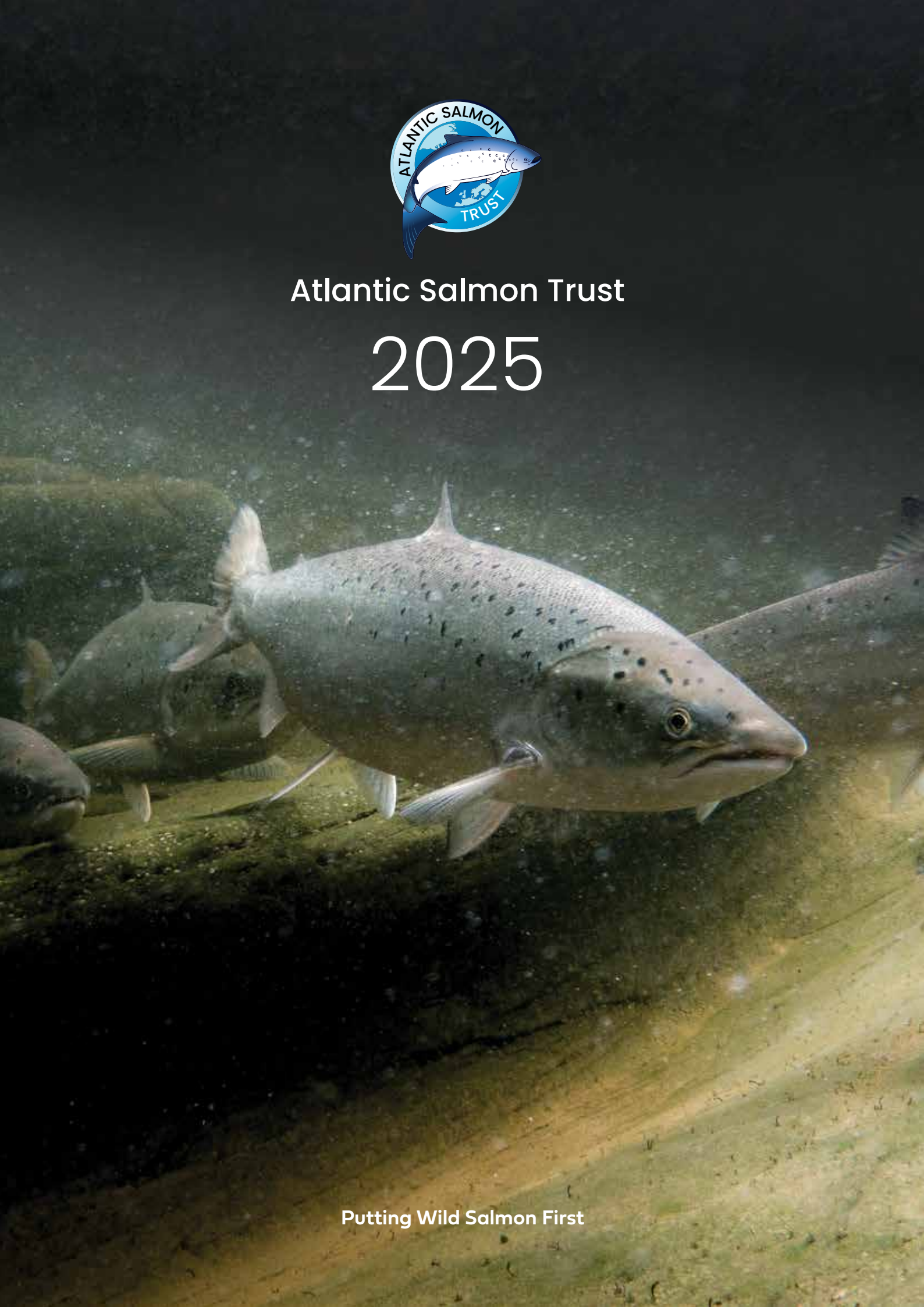
Atlantic Salmon Trust

2025



Putting Wild Salmon First

River Laxford from above

Driven by urgency. Dedicated to wild Atlantic salmon.
Determined to scale up our impact.

Contents

Putting Wild Salmon First

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Registered Charity No. England 252742 & Scotland SCO 37902

Cover Image: Richard Davies

Foreword

by Mark Bilsby

Wild Atlantic salmon are on a perilous path

Wild Atlantic salmon in Great Britain and beyond are in crisis. The prolonged drought conditions and succession of heatwaves we have all seen this year have ramped up all of the pressures impacting them. This is not the most optimistic way to open an annual review but, crucially, there is hope for wild Atlantic salmon. This is not misplaced optimism - this review will highlight the steps we are taking and the strong partnerships that we are dependent upon to help give wild salmon the future they deserve.

So what is the outlook for salmon around the UK in terms of debits and credits, and what is the overall balance?

On the debit side we have seen a sustained drop in marine survival over the last 60 years. Recent work by ourselves and the wider Missing Salmon Alliance team has linked this to a decline in marine zooplankton abundance along salmon migration routes. As a foundational part of the marine food web, zooplankton are vital to salmon and many other species. Alarmingly, forecasts now predict further reductions in zooplankton abundance along these migration corridors by the 2040s, driven by a rapidly changing climate. Compounded by increasing development of our coastal waters and the state of our rivers, it is no wonder that salmon are in difficulty.

It is against this backdrop that we need to deliver immediate, intensified action within our rivers and coastal areas. Both close to home, and around the world, there are many examples to show that targeted, large scale efforts across catchments can reverse the overall downward trend and that salmon populations can recover – but only if we act decisively and without delay.

These are the credits for salmon and there is a growing groundswell of public opinion that we need to improve the health of our rivers and coastal waters, supported by practical interventions to remove barriers, restore landscapes and improve water quality. The science on difficult areas, such as the impacts of sea lice, is becoming settled and needs to be combined with the societal will to better regulate polluters. These are all manageable impacts and we need to address them with conviction if we are to improve the credit side of the wild salmon's balance sheet.

To achieve this the Trust will continue to build the evidence needed to drive stronger policy and regulation for salmon recovery. At this year's Wild Salmon Connections conference in London, the Missing Salmon Alliance launched the Wild Salmon Declaration and a renewed set of policy demands. These call on policymakers to: prioritise legislation which puts wild salmon first; make polluters pay; ensure free access to cold, clean water; manage land for water; and improve survival at sea. Alongside our Alliance partners, we are pushing these goals forward.

Despite the challenges we face, the Atlantic Salmon Trust is making progress toward its own 5 in 5 Goals. The Core Rivers, Project Laxford and Project Deveron, while still early in their lifespans, have now solidified their place as national exemplars of catchment-scale restoration, combining extensive habitat improvement work with two of the most advanced monitoring systems in the country. From techniques employed on these two rivers, we are supporting a growing network of catchment restoration partnerships in our Watershed Connections work stream. These include Save the Spring on the River Dee, Linking the Lochs on the Isle of Lewis, and Project White Hart on the Test and Itchen. That project in particular, launched in October 2025, marks a major step forward for the Trust as we work to support and enable practical restoration across the British Isles.

The journey ahead will not be easy, and we can't do it alone, but with your support we can continue to set a ripple effect in motion – demonstrating examples of the action which must urgently be scaled up across the country to put wild Atlantic salmon on the pathway to recovery. I hope this year's report demonstrates the passion, drive and hard work from our team which is enabling us to meet this challenge.

Mark Bilsby, *CEO Atlantic Salmon Trust*

Our Impact in 2025

The Ripple Effect

Purpose. Partnership. Progress.

Working in partnership is one of our cornerstones, whether with the UK-wide Missing Salmon Alliance, international partner NGOs across the Atlantic and Pacific, or local groups helping to deliver research and restoration projects on the ground. Everything we do is rooted in mutual support and cooperation. This is how our impact is scaled up, our action is transformative, and our success is shared. Here are some highlights from 2025. View our full impact report at **atlanticsalmontrust.org**

Working in catchment restoration partnerships covering over **4,600km²**

3,600 salmon parr PIT tagged on Core Rivers

11km of river reconnected by dam removal

Delivered **scientific evidence** to governments and regulators

Flew **2,000km** of environmental drone surveys

Digitally 3D mapped **200km²** of river catchments to support restoration work

Recorded over **12,500 hours** of sonar fish counter footage

4 million people in 44 countries reached through International Wild Salmon Day

1,500 school children engaged and inspired about wild salmon conservation

Worked in partnership with **11 universities** across the UK and Ireland and published peer reviewed research papers collaboratively with **75 international scientists**

Mission & Vision

Our Mission: To restore wild Atlantic salmon and their environment.

Our Vision: By 2050 the decline in wild Atlantic salmon has been halted across its range and numbers are increasing in over 50% of the catchments it calls home.

5 goals for 5 years

1 **Define** why salmon are declining and continue to fill knowledge gaps.

2 **Identify** and prioritise the manageable pressures influencing that decline, and publish up-to-date reports on the efficacy of interventions, such as stocking.

3 **Design** and conduct a catchment audit and roll out a suite of restoration solutions on each of our Core Rivers, using salmon restoration as the driver to achieve wider biodiversity and climate goals.

4 **Demonstrate** that our strategy is working, through proven short-term successes on the Core Rivers and create a predictive model to demonstrate the potential long term restoration success.

5 **Create** catchment partnerships to share successful solutions, supporting others to implement them in their own watersheds.

Our progress so far and where we need to go

Goal 1:

Published peer reviewed science, from information gathered through acoustic smolt tracking projects and wider research, continues to advance our understanding of wild salmon behaviour and mortality in freshwater and at sea. This knowledge forms the background of our modelling work and identification of manageable pressures.

Goal 2:

Pressures have been identified and prioritised by our science team, through an evaluation of the impact of different stressors on wild salmon. This allows us to prioritise our research, restoration and advocacy work. Specifically, position papers on manageable pressures are being developed. The publication of these reports commenced this year.

Goal 3:

The catchment audit process has now been implemented on the Core Rivers programme. It is now being rolled out through our Watershed Connections catchment partnership network. It will continue to be refined and improved.

Goal 4:

The development of our salmon population data modelling tool is nearing completion after several years of work under the Likely Suspects Framework programme. It is being trialled as a practical restoration support tool on Project Laxford. The team is now working to produce a series of case studies using the tool on other catchments.

Goal 5:

In addition to the Laxford and Deveron Core Rivers, formal catchment restoration partnerships are now in place on the Aberdeenshire Dee, Laxay on the Isle of Lewis, and Test and Itchen in Hampshire. This network is set to grow further over the coming years. In total, these areas cover over 4,600km^2.

How We Work

Our wild salmon restoration stream – the route to long-term recovery

MEETING OUR 5 in 5 GOALS

To secure a long-term future for wild Atlantic salmon in biodiverse and climate resilient river catchments, our workflow is focused on demonstrating successful evidence-led restoration at a catchment scale and supporting others to take action.

I Science, Evidence & Modelling

Our Foundation

Science and evidence are our foundation. This foundation is built on peer-reviewed and published outputs from research projects which fill knowledge gaps and advance our understanding of the causes of wild salmon decline.

Likely Suspects Framework

A new digital salmon population modelling tool is in development through the Likely Suspects Framework, delivered on behalf of the Missing Salmon Alliance. This uses evidence on what is driving wild salmon mortality at each lifestage, and can be calibrated to an individual river catchment. This information is then transformed into a practical, digital management support tool to guide restoration efforts.

2 Core Rivers

Science into Action

Core Rivers put science into action on the ground. They are currently Project Laxford - delivered in partnership with Grosvenor's Reay Forest Estate in Northwest Sutherland, and Project Deveron - delivered in partnership with the Deveron, Bogie & Isla Rivers Charitable Trust in Aberdeenshire. Core Rivers are long-term monitored river systems which employ two strategic elements:

- They undertake catchment-scale ecological restoration work focused on giving wild salmon free access to cold, clean water in a biodiverse and resilient environment.
- They operate cutting-edge salmon population and wider environmental monitoring systems to measure and demonstrate the success of their restoration work over time.

We will look to establish a Core River within different salmon regions going forward.

3 Watershed Connections

Delivery through Partnership

Our Watershed Connections programme translates our evidence base and Core Rivers work into a wider network of catchment restoration partnerships. This element comprises project design, delivery, governance, management, fundraising and communications support. Currently these partnerships cover over 4,600km^2 across the UK.

Facing the Future

How to restore wild salmon populations in a rapidly changing world

The world is changing. Rising temperatures and altered weather patterns are impacting wild Atlantic salmon across their entire lifecycle, in freshwater and at sea.

In 2025 the UK experienced severe drought conditions, with much of England suffering its driest spring for over a century. Scotland too faced significant water scarcity pressures with eastern and southern areas recording the driest start-to-year since 1964. In the spring, the River Spey recorded its lowest May flow since records began in 1952 and, in recent years, water temperatures in Scottish salmon rivers have exceeded 27°C – the temperature of a swimming pool.

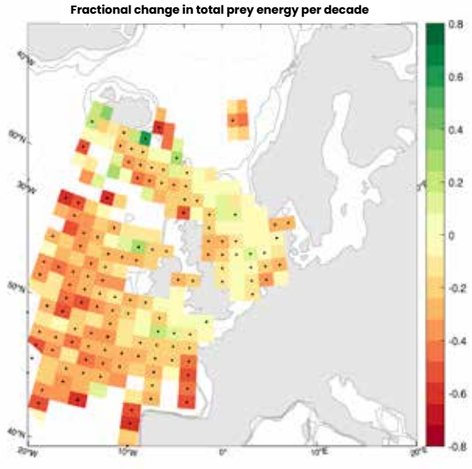
Out at sea, between January and June this year, the North Atlantic had its third-warmest first semester on record. In May 2025, sea surface temperature anomalies off western Ireland and near the southwest UK were particularly striking, peaking at +3 to +4°C above normal, classed as Category 2-3 marine heatwaves. To a lesser degree these marine heatwaves were repeated around the British Isles.

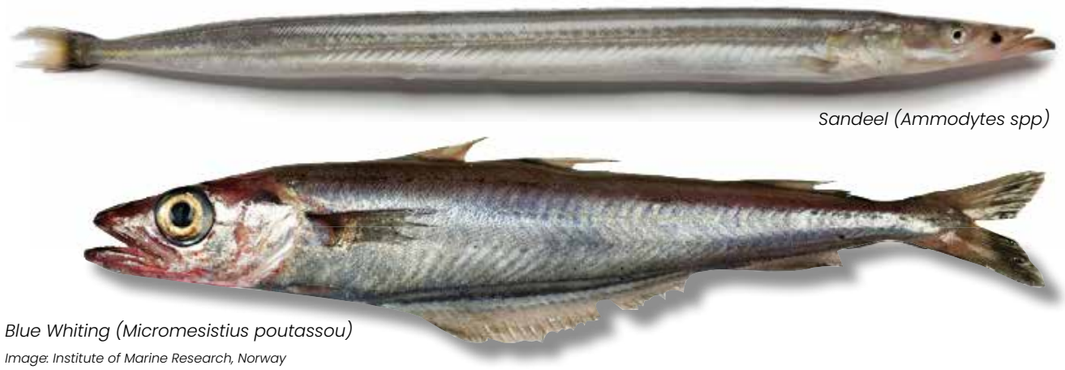
Wild Atlantic salmon are in a race against time if they are to adapt, survive and thrive once again. Our understanding of the big environmental picture, and its impact on the species, must be central to the development of restoration strategies aimed first at halting the decline, and then enabling the path to long-term recovery. Wild salmon do not have the luxury of time for futile gestures.

