incident management

Responding to fish kills and other environmental incidents is a vitally important part of what we do. We respond to thousands of substantiated incidents annually. Members of the public report incidents through our Incident Hotline (0800 80 70 60) and we are able to respond 365 days a year and on any day, at any time, providing an effective and proportionate response.

All incidents are categorised according to potential and actual impact on the environment and the impact on our resources. We can then break this figure down into categories of incident as shown below. Category 1 is the most serious and Category 4 is a reported incident with no impact.

## Cumbria and Lancashire Incident Management Categories



### Incident management Christmas day

Officers were called to an incident during 2017 Christmas Day to investigate fish in distress on the Leeds Liverpool Canal at Wigan Top Lock.

We found thousands of fish gasping for oxygen at the surface of the water at the Lock. This fish incident was occurring at a localised area of the canal, which indicated to our officers there was likely to be a pollutant entering the water course. We immediately deployed aeration equipment while our colleagues searched for a source of pollution.

It's very unlikely that an oxygen crash was caused naturally. For example, it was unlikely that low oxygen levels were as a result of natural causes such as an algal bloom, as this generally occurs during warmer weather. This is why we suspected a pollutant had caused this incident.

Dissolved oxygen levels were found to fluctuate up and down the canal as the investigation unfolded. We dispatched a Fisheries Officer to establish where the pollutant was coming from and to collect data. They cycled several miles upstream and, the data collected showed several areas of the canal had low oxygen levels, separated by expanses with good levels. Around 6 miles upstream our cycling officer found some poor farm management practices which appeared to indicate slurry may have been occasionally entering the canal, following heavy rain. This created a 'slug' of deoxygenated water, slowly moving down the canal towards the fish in distress which were trapped against a lock.

The Environment Agency administered controlled measures of hydrogen peroxide at several locations along the canal to raise oxygen levels. Targeting the low oxygen reaches before they reached and effected more fish. This quick thinking incident work saved thousands of fish.





Officers deploying hydrogen peroxide to a section of deoxygenated canal.

## Fisheries improvements

The boxes below highlight some projects we have delivered followed by the table below listing many of our environmental improvement projects that have helped to deliver benefits to fisheries; many in conjunction with our partners. We have included the time of our fisheries officers in the funding considerations for the projects as their posts are funded by fishing licence income. Considerable amounts of their time and expertise has been provided for the projects. Many projects have also received funding from government or from other parts of the Environment Agency e.g. flooding, the Environment Programme or Water Framework Directive budgets however where contribution has included fishing licence income, this has been noted.

<b>£79,000</b>	<b>+</b>	<b>£186,900</b>	<b>=</b>	<b>£265,900</b>
<b>EA Funding</b>		<b>Match Funding</b>		<b>Fisheries Improvements</b>

In 2017 to 2018 CLA addressed 8 fish passage issues and opened up 82.1 km of habitat or spawning ground for fish.

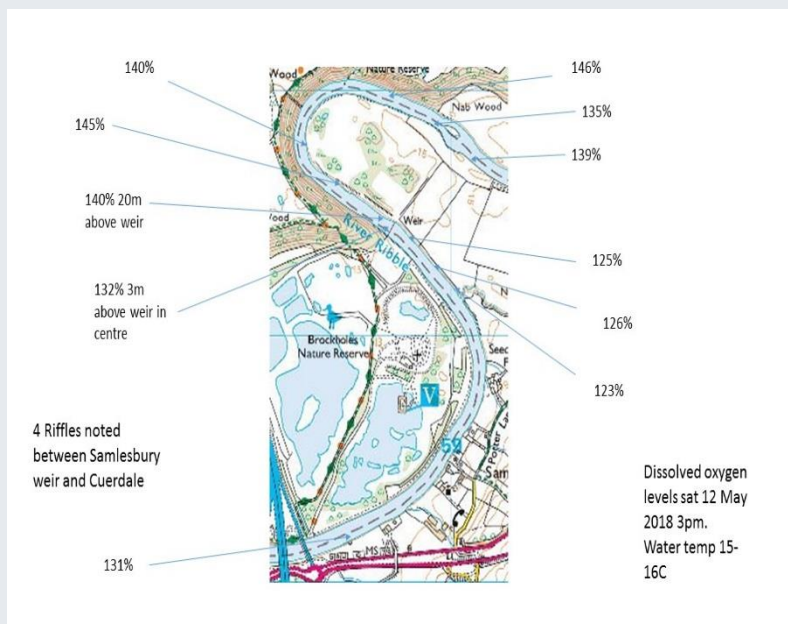
We were involved in 65 projects this year working with 34 partners. We improved water quality through sediment management, river habitat, fish passage, fish populations through creation of over 13 km of fencing, over 800m of green engineering, habitat improvement workshops and planting of over 10,000 trees by hundreds of volunteers.

## Samlesbury weir removal feasibility study

Samlesbury weir is the lowest barrier to fish migration on the River Ribble, just a couple of miles upstream of the tidal limit. While some species of fish can pass the barrier, it's not always passable and does take extra effort. The Ribble River Trust have produced a feasibility report for us so we can now plan how best to remove the barrier.

Local course fish anglers raised concerns that if the barrier was removed it would reduce dissolved oxygen levels and harm the fish during warm weather. We listened to these concerns and conducted necessary research. Surprisingly, we found that the weir lowers oxygen levels during daylight hours and only marginally increases them during darkness in summer. The Ribble is shallow in the location so general turbulence and oxygen production by submerged algae growth results in oxygen levels which are higher than found in the air during daylight. Turbulence below weirs and riffles allows excess oxygen to escape.

The results of this work have helped demonstrate that weir removal would have a positive, natural impact on the ecosystem and would benefit the fishery.



## Fish pass maintenance

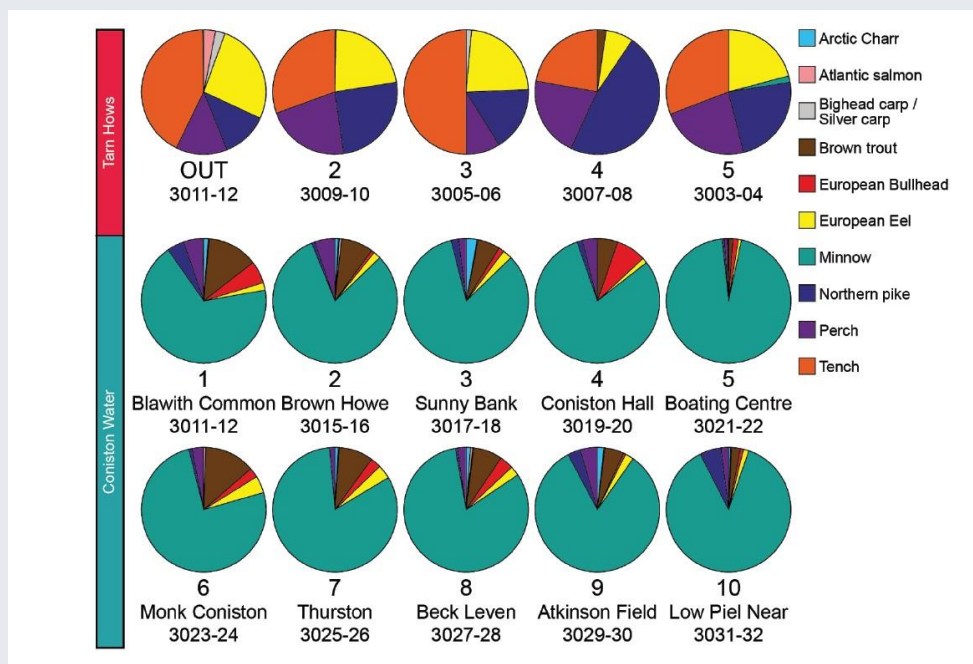
We look after 37 fish passes in Cumbria and Lancashire which is home to 4 of the 6 Salmon Rivers in England with the highest rod catches. It's essential that these structures are maintained and improved wherever possible to ensure our migratory salmonids can reach their spawning grounds successfully if we are unable to remove the original barrier.

Our fish pass at Waddow near Clitheroe had an ongoing issue which continually caused blocking and the trash screen had become damaged. We designed a new, different screen and worked with a fabricator to fit it. The new screen should reduce blockages and ensure that every salmon which wants to get past, can.