Modelling: understanding why wild salmon are declining

The Likely Suspects Framework, delivered by the Atlantic Salmon Trust on behalf of the Missing Salmon Alliance, is an ongoing modelling project working to understand how best to guide the restoration of wild salmon populations in this rapidly changing world.

For years the reduction in marine survival of wild Atlantic salmon has been identified as the main driver of the species' decline. Independent researchers working collaboratively with the Atlantic Salmon Trust and wider Missing Salmon Alliance, are producing groundbreaking





Sandeel (Ammodytes spp)

Blue Whiting (Micromesistius poutassou)

Image: Institute of Marine Research, Norway

analyses of what could be a key driver – a major decline of zooplankton around the UK and Ireland. Zooplankton are the foundation of the marine food web, and therefore critical to the abundance of prey species on which wild salmon rely, such as larval sandeel and blue whiting. A recent study led by Dr Emma Tyldesley which mapped the decline in zooplankton across Western Europe, found that their food value for migrating salmon has significantly and dramatically declined over much of the Northeast Atlantic, and specifically within key post-smolt migration routes. Work to understand the reasons behind this decline and the effect on wild salmon is ongoing, however rising sea surface temperatures, changing currents and shifts in seasonal timing are all considered to be affecting zooplankton abundance and location.

This global climate and marine zooplankton information plays a critical role in forming our data model's general backdrop – what is driving mortality at sea. On top of this, the quantifiable impacts of known pressures in freshwater and the coastal zone are being woven in. When using local information the result means the model is able to produce a visualisation of the future trajectory of a salmon population. With the current environmental conditions, these trajectories are not good for the future of wild salmon and clearly demonstrate that the 'do nothing' approach is not a viable option for them.

Managing the manageable – why healthy rivers and coasts are essential

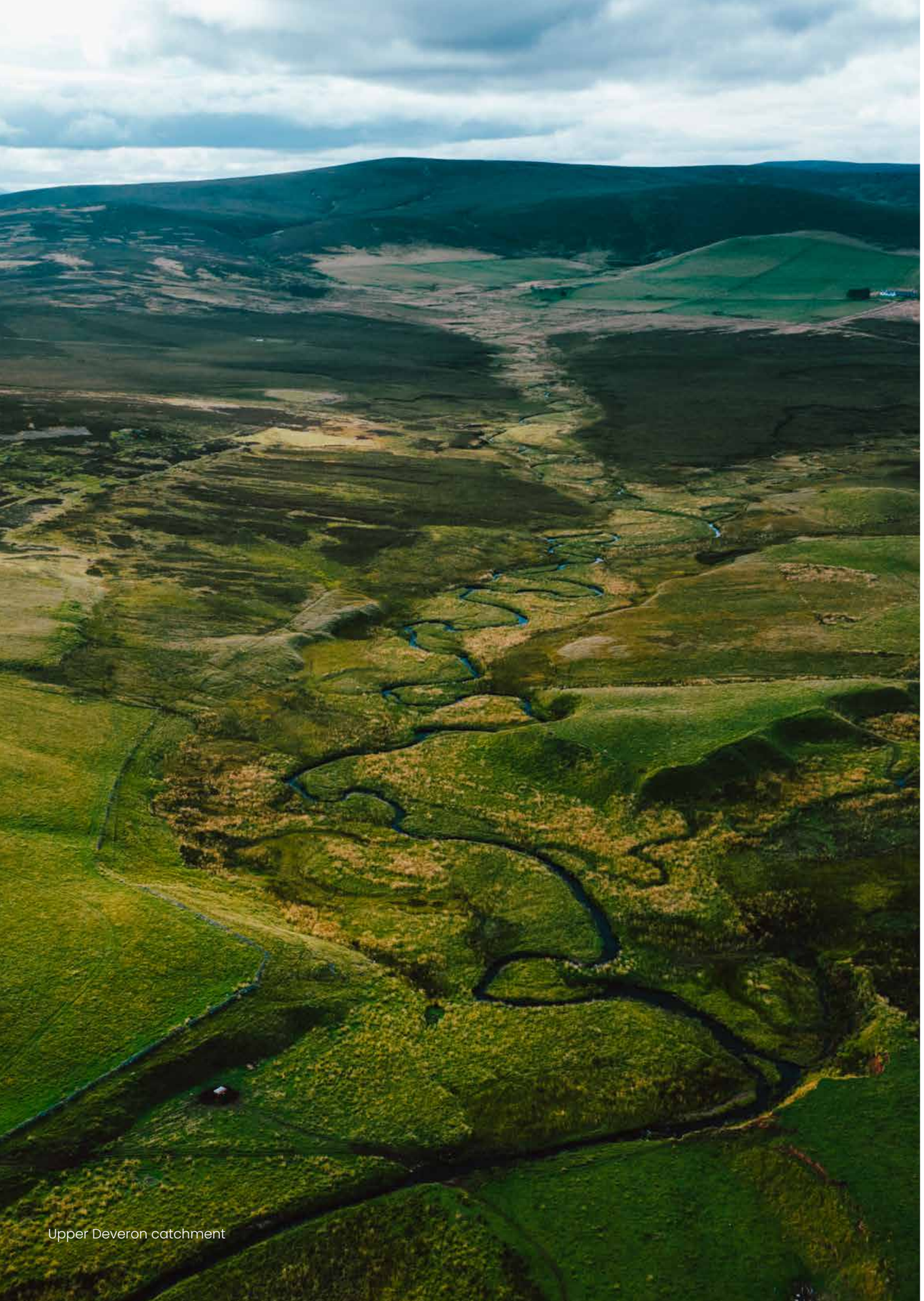
Our modelling work is showing us that targeted interventions, within the more easily manageable freshwater and coastal zones, could bend those trajectories upwards and put wild salmon on the path to recovery – but only if we act with urgency, conviction, and at scale in order to offset the effect of low marine survival.

It is essential that river catchments are sending as many fit, well-fed and healthy wild smolts out to sea as possible, and that these fish can safely transit through coastal waters. This modelling is now being trialled on our Core Rivers and Watershed Connections partnerships – catchment-scale ecological restoration aimed at increasing access to cold, clean water in biodiverse, resilient landscapes. It also informs our advocacy work aimed at reducing human impacts on wild salmon around our rivers, coasts and at sea.

We are currently exploring whether a 'bioregions' approach can help to accelerate and align these efforts further across multiple river catchments within regions which share similarities in terms of their salmon populations and other natural characteristics. By shaping interventions to these regional conditions we can better focus our efforts to restore wild salmon populations at scale.

Bringing a wide range of national salmon management experience and scientific rigour into the fight to save wild Atlantic salmon is not only necessary but vital if we are to influence the factors threatening their future. We urge everyone with a desire to save this iconic species to support the Missing Salmon Alliance and the Likely Suspects Framework so that this important work can be carried forward and mobilised to reflect the urgency of the task ahead.

Simon Toms
Environment Agency, England, Likely Suspects Framework steering group member.



Upper Deveron catchment

From the Ground Up

Core Rivers lead the way for catchment-scale restoration

Project Laxford and Project Deveron are designed to use a detailed catchment audit process to inform restoration plans - a full ecosystem health check from source to sea, leading to action on the ground.

Now recognised nationally and internationally for the important role they are playing in wild Atlantic salmon conservation, their combined strategy of ecological restoration and highly advanced monitoring is forging a path for others to benefit from, with the potential to link in with a network of 'index' rivers across the North Atlantic. Project Laxford is a partnership with Grosvenor's Reay Forest Estate in Northwest Sutherland, and Project Deveron is a partnership with the Deveron, Bogie & Isla Rivers Charitable Trust in Aberdeenshire. Both are delivered with Atlantic Salmon Trust project leaders embedded in local catchment teams. Our ambition is to establish future Core Rivers in different regions, ensuring that each has a highly monitored catchment through which region-specific restoration strategies can be developed, supported by evidence, and shared.

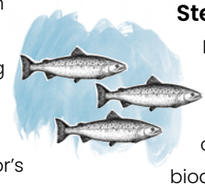
The Core Rivers Process

Step 1: Establish a Baseline

Conduct a full catchment audit by gathering existing information about the river system, its wild salmon population and wider biodiversity. Generate a plan which defines the issues preventing wild salmon recovery and the potential for restoration using using our salmon population modelling tool.

Step 2: Ecosystem Restoration Plan

Design and implement a catchment-wide ecological restoration plan to tackle issues identified in the catchment audit, working and engaging with local community stakeholders and land managers. This work looks to give wild salmon free access to cold, clean water in a biodiverse and resilient watershed extending from source to sea.



Step 3: Monitoring Plan

Ensure that a range of monitoring methods are in place in order to measure the success of restoration work over time on the wild salmon population and wider biodiversity. Techniques include:

- Passive Integrated Transponder (PIT) tagging of juvenile salmon 'parr' to monitor fish behaviour, movement and marine survival rates.
- Smolt enumeration to calculate the number and health of juvenile salmon 'smolts' exiting freshwater and beginning their ocean migration.
- Sonar imaging cameras to accurately calculate numbers of adult salmon returning to spawn.
- Invertebrate sampling.
- Environmental DNA (eDNA) analysis to map species diversity.
- Water temperature monitoring.
- Advanced ecological drone mapping to monitor changes to the landscape.

Step 4: Demonstrate and Share Success

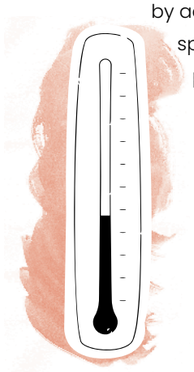
Identify successful restoration solutions and demonstrate their impact on wild salmon populations. Share this knowledge outward to support wider wild salmon recovery efforts.

Dappled shade from riverside woodland is key to mitigating against rising temperatures.

The Temperature Danger Zone

Water temperature monitoring demonstrates urgent need for riverside woodland

Juvenile salmon exhibit growth at temperatures above 6ºC with optimum growth at around 16ºC. If rivers sit at around this temperature in the spring and summer months, juveniles will be well fed, fit and healthy in preparation for their future migration to sea. Above 16ºC, growth rates slow and cease altogether once the water temperature enters the thermal stress zone at around 18-20ºC. Temperatures exceeding 16ºC are also associated with reduced migration behaviour for both juvenile 'smolts' and returning adult salmon, which can cause delays and mortality in both estuaries and rivers, with very little migration at all above about 20-23ºC. The temperature experienced by adult female salmon in the months before spawning can also affect egg quality. Eggs produced by females exposed to water temperatures above 20ºC have been found to be smaller and less viable than those produced by fish which remain at 18ºC or below. Temperatures in the 27-28ºC zone start to become lethal for juvenile salmon parr.



Since 2022, Project Laxford has operated 14 water temperature loggers across key areas of the catchment, including the main stem of the river and important spawning streams. These units record water temperature readings every 15 minutes. During that period, water temperatures of over 26ºC have been recorded in known spawning streams and in the main river itself – well into the danger zone for wild Atlantic salmon.

This alarming insight affirms the urgency of working to restore riverside woodland to provide dappled shade and cold water in the future.

Project Deveron will install its own network of 30 temperature loggers in areas of the main river and tributaries. The information these units gather will help to support targeted restoration work aimed at reducing temperatures where necessary.

Reawakening Resilient Ecosystems

Guided by nature, grounded in science

In response to findings from their catchment audits, including available temperature information, Project Laxford and Project Deveron have made considerable strides forward in 2025 with the rollout of on-the-ground habitat resilience work. This work is intended to provide wild salmon with the environmental conditions they require to survive, adapt and thrive in a changing world.

A Woodland Reborn

Thanks to ongoing efforts at Grosvenor's Reay Forest Estate, riverside woodland is now reemerging from the ground – a key action which will provide dappled shade to reduce water temperatures in the future. To enable this restoration, a combined strategy is underway. Firstly, the ongoing, managed reduction in deer numbers is alleviating grazing pressure and highly encouraging signs of natural woodland regeneration can be seen at various locations along the river as a result. To complement this, fenced enclosures are being planned across the catchment, with their total area set to cover 22km^2.

A combination of tree planting and natural regeneration will allow woodland to reestablish in these areas. Recent studies have demonstrated that wooded and un-wooded sections of the same river can experience water temperature differences of up to 6ºC. This can mean the difference between whether temperatures are within the safe zone for salmon, or exceed the level which induces thermal stress.

Although in the early stages of its riverside woodland regeneration, encouraging signs on the Laxford are demonstrating what can be achieved when efforts are focused towards this important goal.

Gold Accreditation

In July 2025 Grosvenor's Reay Forest Estate made history by receiving the highest ever score in Europe from Wildlife Estates for land management and conservation. Scoring an exceptional 91.75%, it is also the first UK estate to be awarded gold accreditation. We're extremely proud that the Project Laxford partnership contributed to this recognition, as well as Grosvenor's wider investment in nature recovery and climate resilience, including pioneering natural capital baselining and science-led deer management.

A River Reconnected

Project Deveron also succeeded in achieving one of its major early habitat restoration targets this year – the removal of an historic dam and full reconnection of an 11km tributary for the first time in over 150 years.

GROSVENOR

Project Laxford is delivered in partnership with Grosvenor's Reay Forest Estate.

Natural woodland regeneration on the banks of the River Laxford in response to a managed reduction in grazing pressure.

Spearheading: A New Era of Intelligent Monitoring

The cutting-edge environmental insight transforming wild salmon restoration on Core Rivers

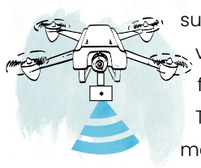
Establishing the link between a management or conservation intervention, and its direct impact on a wild Atlantic salmon population, has historically been a significant challenge for conservationists. Angler catch data, while useful for seeing long-term trends, can be unreliable and can fluctuate with factors including weather and fishing effort. Observational and anecdotal information, while valuable, doesn't carry the level of accuracy required to scale-up action with confidence across an entire river catchment, or multiple river catchment bioregions. That's why we and our Core Rivers partners set out to change that. Together we're pioneering the most advanced monitoring systems in the country, from macro-level aircraft surveys to the microscopic DNA level, coordinated with physical conservation interventions on the ground to firmly establish their effects and their impact.

The View from Above

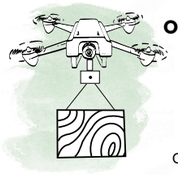
Insights from aerial mapping

The Laxford and Deveron catchments are great places to spot a golden eagle or osprey, but they're not the only ones who have been soaring above. In addition to last year's aerial habitat survey carried out on the Laxford by a light aircraft fitted with ultra-high resolution cameras and laser imaging (LiDAR) equipment, 2025 has seen us making full use of modern drone capabilities on both Core Rivers.