### **Coniston – eDNA project**

This project aimed to investigate and improve fish screening between Tarn Hows and Tom Gill to exclude coarse fish, especially roach, from entering Coniston Water. Historically, Tarn Hows was stocked with coarse fish species for recreational fishing, although since its designation as a SSSI this has been stopped and fishing is no longer allowed. In 2011, the Environment Agency and South Cumbria Rivers Trust were alerted to an incident of a tench being caught in Coniston Water. This fish species is not indigenous to glacial lakes, and it was concluded that it must have come from Tarn Hows. It was proposed that when water levels in the tarn were particularly high, it enabled the tench to swim out. This was a concern as the introduction of such species could upset the delicate balance of life required by rarer, indigenous species such as Arctic Char within Coniston Water. There had also been more anecdotal reports of roach being caught in Coniston Water. This project investigated these issues further. The first step was to identify what fish are present and how dense their populations, in both Tarn Hows and Coniston Water, through eDNA analysis of water samples from both lakes for all common fish species. Once this information was obtained, the project then addressed the findings from this initial study, working closely with the National Trust and Natural England.



## Wyre fisheries development project

The project focused on three areas within the Wyre Catchment, each of which have distinct issues and back stories. Across the three areas we hoped to promote the sustainable restoration of watercourses for fish and other forms of aquatic and terrestrial life. We also hoped to promote geomorphological improvements in areas where impoundment, canalisation and historical alterations were having a negative impact on the watercourse and the flora and fauna that reside within it.

### River Calder:

Principally the works focused upon the notching of a cobble weir near Catterall. This currently acts as a barrier to fish passage in low flows. We aim to focus the flow into the central portion of the structure by creating a notch within the weir, therefore increasing habitat connectivity by allowing fish passage for all species beyond this obstruction. These works will be augmented by tree planting in the riparian zone which sits below the weir and the installation of deflectors within the channel downstream to increase sinuosity within this reach of the river Calder.

### Woodplumpton Brook:

Following the successful delivery of works under the Woodplumpton Brook Renaturalisation Project we plan to expand upon these works by delivering further instream and riparian zone interventions. These interventions will take the form of woody deflectors which are installed within the brook to create sinuosity fisheries surveys at several locations along Woodplumpton Brook to identify the species which are present and to identify the range of any brown trout which currently reside in this watercourse. The data and evidence which is collected will help to inform the interventions which are delivered as part of this project and those which are delivered in the future, it will also allow us to monitor any improvements which have occurred as part of the previous projects which have been delivered in this location.



### **Abbeystead Estate:**

In 2016 Jon Grey (Wild Trout Trust) delivered an advisory report for the Grosvenor Estate at Abbeystead, this report has been endorsed by the estate and they are now interested in delivering a number of the interventions which were outlined in his report. These include but are not limited to: instream habitat restoration, tree planting and fencing. Owing to the numbers of interventions which have been identified we would expect to identify a sub-catchment within the estate and deliver a series of relevant interventions to improve riparian and aquatic habitat and water quality.



### **River Crake – Large Woody debris**



This project aims to improve spawning habitat through the diversification of habitat along a stretch of the River Crake upstream of Penny Bridge. The EA's 2012 paper, 'An assessment of migratory salmonid stock performance on the Rivers Leven and Crake, Cumbria' reported that the main River Crake is one of the most important sub-catchments within the Crake system with respect to salmon parr production. However, salmon parr production on the main river has

declined significantly since the early 1990s. This section of the river is very straight, with little diversity in substrate and no in-river habitat, thus limiting populations other species of fish.

This project aims to address this by introducing large woody debris along this section of river to encourage variation in the flow of water and encourage gravel deposition, creating more pools and riffles and a variety of habitat to support fish and other wildlife.





### **Coniston Water – Doll Moss Beck deculverting project**

This project aims to improve the overall habitat value (including spawning habitat) through the uncovering of a beck which currently runs for approximately 150 m in a culvert underneath a field near Brown Howe and out into Coniston Water. The beck has been culverted since the 19th century. It is proposed that the beck is de-culverted to restore the bed, bank and riparian corridor to more natural conditions. This will benefit salmonids, eels and other aquatic organisms by re-opening the habitat (currently underground) increasing light, providing and improving habitat and restoring natural river processes.



### **Coniston water – Thurston deculverting project**

This project aims to improve both in-stream and riparian habitat along a 180m stretch of newly-created beck between Thurston hydro-electric scheme and Coniston Water. The beck has recently been removed from its man-made underground culvert, where it has flowed for over 100 years, and its recreation will benefit salmonids, eels and other aquatic organisms by increasing light, providing and improving habitat and restoring natural river processes. The beck will be fenced off from surrounding farmland, trees will be planted in the riparian buffer strip and in-river habitat will be improved through the installation of woody debris, rocks and fascines.

It will also provide an opportunity to engage staff and students at the Adventure Centre in the freshwater environment and to encourage angling within the catchment and extended local area. Engagement within school groups from outside of Cumbria will also provide the opportunity to educate pupils about fish conservation and angling



### **River Crake – Bouthrey bridge engineering works**

This project aims to improve spawning habitat through the removal of large slate shards along a short stretch of the River Crake upstream of Bouthrey Bridge. This is an important spawning area for salmonids. Slate shards are a waste product from the slate mining industry and were dumped at this site in the late 19th Century. As a result of their flat and angular shape they have a very high resistance to flowing water currents and as such have remained in this stretch of the river for a long time. The shards very effectively ‘armour’ the riverbed and prevent natural smaller gravel from accumulating. It is proposed that the slate shards are removed from the river, which will allow the natural influx of gravels into the section and therefore improve the habitat for spawning salmonids. In addition 10 large woody debris dams will be installed to improve in channel habitat diversity.

### **Working with the Wild Trout Trust in Cumbria**

The partnership between the Environment Agency, Wild Trout Trust and local fisheries interests continues to deliver work with new cubs as well as building upon previous relationships. Work has been undertaken at a range of sites across Cumbria, with great potential for the work already undertaken to develop further, into future collaborative projects. This years’ project has built upon the success of previous, with the activities undertaken ranging from on-site advice, informative workshops and practical habitat improvements. This work has involved 7 site visits, 3 days of practical demonstration workshops, a days’ advisory (redd identification) workshop, two technical reports and two local stakeholder meetings, working across four different catchments and with representative from over 10 different organisations. The practical advisory workshops have involved interaction with over ninety volunteers/attendees.



### **River Ehen – Brash bank protection workshop (following initial site visits through previous years' project)**

A large Environment Agency and West Cumbria Rivers Trust project to deliver improved riparian land management scheme on the River Ellen led WTT involvement advising on more sustainable, appropriate methods of bank protection at the site (initiated through previous Cumbria FIP).

Hard, block-stone revetment had already been consented but was far from a suitable solution, prompting Fisheries Officer Mike Farrell to make the site the focus of a Cumbria FIP workshop. Following initial WTT site visits, the landowner and his friend/assistant from the local angling club (attendee of the previous River Derwent Brash workshop) were convinced of the merits of trialling brash at the site – a large erosion bite of over 35m long by up to 5m wide and >1m deep in places.

#### **Pre-work**

As with any effective green-bank protection, this work is reliant upon the improvements in broader land management at the site already being tackled by the EA and WCRT project, including the exclusion of livestock from the bank area with appropriate buffer fencing (now in place). In conjunction with the brash work initiated as part of the Cumbria FIP project, the generally more suitable green land management should see a long-term, sustainable bank protection solution. Even within one winter of the brash work being undertaken, the benefits of employing a well-designed, diffuse bank protection is very apparent, with it already having created significant natural deposition, filling in much of the erosion void.

#### **Post-workshop - applying the finishing touches to phase 1**





### **One winter after installation**



Note the void and brash in the foreground has already filled with fine sediment. This kind of treatment may require follow-up work but is by far the most effective solution, employing natural processes, rather than futilely fighting them. As the willow brash material grows and the bank revegetates it will trap even more sediment until the void is filled. Future years of this project will seek roll-out more of this appropriate riparian management across Cumbria.

### **Site visit with Carlisle Anglers**

A site visit was undertaken with Mike Farrell to Carlisle Anglers to look at a section of bank erosion and assess the potential for improvements. This was a very straightforward site and it was agreed by all parties that simply fencing the bank would be sufficient - this was addressed through a different project FIP.

### **Meeting with Prince Albert AS**

A meeting and subsequent discussions have been held with PAAS regarding the potential for future assistance through the Cumbria FIP project. Initially discussions focussed around the club's desire to obtain funding for balsam control. The club were unaware that this treatment is still largely experimental and may not be the best use of FIP funding. We are still exploring avenues for work with and education of the club in an aim to diver their efforts towards more realistic and feasible project work.

### **Sandybeck**

An initial site visit and assessment was undertaken on the Sandybeck to address a precariously perched beck channel suffering lateral erosion that could have jeopardised the watercourse (e.g. it could be lost from its channel). The visit was followed up with a full assessment of the potential options and ways to proceed. It was decided that, in the short-term and in the absence of funding for a more major project, addressing the erosion issues would be the best solution. This led to the delivery of a practical workshop involving volunteers from a wide range of organisations.