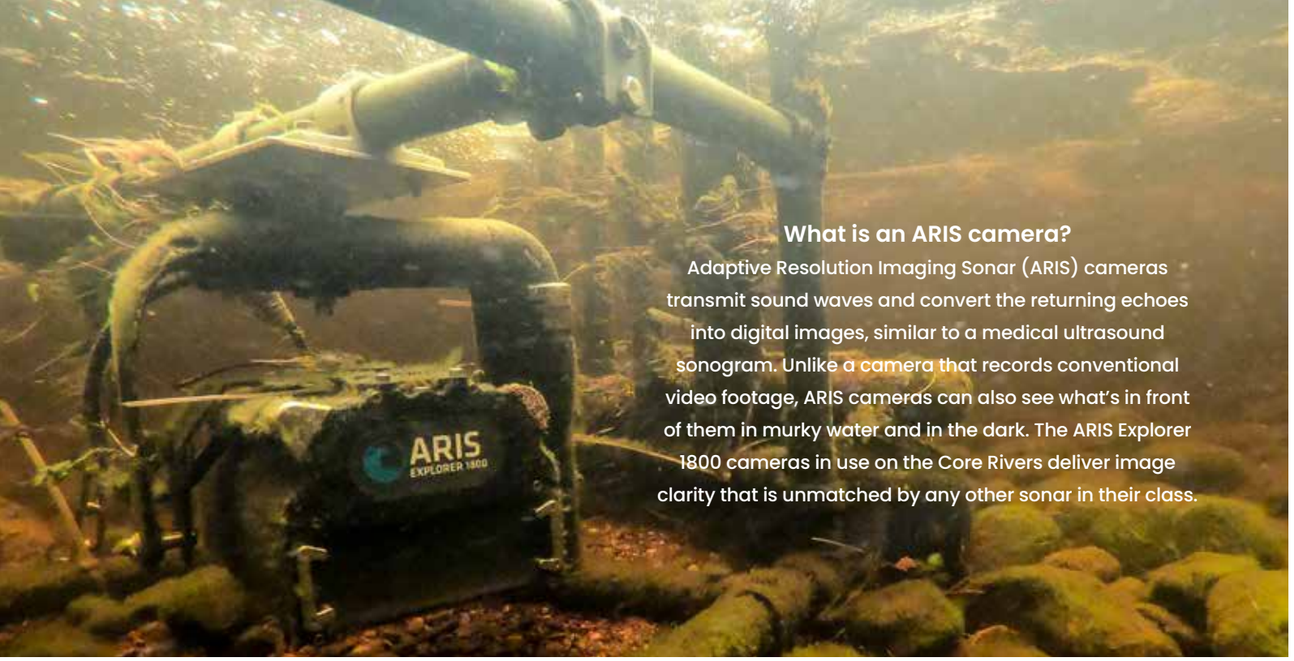
LiDAR uses laser pulses to measure distances with centimetre-level accuracy. It reveals the true ground surface under tree canopies and vegetation, showing us riverbanks, floodplains, and elevation changes. This technology helps guide river re-meandering, floodplain reconnection, and bank stabilisation by showing precise ground levels.



Thermal Imaging sees infrared radiation (heat) from surfaces and converts this into thermal images, showing temperature differences across the landscape and water bodies. This highlights temperature variations in watercourses, identifying cold water refuges, potential fish habitats, and sources of thermal pollution.



Orthomosaic Camera captures a series of high-resolution aerial images which are stitched into precise digital 2D maps and 3D models. This will provide a visual record before, during, and after restoration, helping us assess success.



What is an ARIS camera?

Adaptive Resolution Imaging Sonar (ARIS) cameras transmit sound waves and convert the returning echoes into digital images, similar to a medical ultrasound sonogram. Unlike a camera that records conventional video footage, ARIS cameras can also see what's in front of them in murky water and in the dark. The ARIS Explorer 1800 cameras in use on the Core Rivers deliver image clarity that is unmatched by any other sonar in their class.

Seeing in Sonar

The only two river systems in Scotland producing sonar imaging counts of returning adult salmon

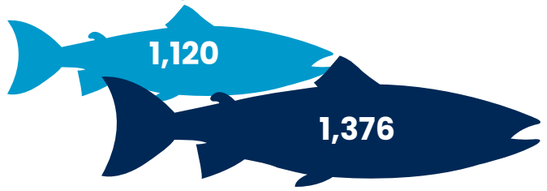
Both Core Rivers are currently operating highly advanced ARIS (Adaptive Resolution Imaging Sonar) cameras to accurately calculate the total number of adult salmon returning to spawn each year. These are the only two such systems currently operating in Scotland.

This technology marks a considerable advance in the accuracy of our collective understanding of returning salmon numbers, which historically have been determined through less accurate rod catch figures. The two sonar cameras on these rivers have been funded by the Scottish Government's Marine Directorate and are operated and maintained locally by our project teams. The data is then modelled by the Marine Directorate to produce an overall returning adult salmon count.

We now have two full yearly counts for both rivers, providing a key baseline against which to measure the impact of restoration work over time. For Project Laxford the count was calculated to be 1,120 returning adult spawners in 2023 and 1,376 in 2024, representing a 22.85% increase from one year to the next. For Project Deveron the count was calculated to be 5,705 returning adult spawners in 2023 and 8,796 in 2024, representing a 54% increase.

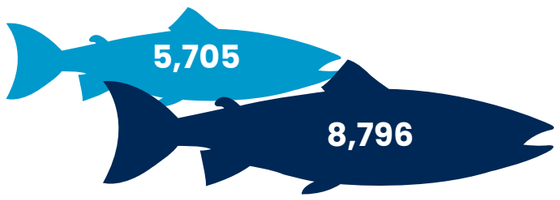
River Laxford

Returning Adult Salmon Count



River Deveron

Returning Adult Salmon Count



2023 *2024*

Of additional note is the rod catch rate on the Deveron over these two years. Figures show that 766 salmon were caught by anglers on the river in 2023, representing a 13-14% rod catch rate. The rod catch for 2024 was reported as 1,711, representing a rod catch rate of 19%. While the run size increased by 54%, angler catches increased by 123%. This insight reaffirms the importance of collecting accurate counts of returning adult salmon to gain a true picture of population changes from year to year.

The funding and operation of this important equipment is made possible through local and national public and private partnerships. We hope that over time this new level of year-to-year accuracy will enable us to make a direct link between restoration efforts and recovering wild salmon populations in the future.

Supporting Scotland's nationwide salmon population assessments

The Laxford and Deveron ARIS count data is being used to develop new methods to support the Scottish Government's annual assessments of the health of wild salmon populations across the country. Each year, these assessments grade salmon rivers either 'Good', 'Moderate' or 'Poor' in relation to their likelihood of meeting their 'Conservation Limit' – the minimum number of eggs which need to be deposited by spawning adult salmon to enable the population to sustain itself.

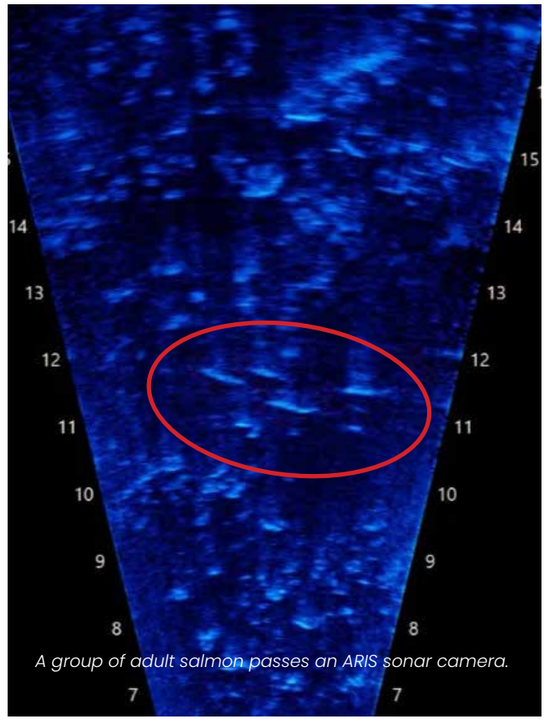
From Stream to Sea

Monitoring smolt numbers to assess river productivity

Project Laxford completed its second year of smolt counting in 2025 – trapping, counting and releasing smolts through 'mark recapture' techniques as they migrate downriver to the sea. For a second year, this has enabled us to quantify the river's total smolt output, or 'smolt escapement'. The 2025 count was calculated to be 36,202, down from 39,196 in 2024.

Laxford Smolt Escapement

As smolt escapement is directly linked to the number of adult salmon which return from the sea to spawn, we will continue to monitor this metric over time and see how it responds to restoration activity. Our aim is not only to ensure that the river is producing healthy numbers of smolts, but also that the smolts heading out to sea are fit and healthy themselves. Research demonstrates that larger, fitter smolts survive better at sea, achieved by providing an environment with free access to cold, clean water – the conditions required for optimum juvenile feeding and growth.



A group of adult salmon passes an ARIS sonar camera.

Connecting the Dots

PIT tagging: a window into the unseen

Both Core Rivers undertake Passive Integrated Transponder (PIT) tagging programmes where up to 2,000 juvenile salmon 'parr' are tagged on both river systems in the autumn each year, prior to them becoming 'smolts' and beginning their marine migration. This work enables us to see survival rates between the parr and smolt lifestage, and the smolt to returning adult lifestage. Understanding and monitoring these survival rates over time will inform lifestage-targeted restoration work which looks to increase survival and fitness.

How does PIT tagging work?

Passive Integrated Transponder (PIT) tags are small microchip tags (about the size of a grain of rice) which can be implanted into fish and don't rely on battery power to work. This means fish can be tracked over several years across their lifecycle from parr to returning adult whenever they come into range of PIT tag detection equipment.

Wild Salmon – the Keystone

Understanding the wider environmental picture

Core Rivers also carry out a wider suite of environmental sampling to assess the broader health of the ecosystem, including environmental DNA (eDNA) to map species presence and diversity, and invertebrate sampling. This information is channelled into restoration plans to support targeted action on the ground aimed at supporting the needs of wild Atlantic salmon as a keystone and indicator species for the health of the wider environment.

Working in partnership to deliver Project Deveron's annual PIT tagging programme.

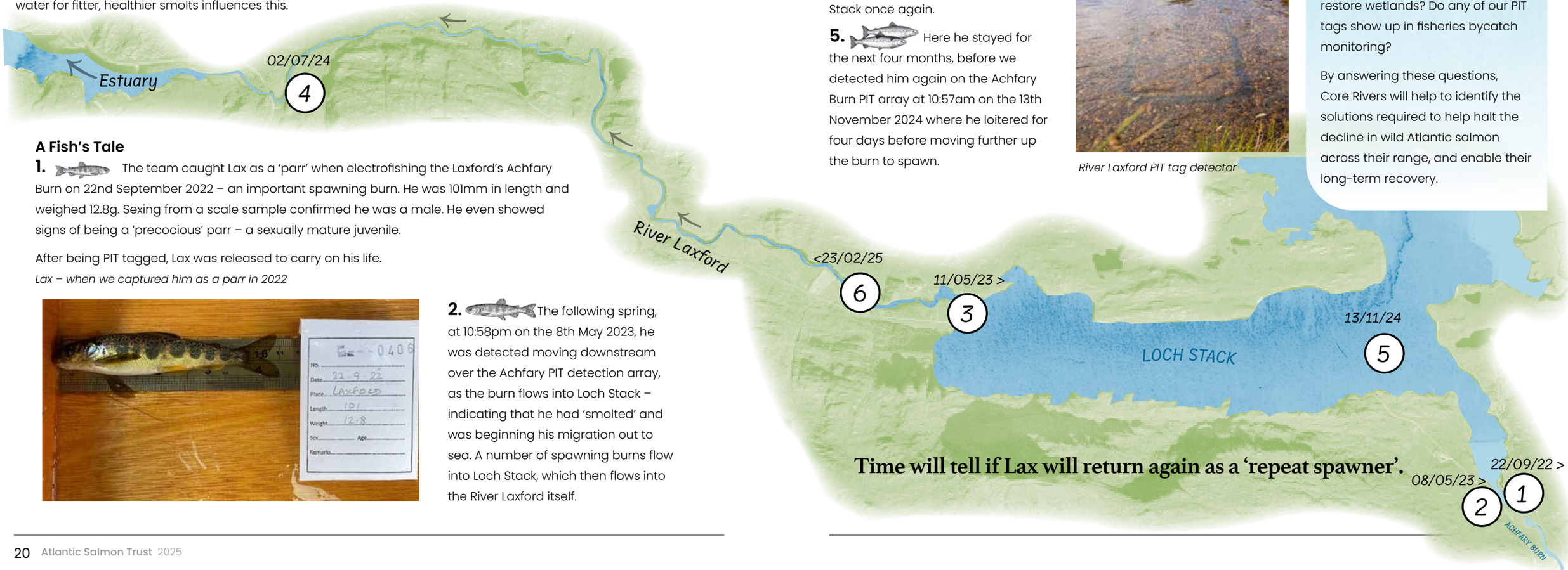
Lax: A Salmon Story

**From parr to smolt to spawning adult and kelt,
Project Laxford tracks salmon across the entire lifecycle**

The Core Rivers combined strategy of catchment-scale ecological restoration and advanced monitoring includes PIT tagging as one of its key activities. By implanting up to 2,000 juvenile salmon parr with microchip PIT tags in both the Laxford and Deveron each autumn, we can record their movements and behaviour whenever they pass over PIT detection 'arrays'. This allows us to see when they 'smolt' and go out to sea, and when (and if) they return as adults to spawn. PIT tagging in particular is key to measuring changes in marine survival rates over time, and how work to deliver free access to cold, clean water for fitter, healthier smolts influences this.

Loch Stack

Amongst the population-scale information being gathered, we are also gaining a fascinating insight into the lives of individual fish. One such fish is from Project Laxford, PIT tagged with ID number 3DD.003E1D8F0E on the 22nd September 2022. We've named him 'Lax'...



A Fish's Tale

1. The team caught Lax as a 'parr' when electrofishing the Laxford's Achfary Burn on 22nd September 2022 – an important spawning burn. He was 101mm in length and weighed 12.8g. Sexing from a scale sample confirmed he was a male. He even showed signs of being a 'precocious' parr – a sexually mature juvenile.

After being PIT tagged, Lax was released to carry on his life.

Lax – when we captured him as a parr in 2022

2. The following spring, at 10:58pm on the 8th May 2023, he was detected moving downstream over the Achfary PIT detection array, as the burn flows into Loch Stack – indicating that he had 'smolted' and was beginning his migration out to sea. A number of spawning burns flow into Loch Stack, which then flows into the River Laxford itself.

3. Three days later, Lax had transited through the loch and was detected on the next PIT array at the top of the Laxford's main stem. At the time we had some intermittent issues with the final PIT array at the mouth of the river (which have since been addressed), so Lax wasn't detected on the lowest array going out to sea.

That was until 1 year and 2 months later...

4. At 7:40pm on the 2nd July 2024, Lax pinged the lower array at the mouth of the river. He was back – this time as a 'grilse' – an adult salmon which has spent one winter at sea. He was then detected moving past the next array at the top of the Laxford at 8:27pm the following day, after which time he entered Loch Stack once again.

5. Here he stayed for the next four months, before we detected him again on the Achfary Burn PIT array at 10:57am on the 13th November 2024 where he loitered for four days before moving further up the burn to spawn.