### **Redd identification workshop for Kirkby Stephen and District AA**

Following relationships developed with KSDAA during previous FIP work and workshops, a further workshop was devised to help train some of the proactive club members on salmonid redd location and identification. The hope being that trained members will begin to develop the skills to start monitoring undertaking their own redd counting. Four attendees from the club, one from Appleby AA and one from Penrith AA visited several sites around the upper Eden catchment to get a feel for the type of habitat in which salmonids spawn. Several redds were observed although sadly, owing to recent high water, they were not as clearly visible within the gravel as would have been hoped. All attendees were keen to learn more and were subsequently supplied with a redd identification document. There will be significant scope to run similar work this coming season, with repeat interest from those attending last year and interest from new potential clubs and attendees.

### **Raise Beck site recce**

A site visit was undertaken with Fisheries Officer Mike Farrell and John Gorst (United Utilities) to assess the potential of sites around the upstream end of Thirlmere for a practical habitat improvement workshop/demonstration. The visit was a success, with several potential areas of work identified and agreed with UU. The resulting workshop will be delivered through the 18/19 Cumbria FIP project.

### **Millom Anglers – Devoke Water**

In association with Mike Farrell and the Lake District National Park, a site visit and assessment were carried out with Millom anglers for their Stillwater fishery, Devoke Water. The site visit identified impacts upon the site and waterbody, highlighting several areas in which improvements could be made. This work is in support of the clubs aspirations to cease stocking the water with hatchery reared fish and develop a sustainable wild trout fishery. Everything seems to be progressing well on that front, assisted by advice during the site visit and the subsequent report. As further support of the move towards improving their fish



population, the WTT will also be attending the Millom Anglers AGM, to field questions on the feasibility and potential for developing the wild fishery.

### **Skitwath Beck**

Site visits, advice and support (technical and practical) are also ongoing on Skitwath Beck, where it is hoped that an assisted natural recovery/channel enhancement project can be undertaken in conjunction with the landowner. This beck has seen serious abuse from other local landowners leading to several, pollution incidents, fish kills and prosecution. It is now nice to be able to support one of the responsible landowners with advice and assistance that should help see the beck supporting wild fish populations.

### **Looking forward**

There have already been expressions of interest for further collaborative working with numerous angling clubs (inc. PAAA, PAA, KDSAA, MAA). With the next round of Cumbria FIP funding already secured, there will be significant opportunity for building upon the range of beneficial work that the project has already delivered. Potential workshops already identified through previous years of the project will also be delivered (e.g. Raise Beck, further Redd identification workshops etc.).

### **Adopt a Beck**

We have continued to work closely with West Cumbria Rivers Trust on the 'Adopt a Beck' scheme. This aims to encourage local businesses and organisations to get involved in looking after their local rivers by investing in habitat improvements and events.

Projects this year have delivered river bank stabilisation, riparian fencing, educational workshops, installation of solar powered pumped water troughs (to remove the need for cattle to enter watercourses) , cross river drains to prevent muddy water run off entering fields from rivers, tree planting, riverfly training, farm educational event for slurry management, school education days and electrofishing and habitat surveys.

### **Yeorton Hall, sediment run-off into the river**



**After works are complete**



### **River Ehen – Ennerdale Mill Dam Removal**

Cost £415,000

EA £50,000 NE £50,000, European Maritime and Fisheries Fund £240,000, James Fisher Nuclear £75,000

#### **Pre removal**





The Weir, approximately 250 years old, has not been used as it was intended for many years and has been proven to be a barrier to migratory species of fish such as Trout and other Salmonids in the Ehen catchment, as well as a crucial site for Freshwater Mussels. Sea Trout and Salmon are often seen leaping up the weir but failing to get over it, frequently becoming injured and stressed, or worse falling prey to predatory birds. Upstream numbers of Salmonids are low, but the barrier also poses a risk to downstream migration of juveniles.

WCRT, in partnership with the Environment Agency, Natural England, James Fisher Nuclear (the owner of the weir) and AECOM (independent consultant commissioned to undertake an options appraisal of the barrier) have been monitoring the weir since 2015, and found firm evidence that the weir is failing in places. If nothing is done, there is a significant risk of the weir failing completely, causing major damage to existing infrastructure including a road used by local businesses and farmland adjacent to the site, as well as the Mussel colony immediately downstream.