6. We detected him again moving downstream on 4th December, presumably on his was back down after spawning, and now as a post-spawn 'kelt'. He once again took refuge in the loch for over two months before crossing the upper Laxford array at 10:30pm on 23rd February 2025, and passed over the lower array six hours later at 4:22am on the 24th February, making his way back to sea.

Time will tell if Lax will return again as a 'repeat spawner'.

River Laxford PIT tag detector

Time will tell if Lax will return again as a 'repeat spawner'.

The Power of Understanding

Lax is just one of thousands of PIT tagged salmon moving throughout the Laxford and Deveron catchments, travelling out to sea, and returning as adults to spawn.

Over time, we'll be able to build an understanding of how salmon populations respond to restoration efforts within these rivers and on the surrounding landscapes. How can we improve conditions in the spawning and nursery areas that salmon are using? How can we ensure that salmon have the free access to cold, clean water required for good feeding to become fit and healthy smolts? How does the population respond when we remove a barrier to migration, plant trees to shade spawning streams, or restore wetlands? Do any of our PIT tags show up in fisheries bycatch monitoring?

By answering these questions, Core Rivers will help to identify the solutions required to help halt the decline in wild Atlantic salmon across their range, and enable their long-term recovery.

Stream to Sea and Back Again

PIT tagging salmon parr on the Core Rivers programme is enabling us to track fish throughout their entire lifecycle.

Steward of Change

**In conversation with David Allison,
Head Stalker at Grosvenor's Reay Forest Estate**

Earlier this year our Head of Communications, Jonathon Muir, sat down with David Allison, Head Stalker at Grosvenor's Reay Forest Estate – location of Project Laxford. They talked salmon, woodland, deer and above all, managing change.

Jonathon: David, tell me about your upbringing. Were you always drawn to rivers, wildlife and land management? Where and when did your passion start?

David: I grew up on a croft in Lairg right in the middle of Sutherland, looking out over the top of Loch Shin. My young life was defined by the croft, but my father was a keen stalker as well. He knew some estate stalkers and used to fix their ATVs and Land Rovers. In exchange he'd get some days stalking. I got the opportunity then to spend time with these guys, listening to their stalking and fishing stories which captured my imagination from an early age. From our croft I could see Ben Stack in the distance and always had a yearning to be out West later in life.

Jonathon: You've worked on a number of rivers and estates in the Highlands, but you've been on the Laxford now for 18 years. That yearning for the West was clearly important. What for you is so special about the Laxford?

David: I think first and foremost the area is so beautiful. When I wake up I'm fortunate enough to see Arkle, Foinaven and Ben Stack from my kitchen window. You can't help but be in awe of the area and the beautiful river running through it. The river has everything from open, winding slow pools to gorges, rapids and waterfalls. It's constantly evolving and changing as you make your way down from top to bottom. It's also interspersed with pockets of native woodland and wonderful wildlife, from otters and pine martens to eagles and ospreys. There's a great team here too and I'd known some of them from a young age. I really wanted the opportunity to work with those people.

Jonathon: What about the ethos of the estate? Was that a draw too?

David: Very much so. My wife's grandfather worked on the estate here and the Grosvenor family have always looked after their staff exceptionally well, even extending that to former employees. It's a great 'people first' atmosphere and the estate believes in the long term investment in people, as well as nature.

Jonathon: What is Grosvenor's long-term vision for the estate and how is Project Laxford supporting this?

David: Long term sustainable employment is really front and centre of Grosvenor's aspirations on rural estates. But we've had to evolve and we're continuing to evolve, and part of that is Project Laxford. The catchment audit is helping to inform our forestry planning for example, by giving us a deeper understanding of the ecology of the area and the linkages between habitats and species.

Jonathon: That catchment audit is an important part of the Core Rivers process - a full ecological health check of the system from source to sea. What sort of things did it reveal, and what did you identify as the key factors that needed to be addressed?

David: Having trained as a mechanic as a boy I see it like a Haynes Manual - the audit is exactly that for us. It added to the evidence we had on the degradation of the habitat due to overgrazing, something that we'd already been working to address. Given the importance of cold, clean water for salmon, we knew that having more vegetation alongside the river was the right way to go, and having a few less deer would form part of that.

Grosvenor's Forestry and Conservation team uses advanced GIS mapping for a strategic view of native woodland restoration.

Jonathon: How much did water temperature information influence that decision making too?

David: We've long had an aspiration to have more native woodland, but what that temperature information has done is focus our attention to where we need to undertake that work as a priority. Project Laxford has given us that steer. Water temperature is crucial and dappled shade makes a difference. We've seen it here already with data from the temperature loggers. Upstream from the woodland which runs through the village here, the water temperature can be in the twenties. Downstream of the wood, and in the wood itself, the water is in the safe zone for salmon.

Jonathon: You've mentioned that part of the strategy is an ongoing, managed reduction in deer numbers. What initially led to you going down this route?

David: Our herbivore impact assessments demonstrated that impacts were too high, particularly in woodland areas, and if we were going to fence off those areas to allow for natural regeneration we had to reduce the deer numbers across the wider area. We also asked our ecologist to do a thorough study on our carrying capacity, mapping how much of the land was exposed rock compared to grazable land, as well as accounting for things like altitude and studying deer stomach contents.

Jonathon: So a very data driven approach then?

David: A completely science-led approach and we made sure to act on it. There's no point letting studies and data just sit there – you have to utilise it in your decision making.

Jonathon: What results are you seeing?

David: I go back to being a lad and listening to crofters after the Lairg lamb sale. They would talk about a crofter who'd got a really high price for their lamb and very often another would reply that it was because he didn't have too many sheep. He was striking a balance with what the ground could sustain and was producing better quality lamb as a result. The same applies to deer and we've seen that here. When you do a deer reduction, the habitat improves and so do they. We're now seeing fantastic natural woodland regeneration alongside areas of the river which is great to see. In time, the shade and stability that these trees will bring will benefit the salmon.

Jonathon: Given the changing landscape of deer management and woodland regeneration, what does being a Head Stalker mean to you in today's world? How do you think the role is adapting to meet today's challenges?

David: I think the responsibility today is to reframe what success looks like. In 2005, success might have looked like lodges full of guests from May to the end of October, letting all the fishing and as many stalking days as one could. However in 2025 the goalposts have moved and we have to start having more grown-up conversations about the wider habitat, and actually about what is best for the deer too. What 'good' looks like for me today as Head Stalker is to have habitat recovering and fewer, better quality deer. As stalkers we need to be willing to have those courageous conversations about change. The job is the same, but the target outcome is slightly different. The Common Ground Forum has been a brilliant avenue to have those conversations. I've learned a hell of a lot from them and urge others to engage as well, including the younger generation.

Jonathon: Let's talk about the next generation. What sort of skills do you think the young deer managers of today need in order support their livelihoods in the future?

David: I think the key thing is to understand how the whole ecosystem works rather than just deer. Also communication skills and openness to new approaches, because we need that two-way conversation between land managers, stalkers, ecologists and biologists for instance. We can all learn from and teach each other.

Jonathon: What has been the reaction of your clients to this new approach to deer management? How does having reduced deer numbers change the stalking experience?

David: For some people the idea of change is always going to be difficult. But the actual experience out on the hill is, I think, enhanced. You may have the occasional more challenging or blank day, and some days you'll see fewer deer, but ultimately the experience is a wilder, more rewarding one. Our clients value that and understand the importance of habitat regeneration.

Jonathon: It sounds like, in recent years, a key part of your role has been managing change – a change in practices as well as attitudes, while also maintaining traditional ways of life. How do you balance this? Do you have any key takeaways to help other estates that are going through a similar transition?

David: Slow down to speed up. That means engage your whole team at the earliest opportunity when you're pulling together a strategy and going through a transition. Take time to involve them throughout the process and ultimately you'll get to your destination quicker. People in rural areas are passionate about the places they live and work in and should have the opportunity to engage as stakeholders. The Scottish Rural Leadership Programme is well worth looking into as well.

Jonathon: The work you've done here certainly hasn't gone unnoticed in the sector. This year the estate received the highest ever score in Europe from Wildlife Estates for land management and conservation, scoring an exceptional 91.75%. It is also the first UK estate to be awarded gold accreditation. What does this say about the approach you're taking?

David: The accreditation is a great encouragement to us. It's both a recognition of strategic vision and leadership, as well as the team aspect of what we do here locally. It's also made possible by working in partnership, whether that's with the Atlantic Salmon Trust, West Sutherland Fisheries Trust, Marine Directorate, NatureScot, SEPA, Game & Wildlife Conservation Trust, various academic institutions and the wider Grosvenor Natural Capital team. It's data-led decision making here and these partners feed into that.

Jonathon: It signals a powerful message - that it is possible for sporting estates, traditions and ecosystem recovery to share the same landscape and operate in step with one another. At times I think it feels like the wider perception out there is still one of traditional land management vs rewilding. You're clearly demonstrating that there is a way forward. What's your take on that argument?

David: We're pursuing an elegant compromise. The ecosystem is about much more than just the flora and fauna, but its social capital too. Grazing species and people have a place on the landscape, both ecologically and in terms of sustainable long-term employment, but we need to have the courage to think differently and restore the balance.

Jonathon: Let's fast forward to the future. What do you hope the River Laxford and Reay Forest Estate look like in the years to come?

David: My hope is that in 50 years' time the estate will continue to employ as many people, if not more, in a recovering, thriving, biodiverse ecosystem of flora and fauna. If we can do that there are no losers. I hope we see greater connectivity of woodland, with a diverse mix of tree species and age classes, particularly along that riverside corridor for the benefits it'll bring for salmon.

Jonathon: Although still early in its lifespan, Project Laxford is already revealing some fascinating insights about salmon behaviour and migration patterns through its PIT tagging programme, as well as wider environmental monitoring. Is there anything in particular which has been a real eye-opener?

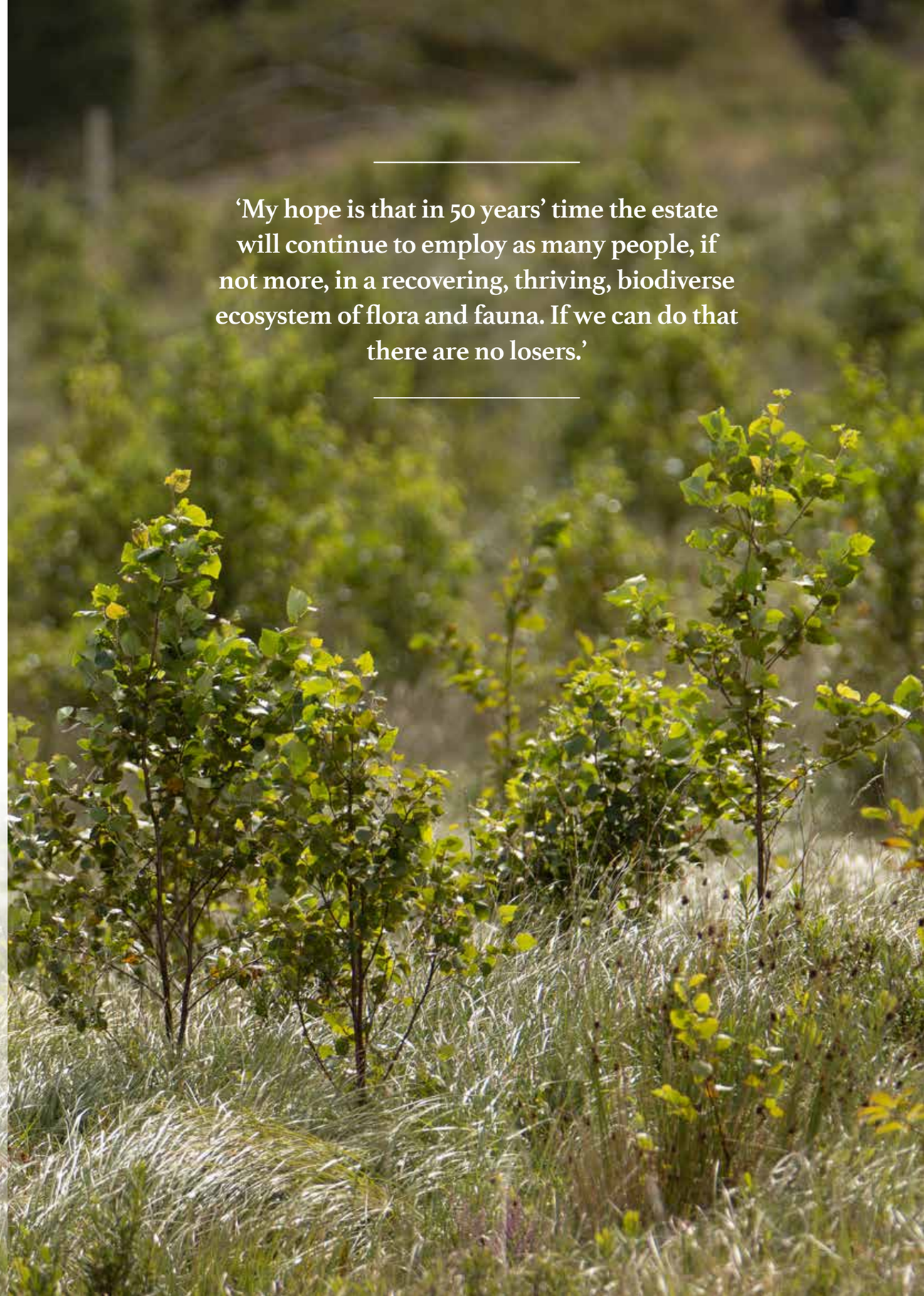
David: For me it was seeing just how few adult salmon we actually had returning to the river, thanks to the ARIS sonar camera. That was quite frightening. To have just 1,200 returning salmon in a 116km^2 catchment focuses you on the population's vulnerability and the need to restore them. The PIT tagging information has also been fascinating, particularly about how juvenile salmon are migrating through our lochs. This knowledge could be critical in working to support them.

Jonathon: We've discussed the long-term vision for the future of the catchment, but what about the next immediate actions. What do you have planned for 2026?

David: Early next year we'll be further progressing our woodland restoration plans with a large 6km^2 fenced enclosure going in, complementing the enclosures we've already constructed around known salmon spawning streams and the main river itself. This will be a combination of planting and allowing for natural regeneration. We'll also be monitoring the impact of the large woody structures which we installed this summer, to properly understand their effectiveness as a restoration tool. We'll then continue to work with the Atlantic Salmon Trust through Project Laxford to identify further targeted restoration work, including the potential to re-meander a formerly straightened river section which we think could increase the available spawning and nursery habitat in the lower river by 30%.

Jonathon: Sounds like a busy year ahead for all of us! Thanks very much David, we look forward to continuing to report on Project Laxford's progress over the coming years.

'My hope is that in 50 years' time the estate will continue to employ as many people, if not more, in a recovering, thriving, biodiverse ecosystem of flora and fauna. If we can do that there are no losers.'



A Watershed Moment

Project Deveron dam removal fully reconnects 11km tributary for the first time in 150 years.

2025 saw a significant moment for Project Deveron, a Core River partnership with The Deveron, Bogie & Isla Rivers Charitable Trust, which succeeded in achieving one of its major early habitat restoration goals in the River Deveron catchment.

With support from Chivas Brothers' The River Within programme and the European Open Rivers Programme, the formerly overgrown and decrepit Mill of Eden weir on the King Edward tributary has been removed, providing unhindered access for wild Atlantic salmon, trout, eels and other wildlife to over 11km of habitat for the first time in 150 years.

Following detailed environmental surveys, planning, licensing, and extensive community engagement with local landowners and residents, work on the weir removal and riverbank reprofiling got underway in April and completed in July. Water is once again flowing freely through the previously silted-up and almost completely blocked channel which had been hindering both upstream and downstream salmon migration, as well as depriving the river of spawning gravels in which salmon and trout need to lay their eggs. Survey work also highlighted this area as a significant predation pinch point for downstream-migrating juvenile fish. In addition to the removal of the structure itself, the newly restored river channel and its riverbanks were re-naturalised with boulders and locally-sourced naturally wind-blown trees. Further downstream of the former weir site, a small number of natural woody structures in the form of wind-blown trees were also introduced to the river channel to help create a more diverse and resilient channel to benefit a range of species. Trees were also planted to shade and help cool the water, to encourage insect life, and to provide climate and weather resilience for the years to come.

The first of these images shows the site silted up and stagnant, just above the weir which was severely overgrown after decades of sediment build-up and vegetation growth.

The second image was taken after this area was cleared and shortly after the moment the weir was breached and water began to flow freely again for the first time in 150 years.

The third image (opposite) was taken after work had completed following channel restoration and riverbank reprofiling. Boulders and wind-blown trees were used to strengthen the banks, and biodegradable coconut fibre matting was laid to stabilise the soil. The final aerial image (overleaf) was taken in October 2025 showing how vegetation is recolonising the site.

Over 23,000 barriers in British rivers

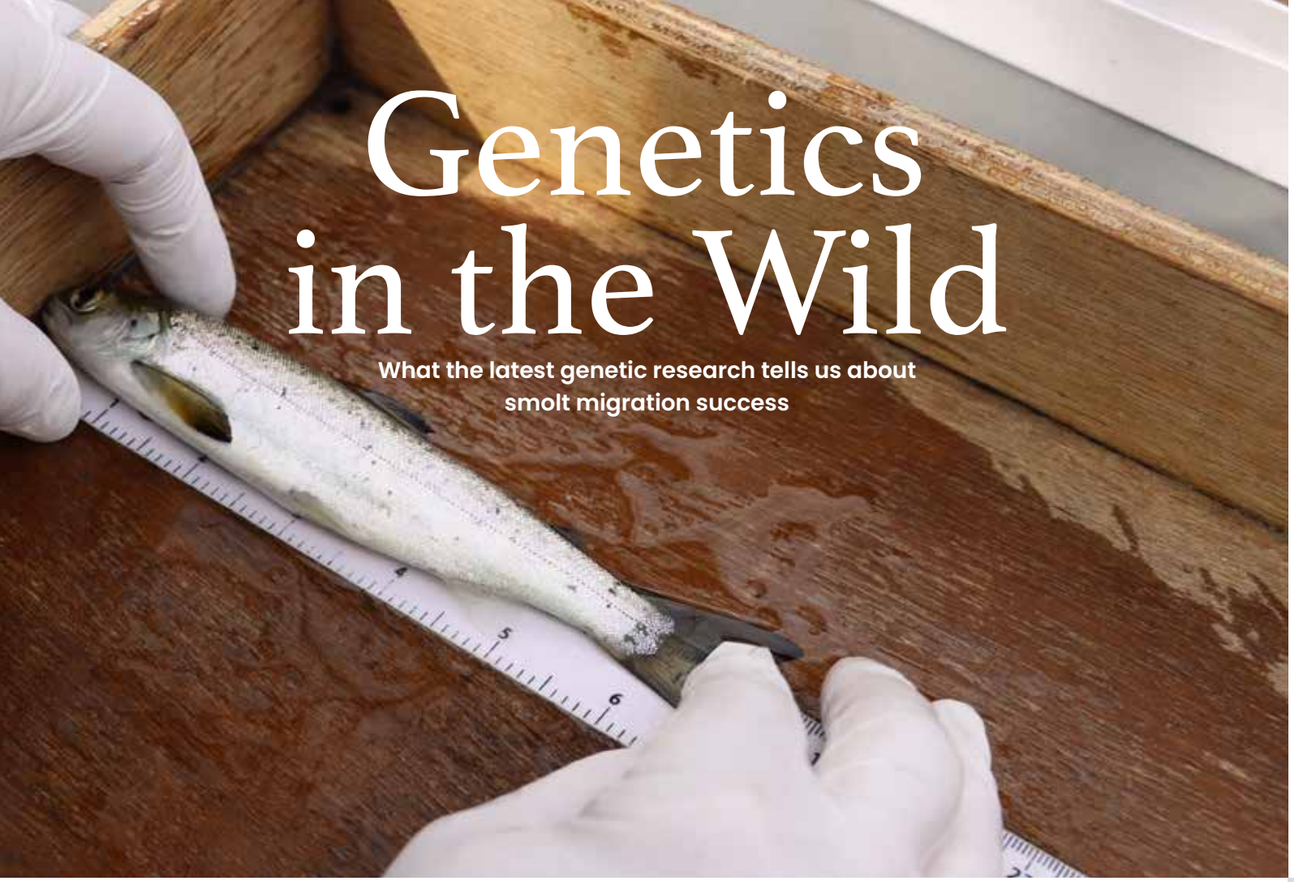
In England, 674 rivers do not achieve good ecological status due to barriers and impoundments. In Scotland over 4,000km of river habitat is cut off from fish migration due to manmade barriers. Project Deveron's work demonstrates that addressing barriers is achievable. Work such as this must now be urgently scaled up across the country.

We're extremely proud of this achievement so early in the lifespan of this partnership project. It's been a real team effort to make this important work possible. We hope to see this area being home to an increasing number of juvenile salmon for generations to come. A huge thank you to Chivas Brothers and The European Open Rivers Programme for their support in making this possible.

Richie Miller, Director - Deveron, Bogie & Isla Rivers Charitable Trust

People, Partnership and Progress

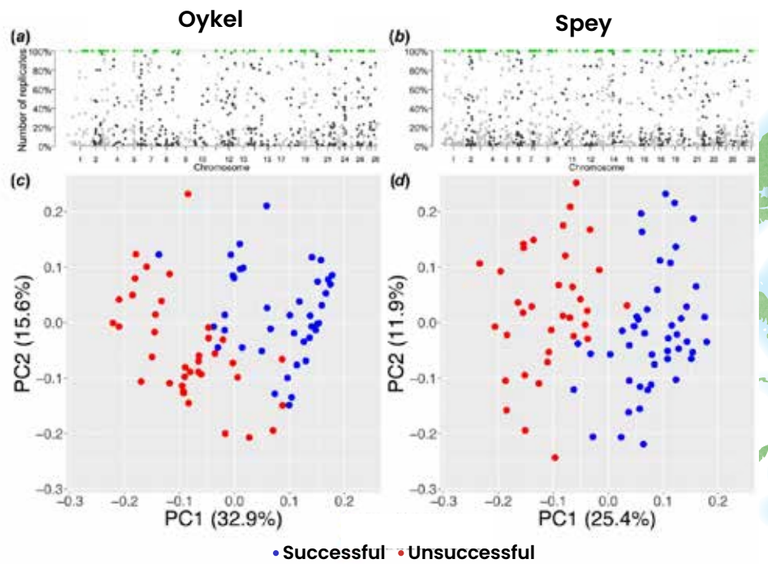
The reopening of the King Edward tributary was possible only through the combined efforts of individuals, organisations and businesses working together in partnership. The Project Deveron partners would like to extend our sincere thanks to Chivas Brothers' The River Within programme and the European Open Rivers Programme for funding this important work.



Genetics in the Wild

What the latest genetic research tells us about smolt migration success

Moccetti et al. 2024 (https://doi.org/10.1002/ece3.70682)



Deploying an acoustic receiver in the River Oykel during the Moray Firth Tracking Project

New research links wild salmon genetics to smolt migration success in the rivers Spey and Oykel

A new collaborative research paper using information from the Moray Firth Tracking Project has identified a link between wild salmon genetics and smolt migration success – the ability for juvenile wild salmon smolts to successfully migrate out from their home rivers and into the marine environment to grow to adulthood. The paper comprised a combined partnership effort by researchers from the University of Hull, Atlantic Salmon Trust and University of Glasgow.

Studying the movements of smolts tagged from two Scottish rivers in the project in 2019 – the Spey and the Oykel, researchers identified distinct single nucleotide polymorphism (SNP) sets which significantly differentiated between wild salmon smolts making successful migrations to sea and those that failed. Interestingly, the set of genes associated with a successful migration differed between the two rivers. Further work will now investigate what role these genes have, and whether the set of genes differs between years.

Wild Genetics Matter

In simple terms, this study shows us that wild genetics matter. This work demonstrates the vital importance of preserving genetic diversity within wild salmon populations, to enable wild salmon to adapt to changing environmental conditions which are known to influence migration timing and behaviour. These findings support approaches which seek to preserve a salmon population's 'genetics portfolio'– the range of genotypes present in a river catchment or sub-catchment.

The paper highlights the importance of preserving genetic diversity to ensure evolutionary resilience at the population level and has practical implications for management.

Watershed Connections

A growing network of catchment restoration partnerships extending from the Outer Hebrides to Hampshire's chalk streams.

Together with our partners we're working across an area of over 4,600km² to deliver resilient, biodiverse river systems in ecologically connected watersheds – from source to sea.

Restore, Regenerate, Return

Save the Spring partnership reaches key milestone

Save the Spring is a partnership between the River Dee Trust, Dee District Salmon Fishery Board and Atlantic Salmon Trust, supported by the University of Stirling and UHI Inverness. Launched in 2024, it comprises a planned 20-year programme of work to restore and futureproof the upper River Dee catchment – heartland of its spring salmon. As a Watershed Connections partnership, the focus is on delivering cold, clean water in a biodiverse, resilient landscape. The programme is also piloting a highly innovative, carefully managed smolt-to-adult supplementation trial.

This is an ambitious programme of work still in its early stages, involving senior scientists in the charitable, university and government sectors, and consulting with an international advisory panel of world-leading experts from across the globe, including experts on Atlantic salmon conservation, landscape ecology, peatland restoration, government policy and water resource management. Locally, the programme is bringing together the community, landowners, jobs and skills to help restore a wild salmon population with huge environmental and cultural significance to Deeside.

What is causing the decline?

In upper parts of the River Dee catchment, some of the river's spring-run Atlantic salmon subpopulations are now at risk of local extinction. The Dee spring run in general is estimated to have declined by 80% since the 1960s. As an alarming example of this decline, the Girnock Burn, which is dominated by spring-run multi-sea winter Atlantic salmon, has recorded the decline in female fish returning to spawn, from as many as 200 females in the 1960s, to just one female in 2024.

Upper tributaries, key to spring salmon spawning and juvenile production, are now frequently exposed to high water temperatures and low flows. 60% of monitoring sites in the upper Dee in 2023 for example exceeded temperatures that cause thermal stress to salmon.

Conversely, winters are becoming wetter, leading to more frequent and severe flooding events which can wash away salmon eggs and young fish, risking the loss of entire generations. The loss of riverbed stability due to frequent winter floods has also impacted salmon spawning areas, invertebrate populations, and other species such as the freshwater pearl mussel.

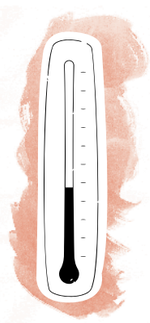
Expanding efforts to rebuild resilience

In line with our other work programmes, the catchment audit process is being employed by Save the Spring. Led by the River Dee team, 2025 has seen habitat resilience work initiated on new tributaries in the upper catchment, and further accelerated in existing work areas. This includes the installation of 70 'large woody structures' in the form of dead trees into the Geldie, Bynack and upper River Dee itself on the National Trust for Scotland's Mar Lodge Estate. This work looks to encourage the diversification of instream habitat to provide, among a number of things, deeper pockets and thermal refuges.

On the River Muick, where extensive habitat improvement work has been ongoing for a number of years, an historic, dried-up side channel has been reopened and reconnected. This channel was blocked and cut off from the river due to massive erosion and sediment deposition initially caused by Storm Frank in the winter of 2015/2016, compounded by further severe flooding events. Its reinstatement has now increased the available area for juvenile salmon and will help to dissipate future flood waters. This work builds on existing habitat resilience work along the Muick carried out by the River Dee team, including native riverside woodland regeneration and wetland restoration.

Across other areas of the upper catchment, riverside trees planted by the River Dee team along the Clunie are showing encouraging signs of growth, set to provide much-needed shade in the future when mature. Water temperatures in excess of 27.5°C have been recorded on the Clunie in recent years – severely into the temperature danger zone and approaching the lethal threshold for salmon. Elsewhere, the River Dee team has led with further habitat resilience work on the Girnock Burn, and efforts are underway to reinstate access for salmon to an upper section of the Ey which has been impacted by severe erosion.

Water temperatures in excess of 27.5°C have been recorded on the Clunie in recent years – severely into the temperature danger zone and approaching the lethal threshold for salmon.

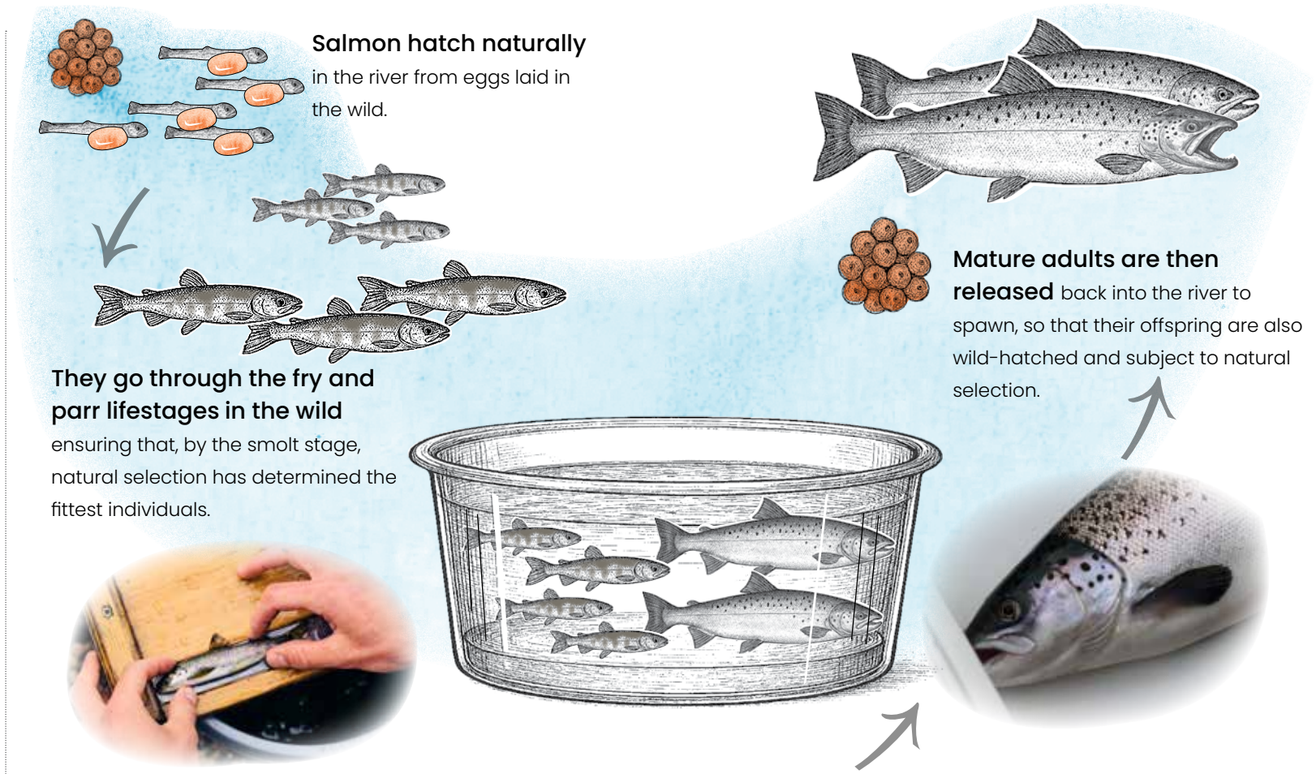


Major milestone - 75 adult salmon returned to the River Muick

The Save the Spring partnership is delighted to report the recent achievement of a major milestone for the programme - the successful return of adult salmon back to the River Muick in early October 2025 as part of its smolt-to-adult supplementation trial.