The fundamental aim of the project was to remove the barrier to fish migration. A feasibility study was commissioned first, which explored several options ranging from installing fish easement only through to partial removal and full removal. This report, combined with extensive flood risk modelling, recommended full removal of the weir as the most viable option.

Once this option was finalised, a programme was drafted to liaise with the local community and gain support from Egremont Anglers (who have rights to fish above and below the weir). It was understood from conception that local acceptance of the project was crucial, as the weir- despite its derelict condition- held a unique place as a local heritage site.

This project was conceived many years ago, but gained momentum in 2015 with the formal monitoring commissioned by WCRT which conclusively showed how the weir was at serious risk of complete structural failure. Through the Cumbria RRS (River Restoration Strategy), a partnership between the Environment Agency, Natural England and West Cumbria Rivers Trust, a plan was created to gain funding to allow the project to begin. Stakeholder engagement was prioritised and a number of meetings were held with local residents, businesses and groups including Egremont Anglers. The purpose of these meetings was to explain the necessity for the project, what the effects would be, and how the scheme would benefit the community as well as wildlife.

As the scale of the project became evident, additional funding was secured by WCRT through the European Maritime and Fisheries Fund (£240,000) and also the weir owner, James Fisher Nuclear (£75,000- probably the largest private investment gained for a project of this type). With sufficient funding secured, the project was scheduled for delivery in 2017 but due to the poor weather combined with a tight delivery timescale, it was postponed until the summer of 2018. This extra time afforded us the opportunity to further engage with the local community through events such as an open day to coincide with World Fish Migration Day in April, and a guided walk for concerned locals to explain why there would be zero additional risk of flooding across the site.

### **After removal**

It is perhaps too early to fully categorise the improvements, as the project was only completed at the end of July; however, knowing the size of the barrier and the negative impact it was previously having on fish passage, it is fair to assume the numbers of



fish passing through this stretch of water will dramatically and immediately improve. By October it should be possible to quantify this with more accuracy. WCRT have been monitoring this river and will continue to do so throughout 2018 and 2019. We have a dedicated Project Officer covering the River Ehen and its source, Ennerdale, as well as an Electrofishing Officer who will perform the first survey of the weir site in August 2018. A programme of continual monitoring has been developed with both staff members to ensure real data is realised from this project, and the success recorded. In addition, the problem caused by the barrier is certainly resolved: the whole stretch of river upstream and downstream, for approximately 350m, has a far more natural gradient and will continue to re-naturalise as gravel deposition occurs. The low flows that benefitted the project are now a minor inconvenience! A few minor flood events will cause the boulder protection to 'knit together' and improve bedload transport; all of this will be recorded and photographed by our staff so a complete picture of improvements is created. In conclusion, fish passage for Trout and other species such as Salmon and Lamprey will undoubtedly be eased; a river system has been restored to a more natural function; other species such as insects and birds are expected to benefit through this naturalisation; on-going monitoring and electrofishing surveys will take place throughout 2018 and 2019.

### **Fishery Management Advice**

Barrett's and Jays Fishing Club lease a small pond from South Ribble Borough Council managing the site as a community fishery. The pond has performed well over several years providing good angling opportunities and a scenic pond for other park users. However, a mortality occurred in summer 2017 along with concerns over fishing performance with many anglers complaining of reduced catches and when they do, it's mainly small Bream. The club asked the Environment Agency for advice. Initial investigations hypothesised the pond had become overpopulated over the years through natural recruitment and the introduction of small carp. This increase in stock density was the likely cause of the ongoing mortality and reduction in catches through stress. Following several meetings and discussion with the club and council, a fish population survey was carried out on 25<sup>th</sup> February 2018 to assess the current fish population and take a health check sample. The survey showed the stock density was very high at 1097 kg/ha<sup>EST</sup> and is the likely cause of the ongoing issues at the pond. The fish population was dominated by bottom feeding fish with Bream and Carp making up 82.1% of the population, the remaining population comprising of Roach, Perch, Tench, Crucian Carp and Chub. The fish sample passed a health check for small Roach and Bream. After discussion with the club and council, decisions were taken to reduce the fish population to more sustainable levels (400kg/ha) by cropping small Roach and Bream, relocating them to Farington Lodges that had suffered from pollution 2 years earlier. Following the reduction in fish population, water quality improvements were seen, there's been no further mortalities and anglers are reporting an improvement in fishery performance.