This trial aims to investigate whether the method is a viable one which can be used to support critically low populations of wild Atlantic salmon in the Dee catchment and elsewhere. It aims to reduce the well-documented genetic and behavioural risks associated with traditional 'stocking' by avoiding captive-rearing at early lifestages, and by facilitating natural mate selection and wild spawning behaviour.

Given the innovative nature of this trial, the partnership has taken steps to ensure best practice is being followed. The trial is guided by the International Union for the Conservation of Nature (IUCN) guidelines for reintroductions and conservation translocations. A key aspect of these guidelines is that translocations should only take place where there is suitable habitat. The River Muick was therefore selected for the trial as it has been subject to a programme of ongoing habitat restoration and resilience work supported by local landowners for almost a decade. Its salmon population remains critically low however, as many of the benefits of this habitat improvement work are expected to materialise over the medium to longer term.



Salmon hatch naturally in the river from eggs laid in the wild.

They go through the fry and parr lifestages in the wild ensuring that, by the smolt stage, natural selection has determined the fittest individuals.

Before migrating to sea, smolts are captured and transferred to on-shore, closed containment marine rearing facilities. These are located at the University of Stirling Institute of Aquaculture Marine Environment Research Laboratory (MERL).

The smolts are reared to adulthood, aiming to maximise the smolt-to-adult survival rate which is only around 2-3% in the wild.

Mature adults are then released back into the river to spawn, so that their offspring are also wild-hatched and subject to natural selection.

Adult fish which were released in October 2025 were captured from the River Muick as wild smolts in April 2024, and since that time have been cared for and reared to adulthood at the University of Stirling Institute of Aquaculture Marine Environment Research Laboratory (MERL). They have been housed in strict biosecure conditions and separated from other fish at the facility in dedicated quarantine units, in on-shore closed containment saltwater tanks. The team has also worked with independent veterinary experts and the Scottish Government's Fish Health Inspectorate to ensure that fish released back into the wild are healthy and disease-free.

Dr Al Reeve of the River Dee Trust releases one of the trial's mature adult salmon.

Preparing for Release

Throughout the year the partnership reported on the growth and status of this first cohort of fish. A second cohort of 100 smolts were brought into the programme in April 2025.

It was deemed that 75 of 79 fish from cohort 1 (from an original number of 82) were ready to be released back into the River Muick after indicating signs of maturation. These fish weighed between 1-4lbs in weight having matured as 'grilse' - 'one sea-winter' salmon. Four fish have been kept back and we aim to release these individuals next year if signs of maturation are observed.

After being safely transported back to their home river by road, fish were held for a few days in purpose-built pens in a sheltered part of the River Muick to allow them to acclimatise to the current, temperature and water chemistry. This also enabled the team to monitor and observe the fish closely. During this time we also welcomed members of the Scottish Government's Marine Directorate for a site visit.

After acclimatisation in the river, fish were prepared for release at the locations where they were first captured as smolts. As each fish was implanted with a PIT (Passive Integrated Transponder) tag with a unique ID when originally captured, we knew exactly where each fish was initially trapped. Based on this information, fish were released at either an upper or lower release site in the River Muick.

Fish were either carefully netted from their holding pens and returned to the river, or individually transported into cooler boxes and released. All efforts were made throughout the process to minimise handling.

Swimming Back Home

One by one fish swam back into their home river again, often making an immediate effort to move upstream, following their natural urges to swim against the current.

While challenges remain, seeing all 75 fish swim off successfully has been a hugely significant moment for the Save the Spring partnership, made possible by a great deal of hard work, partnership and planning.

What next? Understanding the Impact

Prior to their release back into the Muick as adults, 48 fish were radio tagged, enabling the team to track their whereabouts in real time with handheld listening equipment. This is enabling us to understand how the fish move post-release and will allow us to precisely locate them to observe and document any spawning activity.

Radio monitoring over the weeks and months will comprise a combination of handheld listening equipment operated by the team throughout the area, and a fixed listening station which records and logs tag numbers which come into range. Initial surveys allowed us to locate the majority of the radio tagged fish, some of whom remained close to their release sites and others who moved several hundred metres.

Longer Term Monitoring

In addition to this important short term tracking, it is essential that the trial puts in place longer term methods to assess its level of success and impact. This is where genetic work will be key.

Genetic samples were taken from every fish which has entered the trial. Through future juvenile survey work and genetic sampling, we will be able to determine the contribution to the population made by fish in the trial, matching juveniles to their parents. With this information, and after conducting the trial for several years, we will be able to understand the viability and impact of this technique.

Challenges and Unknowns

Throughout the span of this trial's first cohort of fish, from capture as smolts in April 2024 to their recent release, the Save the Spring partnership has been transparent about the many potential challenges which we face.

We do not yet know how these fish will behave back in the wild environment and whether they will spawn successfully this season. If they do, we need to work to understand what contribution they make to the juvenile salmon population, whether those juveniles successfully smolt and go to sea, and whether those smolts successfully return as spawning adults, helping to aid the recovery of an individual population of wild salmon. Running the trial over a number of seasons, combined with effective genetic monitoring and survey work is now required in order for us to answer those important questions.

Our thanks to all involved in a huge combined effort

The River Dee Trust, Dee District Salmon Fishery Board and Atlantic Salmon Trust wish to extend our thanks to the many individuals who have worked meticulously, tirelessly and passionately on getting the trial through this milestone. We particularly thank the Balmoral Estate and Glenmuick Estate for their unwavering support in enabling the trial to take place on the River Muick.

We extend our gratitude to the team at MERL whose expertise, care and attention has been critical in enabling adult salmon to return to their home river successfully. We also thank the team at UHI Inverness for their ongoing support, as well as our own teams who have been out on the river in all weathers to make the trial happen.

Finally we thank our funders for supporting this important trial and for supporting the wider Save the Spring mission.

A radio-tagged fish returned to the River Muick swims away. This fish was recorded 200m upstream later that day.

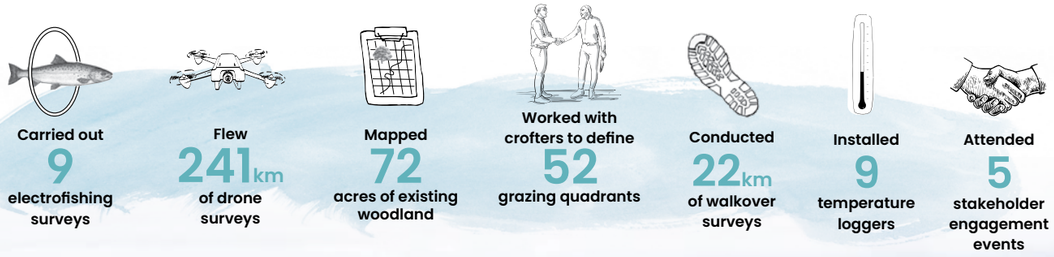
The Island Dimension

How advanced 3D mapping is shaping restoration on the Laxay, Isle of Lewis

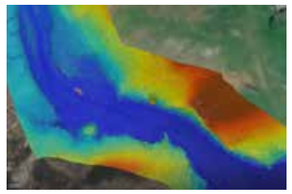
Last year we announced the launch of a Watershed Connections partnership on the Isle of Lewis based around the Laxay river system – Linking the Lochs, so named because of the complex combination of river and stillwater which characterises the system and how a catchment-scale approach must fit all of these pieces together.

Delivered in partnership with the Soval Estate, the initial scoping stages were funded by the Scottish Government's Nature Restoration Fund managed by NatureScot, with support from the Outer Hebrides Fisheries Trust. The wild Atlantic salmon population in the Laxay has been assessed by the Scottish Government's Marine Directorate as 'poor' (formerly defined as 'Category 3'), meaning it is considered to have a less than 60% likelihood of meeting its 'conservation limit' – the number of eggs which must be deposited by adult salmon in order to sustain the population. Working on this catchment will help to inform and support wider restoration efforts across other rivers in this unique region.

Applying the catchment audit method developed from our Core Rivers programme, during a six month period we engaged both local and national ecological surveyors to help us gather and review existing information on the catchment, as well as undertaking further baselining studies.



Accelerating our understanding with 3D mapping



Key to visualising this information into a practical restoration tool has been the use of advanced 3D mapping software. Having flown the entire river system with drones capable of surveying topography, vegetation and thermal signatures, we have now created a full 3D Geographic Information System (GIS) map of the river and surrounding areas comprising 142 information layers. This important technological development now enables the team to visit, zoom in on and investigate any part of the river instantly from their desk.

A restoration plan developing

The catchment audit's findings are now informing the design of a restoration plan. Referring to our 3D catchment map, we are now beginning to identify restoration measures to take forward. The partnership will seek to take action on these, supported by continued engagement with the local community including crofters, businesses, and adjacent landowners. Our findings show that:

- Spawning areas are being damaged by accelerated run-off and silt build-up due to degraded peatland. The restoration and rewetting of around 1800 hectares of peatland bog by blocking manmade drainage ditches would reduce these impacts.
- 41 manmade instream structures could be re-naturalised to provide better habitat for juvenile salmon.
- Three weirs could be adapted to provide better upstream and downstream movement of both fish and sediment.
- The instream habitat of 7km of tributaries could be improved with the removal of built up, fine sediments and gravel augmentation.
- While grazing pressure from sheep and cattle is generally well managed, trampling and grazing along river and loch edges is contributing to erosion and habitat damage. Excluding grazing livestock from these key areas will allow for the regeneration of these important waterside zones.
- Deer grazing pressure currently appears to be at acceptable limits but its impact is predicted to increase and a more holistic management strategy may be required. The low demand for venison is seen as a limiting factor and the partnership is exploring the feasibility of supporting new local venison processing initiatives.
- Targeted tree planting in the riverside zone could reduce sedimentation, as well as creating dappled shade to reduce water temperatures.

Community engagement and shared benefits

Engaging with the crofting community has formed the major focus of our outreach work in the project's initial scoping stages. We are delighted that there has been widespread support for the restoration plan, though it is essential that a mechanism for the delivery of equitable and shared benefits is designed. Identifying this mechanism is supported by both project partners, as well as the Scottish Land Commission and Community Land Scotland. We look forward to working constructively with these partners to ensure that benefits are not just felt by wild salmon and the environment, but people, community, ways of life and businesses too.

We are now setting out to achieve two specific goals: integrating restoration plans with the crofting community to ensure just and equitable community benefits, and securing the funding required to undertake the work and enable its ongoing management.

A Southern Stronghold?

Project White Hart: The new coalition setting out to save chalk stream salmon from extinction

While wild Atlantic salmon are in crisis across their range, for the genetically distinct and unique English chalk stream salmon, the situation is even more serious. Their numbers have fallen so catastrophically that they now face imminent extinction. Where once they returned in their many thousands, in the famous Test and Itchen chalk streams, returning adult salmon can now be counted in the dozens. The future of this incredible subspecies now hangs by a thread. Its decline to near-extinction is a grave warning about the wider health of our chalk stream environments – places of global conservation importance, the vast majority of which are located in England.

A broad and growing coalition of local and national partners formed in 2025 to launch an ambitious, landmark wild salmon recovery mission in the Test and Itchen catchments, the beating heart of England's chalk streams - Project White Hart. This marks the Atlantic Salmon Trust's first involvement in a catchment-scale restoration project outside of Scotland.

The Mission

Project White Hart's mission is to halt the imminent extinction of the irreplaceable English chalk stream Atlantic salmon and put them on a path to sustainable, long-term recovery.

The Vision

By 2050 this partnership wants to see thriving populations of chalk stream salmon in our rivers once again, transforming these catchments into international exemplars of community-coalition led species recovery.

The Challenge

Chalk stream salmon have now declined to such a low level that a single catastrophic event could wipe them out entirely. On the River Itchen in 2024, only 187 adult salmon are thought to have returned to the river to spawn. This number of returning salmon represents just 37% of the river's 'conservation limit' - the minimum number of returning salmon needed to produce enough eggs to sustain the population. This is a dangerous downward spiral with only one outcome if nothing is done to prevent it: extinction. It is a similar story on the neighbouring River Test.

However Project White Hart is also about hope. Wild Atlantic salmon are one of nature's great survivors. They are incredibly resilient and they will bounce back, if we give them a chance. That means giving them the conditions they need to thrive once more: cold, clean water free from pollution and disease; unimpeded access to spawning grounds; rich in-river feeding so young salmon can grow fit and strong; protection in coastal waters and at sea during their marine migration; and rivers which are resilient and adaptive to a changing climate.

Why Chalk Stream Salmon Matter

A biodiversity emergency:
Chalk stream salmon are a unique genetic strain of wild Atlantic salmon. Their extinction would be a global loss and a moment of unforgiveable national shame.

An impending cultural tragedy: Chalk streams and their wild salmon are inseparable from England's natural history and cultural identity. From past centuries to the present day, entire communities, businesses and traditions continue to be shaped and defined by these irreplaceable rivers.

A potential southern stronghold
England's chalk streams flow naturally cool, meaning they have built-in resilience to climate change and the rising temperatures threatening wild Atlantic salmon elsewhere across their range. It's therefore possible that chalk streams may act as a globally important stronghold and play a key role in saving the species at scale.

Plan of Action

1. Bring stakeholders, communities, environmental organisations, businesses, funders, regulators and policymakers to the table.

2. Conduct a full catchment audit for the Test and Itchen watersheds – a complete ecological health check to assess the problems facing wild salmon and define the restoration potential.

3. Design and deliver a restoration plan which will: restore cold, clean water and spawning grounds; reduce pollution and where appropriate put the Polluter Pays Principle into action; remove manmade barriers to salmon migration; reconnect fragmented habitats; provide sanctuary zones for juvenile salmon and spawning adults; demand that regulators and policymakers step up to the challenge; and engage and empower local communities and schools to love, value and protect our chalk streams.