Project Title	Outcome or benefit	Partners	EA Funding	Match funding	Total Cost
Adopt a Beck	Multiple strands	WCRT, Natural England, West Cumbria Rivers Trust, Woodland Trust, NuGen	£4,923	£42,726	£47,649
<b>Derwent Partnership Habitat Improvements</b>	<b>Fencing 9.km of water courses to create substantial riparian strips. Insertion of woody debris to provide shelter for young fish. Planting of several thousands of trees to provide bank stabilization, create dappled shade, “slow the flow” etc. and involving students, school pupils and other volunteers. Over 500m of willow spiling/peg brash to protect banks from erosion. Enhancement of spawning areas by management of gravel beds</b>  <b>Protection of river banks by over 175m log and Christmas trees / interlocking stone etc.</b>	<b>RCG, DOA, EA</b>	<b>£ 22,000</b>	<b>£40,000</b>	<b>£62,000</b>
Cumbria Angler Engagement Project	Activities undertaken ranging from on-site advice, informative workshops and practical habitat improvements. This work has involved 7 site visits, 3 days of practical demonstration workshops, a days’ advisory (redd ID) workshop, two technical reports and two local stakeholder meetings, working across four different catchments and with representative from over 10 different organisations. The practical advisory workshops have involved interaction with over ninety volunteers/attendees.	WTT & Local Cumbrian Angling Clubs EA	£7,000	£21,600	£28,600

River Ehen, Blackbeck and Kirkbeck Habitat Improvements	<p>Yeorton Hall Farm, Beckermeth (March 2018)</p> <p>300m riparian fencing with average of 7m buffer strip. Concrete cross drain &amp; additional works to farm track to divert dirty water into field rather than allowing to flow down to bridge over Kirk Beck</p> <p>Home Farm, Braystones April 2017</p> <p>40m river bank stabilisation (willow &amp; brash) on River Ehen Bank stabilisation workshop with WTT</p> <p>80 m willow spiling Upper Ehen Salter Horseshoe, tree management, 2 LWD introduction.</p> <p>560m riparian fencing, average width of buffer strip approx. 6m</p> <p>18 attendees to bank stabilisation workshop (in partnership with Wild Trout Trust &amp; EA). Mainly Anglers but also 2 local farmers</p> <p>Instillation of 2x water troughs &amp; solar pumps.</p> <p>Additional posts/rails &amp; barb installed at ford for management of livestock when crossing.</p> <p>Japanese knotweed treatment Autumn 2017</p> <p>Community tree planting of buffer strip Winter 2017 to 2018</p> <p><i>3. Willow Spiling at Low Godderthwaite Farm &amp; Stephney Farm</i></p> <p>Approx. 30m of willow spiling &amp; brash bundles forming new terraces to willow bank stabilisation completed and repairs to last year's work (high water &amp; flooding caused some damage)</p>	NuGen WTT NE WT EA	£10,000	£44,500	£54,500
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River Ellen and Tributaries Habitat Improvements	<p><b>Mechi Farm &amp; Plumblands Farm</b></p> <p>Plumbland Mill 660m fencing 0.5 hectares of new habitat</p> <p>Mechi Farm 906m fencing 0.5 hectares of new habitat. Approx. 500 trees planted</p>	Maryport Anglers , Sealy Beds WT EA	£5,000	£8,000	£13,000
River Eden and Tributaries Habitat Improvements	<p><b>Project 1- Eller Beck</b></p> <p>Fence off and plant trees around a small tributary (~200m of fence on each bank) which is excellent nursery tributary for brown trout.</p> <p>Landowner carried out 435m of fencing and coppicing, plus 2 Watergates and 2 gates were put in.</p> <p>Planting of 150 trees provided by the Woodland Trust carried out by ERT apprentices</p> <p><b>Project 2- Long Marton</b></p> <p>Fencing and 100 trees planted. Diverting the footpath away from the river bank.</p> <p><b>Project 3- Frith/ Murton beck</b></p> <p>Create a 4m buffer strip on a ~400m stretch of Murton Beck and a larger woodland/scrub area on a ~800m stretch of Frith Beck with fencing and tree planting</p>	WT, C.C.C. Oglesbury Charitable Trust NE	£10,000	£29,880	£39,880
Connecting Ribbles, Habitat, Fish, Children and Angling	Fish Easement. Woodland Fencing. Tree Planting.	Ribble Rivers Trust, Local Schools and Landowners.	£4,923	£16,000	£20,923
Wyre Fisheries Development Project	River Calder fish passage Woodplumpton Brook habitat improvement	Wyre Rivers Trust	£4,923	£18,136	£23,059