Who's Involved

Project White Hart is a growing coalition, locally embedded in the Test & Itchen Catchment Management Partnership, hosted by the Wessex Rivers Trust and Hampshire & Isle of Wight Wildlife Trust.

Partners to date include:

Actor, environmental activist and Project Founder, Jim Murray MBE
Angling Trust
Atlantic Salmon Trust
Blue Marine Foundation
Environment Agency
Game & Wildlife Conservation Trust
Hampshire River Keepers Association
Southern Water
Test & Itchen Association
In addition, several high-profile individuals have lent their support to the project, including: Ben Goldsmith, Charles Rangeley Wilson OBE, Hugh Fearnley-Whittingstall, Paul Whitehouse, and Robert Plant.

The chalk stream salmon situation is critical, so unity and decisive action are now essential for all stakeholders to adopt if we're to pivot towards a more hopeful future in order to save this integral species, because salmon don't care about egos, silos or NGOs.

Jim Murray MBE – Actor, environmental activist, Atlantic Salmon Trust ambassador and project founder

Why 'Project White Hart'?

The White Hart is an ancient, noble symbol of rarity and redemption, long associated with English history, folklore and legend. It represents this project's spirit: a bold and hopeful mission to restore something precious. Just as the white hart inspired legendary quests, today the white chalk inspires our mission to heal these emblematic rivers, the beating heart and lifeblood which flows through Southern England, and to save their unique wild salmon from the brink of destruction.

In October 2025 an initial outreach event sought to engage Test and Itchen riverkeepers and landowners.

Crisis & Hope

Wild Salmon Connections conference marks a turning point for international cooperation

From January 27-29 2025, the world's most significant international gathering of wild salmon conservation groups for many years, came together in London at Fishmongers' Hall, aligning efforts behind a renewed global commitment to conserve, protect and restore wild salmon across both the Atlantic and Pacific. **The message – wild salmon are in crisis, but there is hope.**

The event was organised with our partners in the Missing Salmon Alliance, together with the Pacific Salmon Foundation (PSF) and Atlantic Salmon Federation (ASF) both based in Canada, Norwegian Salmon Rivers (Norske Lakseelver), and Long Live the Kings from the United States. In addition, speakers and audience members attended from across the Northern Hemisphere to contribute to a huge combined effort to move salmon recovery into a higher gear. It was generously supported by The Fishmongers' Company, Newcore Capital, YETI and the Tenzing Piton Trust.

The conference took place just over a year after wild Atlantic salmon were declared an endangered species in Great Britain by the International Union for the Conservation of Nature (IUCN), with data indicating the trend of a continued decline. This story is echoed across the Atlantic. In the Pacific 70% of salmon populations are below their long-term average. A powerful short film voiced by actor, Dominic West, opened the conference and made a plea to governments, regulators and industry – 'Wild salmon are in crisis, but there is hope. We must commit to bold action, and it must start now.' Above all, the conference sought to highlight, share and inspire the solutions required to give wild salmon a better future.

Among the event's keynote speakers were leading cultural representatives, senior economists, and government minsters. The event began however with a touching presentation from a group of schoolchildren who had taken part in The Salmon School programme – an innovative, international educational project delivered as a collaborative effort across the Thames basin with the support of local river trusts and the Atlantic Salmon Trust, which combines art and science to inspire the next generation to connect with rivers and wildlife. It is based on The Salmon School installation, a project started by renowned American artist, Joseph Rossano, which has travelled the world to raise awareness of the plight of wild salmon, including at COP26 in Glasgow, and at Balmoral.

Inspiring governments and industry to place far more value on wild salmon recovery was the conference's core ambition. Keynote speaker, Professor Sir Dieter Helm (Professor of Economic Policy at the University of Oxford), made clear that wild salmon must be seen as an essential part of our shared 'natural capital'.

Speakers also discussed mitigating the effects of hydropower dams, new approaches to closed containment salmon farming, and achieving catchment-scale habitat restoration.

Renewable natural capital is the stuff that nature gives us for free and keeps on giving us for free forever, provided we don't over deplete it… a salmon stock is the obvious way to think about renewable natural capital, provided we look after its environment, provided we do the right things, then the next generation will have salmon.

Professor Sir Dieter Helm, University of Oxford

Missing Salmon Alliance launches Wild Salmon Declaration and policy asks for England and Scotland

Senior political figures; Daniel Zeichner MP (then UK Minister of State for Food Security and Rural Affairs); Mairi Gougeon MSP (Scottish Cabinet Secretary for Rural Affairs, Land Reform and Islands); and Andreas Bjelland Eriksen (Norway's Minister of Climate and the Environment), all spoke at the event and agreed on the urgent need to protect and restore wild salmon. Their attendance coincided with the release of the Missing Salmon Alliance's Wild Salmon Declaration and new set of high-level policy asks. These are now being used to advocate for governments to do more to accelerate efforts to:

- Develop appropriate legislation which puts wild salmon first.
- Make polluters pay.
- Ensure free access to cold, clean water.
- Manage land for water.
- Improve wild salmon survival at sea.

Salmon are not just sustenance for our people, but they're part of our ceremonies, they're part of who we are – our identity.

Fawn Sharp, Quinault Tribal Member and Former President of the National Congress of American Indians

Making the cultural case for wild salmon

The importance of wild salmon to the peoples of the Northern Hemisphere was also powerfully communicated, underlining the fact that wild salmon recovery is not just an environmental and economic issue, but also a deeply cultural one. Fawn Sharp, Quinault Tribal member and former President of the National Congress of American Indians, spoke of the profound importance of wild salmon to the cultural identity of First Nations peoples – something which was also echoed through stories shared from across the UK and Europe.

Alastair Fothergill OBE, the producer behind a number of Sir David Attenborough's nature documentaries, was also a keynote speaker.

In response to reports that the Danish government was at the time challenging the UK's ban on sandeel fishing (an essential prey species for wild salmon and other wildlife), he urged the UK government to hold firm: 'It's a sad fact, though, that at the moment the Danish government are trying to appeal against it...It's extraordinary, and I really hope the British government stays strong.' We are pleased to report that in May 2025, the challenge to the UK's ban on commercial fishing for sandeels in the North Sea was dismissed in an international court. The ban remains in place, thanks to advocacy efforts by a wide range of NGOs, including the Atlantic Salmon Trust.

The polar bear is the poster child for the Arctic. The orangutan is the poster child for the rainforest. I think that salmon can be the poster child for freshwater systems.
Alastair Fothergill OBE

Stronger together

The Missing Salmon Alliance and its international partners are now working closer than ever before to ensure that the cultural, environmental and economic case for wild salmon recovery is at the top of the agenda for governments and businesses in the 21st Century. While significant challenges remain on the road ahead to achieving a thriving future for wild salmon, the key global players are now more aligned in their strategies to get to that destination.

Watch the conference online

All three days of conference speeches and presentations are available to watch back on the Missing Salmon Alliance YouTube channel. Scan the QR code to watch now.

Scan the QR code to watch now

WILD SALMON Connections

THE MISSING SALMON ALLIANCE

Many students in England are disconnected from their rivers and have little understanding of what lives in them, what should be living in them, and the importance of water quality and healthy river habitats. If we don't educate now there will be generations that grow up unaware that wild Atlantic salmon should be part of the Thames ecosystem, and why they no longer are.
The Thames Salmon School initiative led by the Thames Rivers Trust and artist Joseph Rossano, supported by the Atlantic Salmon Trust, is addressing this by delivering workshops for schools across London and the Thames catchment. It is further supported by Action for the River Kennet, South East Rivers Trust, Thames 21, River Thames Conservation Trust, and the Cotswolds Rivers Trust.
Through this collaboration we get students outdoors and hands-on in their local rivers to learn about the plight of wild Atlantic salmon. The blend of natural history, art and science enables children to appreciate, value and enjoy their rivers and to understand the importance of cold, clean water.
The pilot project ended with a truly memorable and inspiring experience for ten students who took to the stage at Wild Salmon Connections. These students became conservation advocates for wild salmon, sharing their project findings and experiences. In the words of Emily, a student at John Rankin Primary School in Newbury, 'You must act now to protect salmon and our environment. I want a future with healthy rivers full of life'. It's up to all of us to give Emily and her peers that future. Wild Salmon Connections took us all a step closer to that goal.

Anna Forbes, Thames Rivers Trust

Sea Change

The bycatch unknowns and why wild salmon and sea trout must better protected at sea

Marine bycatch is a hot topic which has spurred much debate. However the degree to which wild salmon post-smolts and adults are being intercepted at sea, purposefully or as bycatch, is a glaring knowledge gap.

Important research by our Missing Salmon Alliance partners, the Game & Wildlife Conservation Trust (GWCT), has confirmed that wild salmon and sea trout are being caught as bycatch in coastal gillnets in the English Channel. Further work by Alliance researchers to gather and organise PIT (Passive Integrated Transponder) tagging data from salmon rivers across Europe and North America, enabled the identification of two French salmon smolts from the rivers Scorff and Bresle to be identified by a PIT tag detector in an Icelandic fish processing plant in 2023. Despite these findings, a significant unknown remains: to what degree is bycatch happening on the high seas which could impact wild salmon at a larger population level?

At the Alliance's Wild Salmon Connections conference, Dr Sophie Elliott of the GWCT laid out some of the challenges facing us when it comes to filling this important knowledge gap. Only around 2% of commercial fishing vessels from the UK and Europe have scientific observers on board to monitor species caught as bycatch, with most of these vessels being 'demersal' operators, fishing near the seabed with methods such as bottom trawling, rather than 'pelagic' operators more likely to encounter migrating wild salmon. Further shortcomings were highlighted when it came to on-shore observers (checking for bycatch in fish markets), the underreporting of bycatch in vessel logbooks, as well as scientific studies which are overwhelmingly focused on bycatch in demersal fisheries rather than those where Atlantic salmon could be expected.

In the absence of effective monitoring, salmon scientists are having to think their way around this knowledge gap. Where are vessels fishing and when? Dr Elliott shared a study which involved ICES (International Council for the Exploration of the Sea) researchers, working within the Working Group on North Atlantic Salmon (WGNAS), using pelagic fisheries landings data combined with smolt migration pathways to understand bycatch risk. Herring and mackerel fishing activity presented the highest risk, with potential cumulative impacts as post-smolts migrate north to their feeding grounds.

With freely available AIS (Automatic Identification System) vessel data, Dr Elliott also presented a visualisation of trawlers and gillnetters operating to the north of the British Isles in the same areas where salmon post-smolts are transiting. Nonetheless, Dr Elliott noted that, although some vessels can catch up to 250 tonnes in a single haul, the identification of salmon post-smolts would be virtually impossible as only a handful of hauls are even examined for bycatch. Therefore, despite the significant risk, the evidence is lacking.

The comparison made by Dr Elliott between the level of salmonid bycatch monitoring in the Pacific for chinook salmon, versus the Atlantic, was stark. Compared to the 2% of vessels monitored for bycatch in the UK and Europe, in the US (including Alaska) and Canada, 50% of semi-pelagic hake vessels are monitored, while 100% of demersal vessels are monitored by either video or on-board observers. In the Pacific a widespread genetic sampling programme looks to identify evidence of salmonids in hauls, while there is no such programme in Europe.

Hanna Rudd from Missing Salmon Alliance member, the Angling Trust, echoed the need for better monitoring, stronger precautionary management, and the importance of wild salmonids being recognised as marine species in policy and regulation. Rudd drew attention to the lack of consideration for salmonids in marine planning. Of the 377 Marine Protected Areas (MPAs) in the UK, none are designated for wild salmon and sea trout. Indeed many still permit gillnetting and bottom trawling.

Dr Tom Appleby from the Blue Marine Foundation also spoke at the conference, highlighting how the European Union Habitats Directive, which is translated in UK law by Habitats Regulations and still effectively applies in the UK after its departure from the EU, only protects wild salmon in freshwater SACs (Special Areas of Conservation). 'You've got a crazy situation where the thing is protected for only part of its lifecycle', remarked Dr Appleby.

At the end of Wild Salmon Connections the Missing Salmon Alliance released a new set of policy asks for England and Scotland, both of which demand that policymakers urgently do more to understand bycatch and the role it may be playing in wild salmon decline.

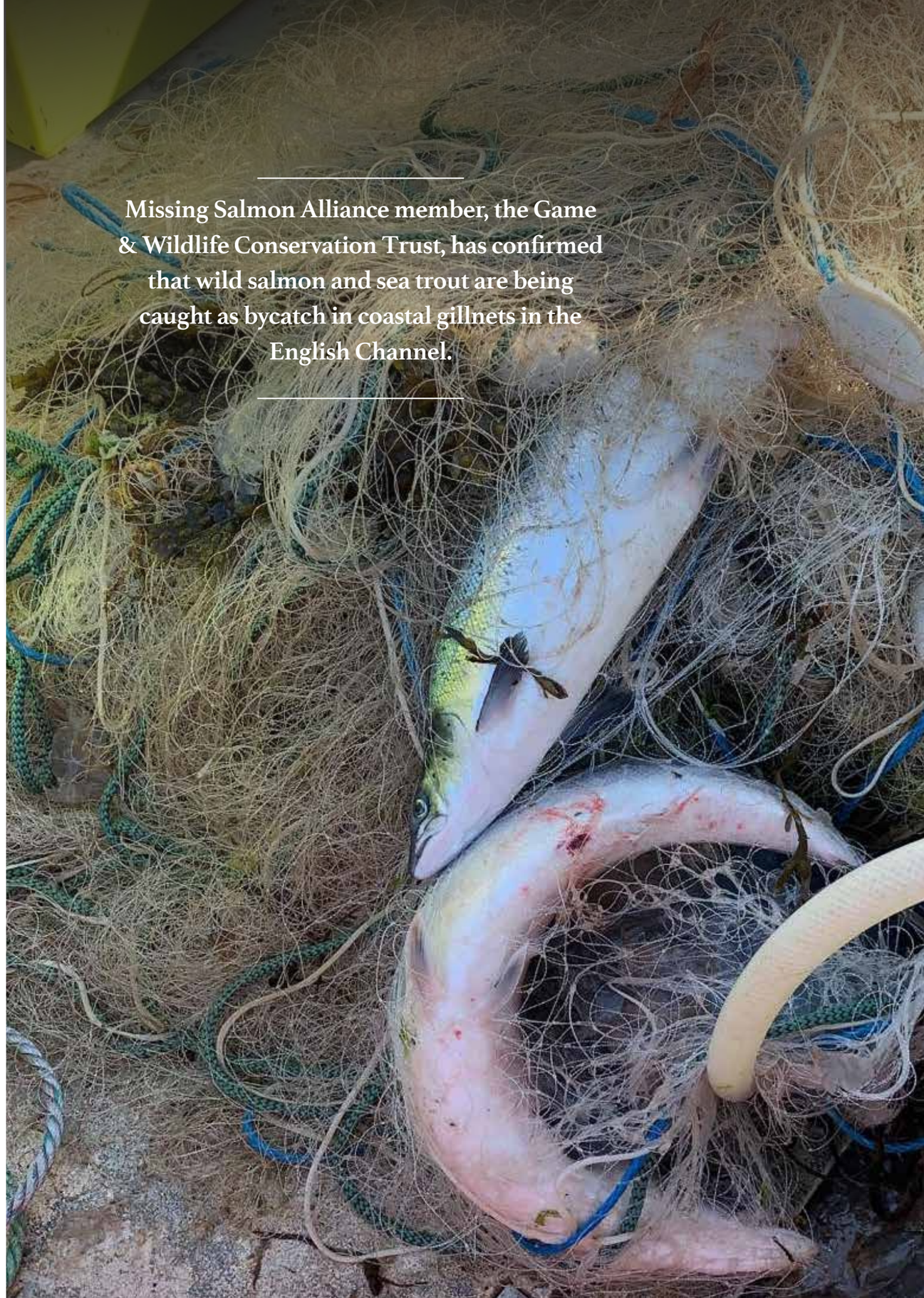
'You've got a crazy situation where the thing is protected for only part of its lifecycle'.