	Abbeystead Estate instream habitat restoration, tree planting and fencing				
Rathmel Beck habitat improvements	Livestock exclusion, create riparian shade, improve habitat complexity and create a wetland/fish refuge	Ribble Rivers Trust and Landowner	£15,133	£5,200	£20,333
Rough Syke Habitat Scheme	habitat creation scheme that would exclude livestock from 600m of stream	Ribble Rivers Trust	£19,029	£9,240	£28,269
Upper Wyre	2km of riparian fencing	Wyre Rivers Trust.	£10,000	£3,500	£13,500
Restoration of Upper Lune Tributaries	800m of fencing and tree planting of 500 trees	Lune Rivers Trust, Tebay Anglers and Wild Trout trust	£10,000	£10,000	£20,000
Calderstones Habitat Scheme	exclude livestock from entering the river	Ribble Rivers Trust and Local Community	£2,288	£1,263	£3,551
Coniston EDNA	to investigate and improve fish screening between Tarn Hows and Tom Gill to exclude coarse fish, especially roach, from entering Coniston Water	South Cumbria Rivers Trust	£1,000	£1,000	£2,000
River Crake Large Woody Debris	to improve spawning habitat through the diversification of habitat along a stretch of the River Crake upstream of Penny Bridge	South Cumbria Rivers Trust, Coniston and Crake Anglers and Volunteers.	£1,000	£1,000	£2,000
Winster and Gilpin Habitat Improvement	improve fish habitat in the Lyth valley and Winster and Gilpin catchments	South Cumbria Rivers Trust	£5,000	£5,000	£10,000
Doll Moss Beck Deculverting	improve the overall habitat value (including spawning habitat) through the uncovering of a beck which currently runs for	South Cumbria Rivers Trust	£2,000	£2,000	£4,000

	approximately 150 m in a culvert				
Coniston Water Thurston Deculverting	improve both in-stream and riparian habitat along a 180m stretch of newly-created beck between Thurston hydro-electric scheme and Coniston Water	South Cumbria Rivers Trust	£3,000	£3,000	£6,000
Coniston Water Waterpark Deculverting	to improve the overall habitat value (including spawning habitat) through the uncovering of a beck which currently runs for approximately 100 m in a culvert underneath the grounds of Water Park Lakeland Adventure Centre	South Cumbria Rivers trust, Coniston and Crake Anglers.	£3,000	£3,000	£6,000
River Crake Bouthery Bridge Engineering Works	improve spawning habitat through the removal of large slate shards along a short stretch of the River Crake upstream of Bouthrey Bridge	South Cumbria Rivers Trust and Coniston Crake Anglers	£2,000	£2,000	£4,000
Yew Tree Tarn Fish Easement	Improve fish movement and passage around the Yew Tree dam in the Upper Crake catchment	South Cumbria Rivers Trust	£1,500	£1,500	£3,000
Bowston Weir Removal Feasibility Study and Design	Redundant Weir removal feasibility study. Help future fish passage.	South Cumbria Rivers Trust	£10,000	£5,000	£15,000
Samlesbury Weir Removal Feasibility Study and Design	Assessment of the potential to remove a redundant flow gauging weir on the Lower Ribble with design options for works.	Ribble Rivers Trust	£25,000	£8,333	£33,333
<b>Total</b>			<b>£79,000</b>	<b>£186,900</b>	<b>£265,900</b>

# Monitoring

Monitoring of all fish species is vital to our assessment of the condition of the environment. Surveys of fish populations, including coarse fish, are used to assess the status of stocks and contribute to the overall assessment of ecological status of a water body. In CLA:

**197** Waterbodies  
**assessed** for  
fish 2016/17

**53%** of waterbodies  
assessed were at  
good status or above  
for fish

Water Framework Directive monitoring is a tri-annual report. The next update is now due in later in 2019.

You can look at our [Catchment Data Explorer](#) for more information.

Our fish count data is now available [online here](#)

For information on what we are doing across the rest of the country read our other [Area reports](#)

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