How we're moving forward

The Atlantic Salmon Trust is working with its partners in the UK-wide Missing Salmon Alliance and in the Scottish Environment LINK to raise awareness of bycatch risk and to protect wild salmon and sea trout in MPAs.

In 2024 it was agreed that ICES will gather international salmon bycatch data, including from the UK, on an annual basis. The Atlantic Salmon Trust now co-leads the NGO group which pushed for this development. However, more action is needed. Together with our Missing Salmon Alliance partners, we are advocating for:

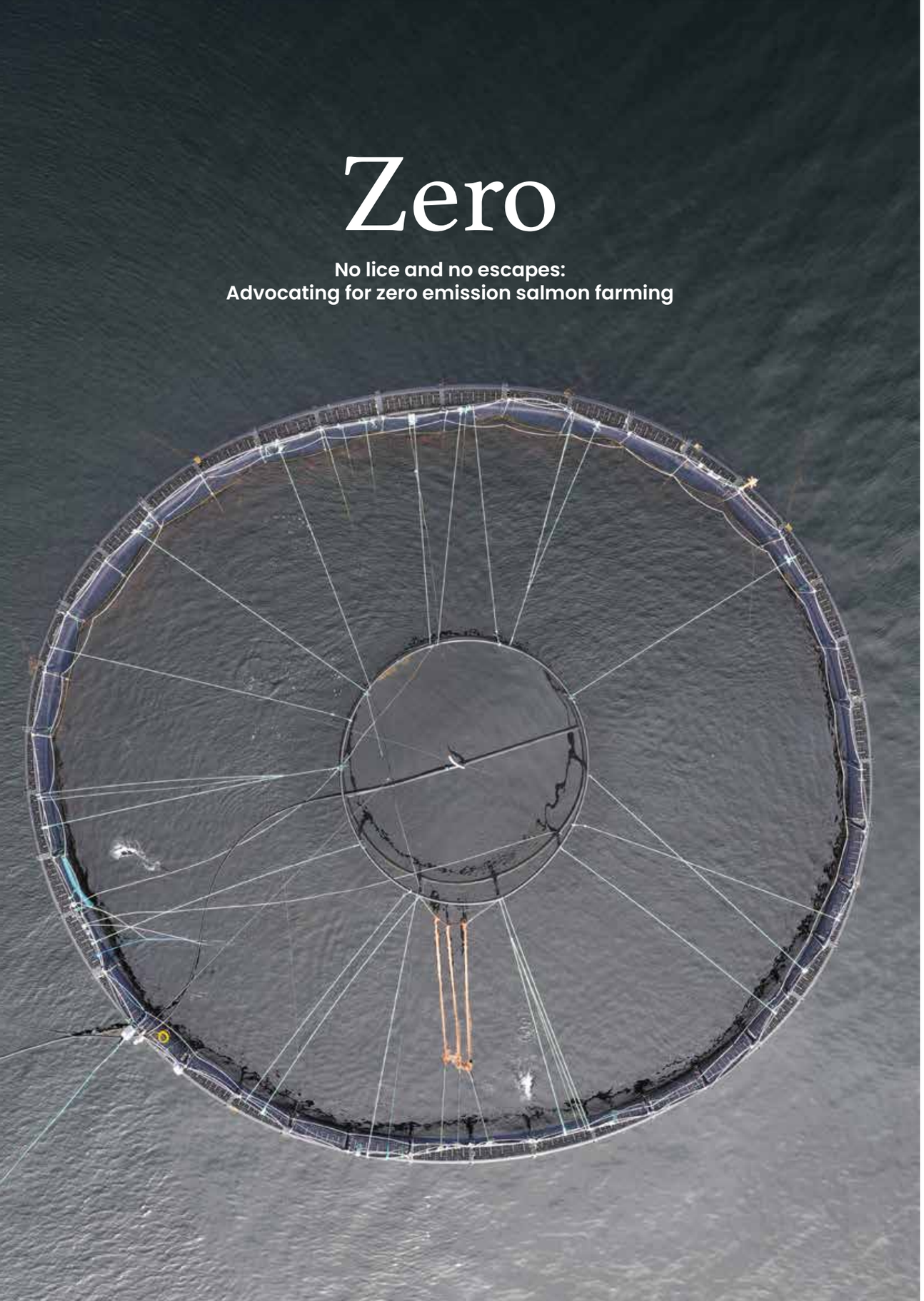
- Increased bycatch monitoring of vessels at sea and in onshore landing facilities, with requirements for minimum and standardised levels of data collection (including pelagic and static fisheries as well as in demersal fisheries).
- Implementation of measures to reduce bycatch risk at sea through temporal and spatial fishing restrictions along known salmon migration routes.
- Mandatory environmental DNA (eDNA) data collection to improve the detection of salmon in bycatch, prioritising pelagic fisheries.
- Revised gillnetting bylaws in light of new evidence on the swimming behaviour of wild salmon and sea trout, in addition to placing a duty on commercial netters to report salmonid bycatch.



Missing Salmon Alliance member, the Game & Wildlife Conservation Trust, has confirmed that wild salmon and sea trout are being caught as bycatch in coastal gillnets in the English Channel.

Zero

No lice and no escapes: Advocating for zero emission salmon farming



As we evaluate the impact of known pressures on wild salmon and produce an associated stressor analysis, this year the Trust began to publish updated position papers. The first of these looks at the impact of open pen salmon farming.

This work aligns with initiatives from other organisations, such as a new information campaign and website which details the impacts of salmon farming, 'salmon.info', launched by the Atlantic Salmon Federation (ASF) and North Atlantic Salmon Fund (NASF). In Norway, we added our voice to the Close the Pens petition to the Norwegian government led by our partners at Norske Lakseelver (Norwegian Salmon Rivers), demanding zero sea lice emissions from aquaculture. In Scotland, we continue to advocate for zero lice emissions and zero farmed fish escapes, in line with the UK Government's international commitments to the North Atlantic Salmon Conservation Organization (NASCO).

The science is clear

Recent studies confirm long standing evidence and demonstrate the harm that open pen salmon farming has on wild salmon and sea trout, in particular, by increasing sea lice loads and from escaped farmed fish.

The Scottish Government (2022) states that 'Salmon farms can substantially elevate levels of sea lice in coastal habitats and potentially increase risks to wild salmon growth and mortality under some local conditions.' It also warns that 'Escaped farmed Atlantic salmon can negatively impact wild Atlantic salmon through direct competition in fresh water. Breeding of escaped fish with wild Atlantic salmon can disrupt adaptive genetic selection with negative consequences for fitness and thus the viability of wild populations.'

Internationally, a NASCO briefing in 2025, states 'studies show reduced survival and adult returns in salmon exposed to salmon lice'. It also reports 'increased mortality linked to salmon lice infestations in countries with significant salmon aquaculture, including Norway, Ireland, and Scotland'. On escapes from salmon farms, the NASCO briefing states that 'Introgression of wild Atlantic salmon is widespread across the North Atlantic and is the most serious threat for the viability and ability to adapt to current and future environmental changes.'

The regulatory regime is failing

At an international level, the Williamsburg Resolution was adopted by NASCO in 2003. Under Article 5, each Party to NASCO, including the UK, agreed to take measures, to:

- minimise escapes of farmed salmon to a level that is as close as practicable to zero…
  and
- minimise the risk of disease and parasite transmission between all aquaculture activities, introductions and transfers, and wild salmon stocks.

Subsequently, in 2009, NASCO and the International Salmon Farmers Association agreed to the following international goals:

- 100% of farms to have effective sea lice management such that there is no increase in sea lice loads or lice-induced mortality of wild salmonids attributable to the farms;
  and
- 100% of farmed fish to be retained in all production facilities.

Over 20 years on from the adoption of the Williamsburg Resolution, an international expert panel has judged that Scotland is failing to meet these international commitments.

At a national level, in 2025, a Scottish Parliament Committee found a 'lack of progress made by the Scottish Government' in addressing the interactions between wild and farmed fish. The Committee 'seriously considered' calling for a moratorium on new sites and expansion at existing sites, to send a clear signal to the Scottish Government and industry that urgent progress is required. It concluded, then, that it 'does not currently support a moratorium'.

Once the Committee reported, the salmon farming industry lodged 260 appeals against the Scottish sea lice regulatory system. This new system is now effectively paused. Today, in practice, there is no regulation of sea lice on fish farms relating to wild fish and no penalties when farmed fish escape.

Sea lice infestation on a wild sea trout

Scotland is falling behind its international partners

In 2024, the Canadian Government announced a ban on open pen salmon farming in British Columbia by 30 June 2029. It stated that 'Wild Pacific salmon are an emblematic species in British Columbia that face unprecedented threats to their survival. The Government of Canada is committed to protecting wild salmon and promoting more sustainable aquaculture practices.' In support of this decision a policy statement was published, a draft transition plan has been consulted on, and a task force established to ensure the transition is managed effectively.

In Norway in 2025, debate about 'zero emission' salmon farming (no lice emission, no escapes, no disease transfer and no waste emission) is gaining ground. Action in the wake of a Government White Paper and consideration in the Norwegian Parliament, will lead to regulation of salmon farming which incentivises low impact operations. Regulation in Norway is evolving toward a more predictable, centrally managed, and environmentally demanding system.

Advocating for zero emissions

The Atlantic Salmon Trust opposes open pen salmon farming due to its negative impact on wild salmon and sea trout.

1. We call for a moratorium on the expansion of open pen salmon farming in Scotland.
2. We advocate for a transition to zero emission production methods.

In light of the evidence and Atlantic Salmon Trust's position, we ask:

- the Scottish Government to:
  - enforce strong regulation for sea lice, escapes and disease from salmon farms immediately.
  - adopt a moratorium on the expansion of open pen salmon farming.
  - transition to zero emission production – no lice emission, no escapes and no disease transfer (such as closed containment).
- the Scottish Parliament Committee to reconsider supporting a moratorium on new sites and expansion at existing open pen salmon farming sites.

Wild Atlantic salmon are in crisis. The harm from open pen salmon farming can and must be stopped in order to restore wild Atlantic salmon and the environment they depend on.

Wild Salmon in the Spotlight

How this year's awareness activity reached millions around the world

International Wild Salmon Day

Originally started by our partners at the Pacific Salmon Foundation and BC First Nations Fisheries Council as 'BC Wild Salmon Day', this year the Atlantic Salmon Trust and Atlantic Salmon Federation (ASF) joined forces with our friends in the Pacific. Together we launched a truly global awareness movement for wild salmon everywhere on June 1st – International Wild Salmon Day.

The inaugural year's social media campaign, which was jointly designed and delivered by the organising partners, reached over four million individuals from 44 countries worldwide, saw thousands of users visiting the new wildsalmonday.com website, and over 250 new individuals and organisations signing up to the Wild Salmon Declaration, first launched by the Missing Salmon Alliance at its Wild Salmon Connections conference in January.

PACIFIC SALMON FOUNDATION

ASF

First Nations Fisheries Council of British Columbia

Springwatch

In April 2025 BBC Springwatch spent two days filming with the River Dee and Atlantic Salmon Trust teams on the Save the Spring programme, covering both the habitat resilience and conservation translocation elements of work. The segment was shown on BBC Two in May on Episode 3 of this year's series and was viewed live by over 3.5 million people. It can now be viewed on catch up via BBC iPlayer.

We'd like to thank the team from the BBC for helping to get the wild salmon message out to a huge national audience, as well as the Balmoral and Glenmuick Estates, and University of Stirling's Marine Environment Research Laboratory (MERL) for their generous support in enabling filming to take place.

RHS Chelsea Flower Show 2025

We were delighted to have brought the message of wild salmon restoration to a huge audience at this year's RHS Chelsea Flower Show in the form of a spectacular floral display, Across the Ocean, Home Again. The world famous horticultural show is attended by over 150,000 visitors annually.

Across the Ocean, Home Again which adorned the Bull Ring gate entrance at the show was created by renowned floral designer, Tattie Rose. It represented the incredible lifecycle of wild Atlantic salmon as they return home to our rivers from their ocean voyage, inspiring thousands of visitors attending the show to think about wild salmon restoration, and to energise greater collective action to deliver environments of cold, clean water for nature, people and the planet.

In-keeping with the show's emphasis on biodiversity and water sustainability, the piece was a celebration of Britain's riverbanks, its plants and wildlife. Honeysuckle, ripples of willow and rush, and swathes of native greenery and river flowers adorned the gates, whilst handmade plaster casts of Atlantic salmon glided through it – a beautiful reminder of the need for health and abundance in our environment. In addition to the Bull Ring gates display, renowned bronze sculptor, Simon Gudgeon, generously loaned a stunning bronze salmon sculpture which sat atop a plinth within the show grounds.

Inspired by Ed Pettifer

The display was commissioned by Mrs Dominic Collins to commemorate the memory of Edward Pettifer, who was tragically murdered in the New Orleans terrorist attack on New Year's Day 2025. Ed, who grew up in rural Wales, was a gifted fisherman and was passionate about the environment, devoting much of his time and energy to supporting salmon conservation. We are hugely grateful that, at the request of Ed's family, the display could be used to raise awareness for our work.

Our thanks go to designer, Tattie Rose, for the time, energy, passion and dedication she devoted to wild Atlantic salmon through this initiative, as well as Nadine Charlton of Home Spring Gardens for her support and advice. Our thanks also go to the Royal Horticultural Society for their support and openness to this shared vision.

Events

Connecting with supporters at home and abroad

Charity Clay Shoot raises £55,000

This year our ever popular Charity Clay Shoot moved to Holland & Holland on the outskirts of London. Generously sponsored by INEOS Grenadier and BaxterStorey, we welcomed 17 teams of shooters for a wonderful day out in the sun, all in support of our work to restore wild Atlantic salmon and their environment. Together, we raised an amazing £55,000.

Our enormous thanks go to INEOS Grenadier and BaxterStorey for their sponsorship, without whom this event wouldn't have been possible. Our thanks also go to YETI and Holland & Holland for their support, our auction donors for providing incredible lots for our guests to bid on, and of course our teams! Without you, we cannot continue our vital work.

Wild Salmon Without Borders 2025

Germany shows its support for wild Atlantic salmon recovery

In April 2025 our team travelled to the renowned Erlebniswelt Fliegenfischen (EWF) fly fishing show near Munich, Germany. As part of an ongoing partnership and friendship with show organisers, Michaela, Robert and Lara Stroh (an Atlantic Salmon Trust ambassador), we were delighted to have been chosen as the charity of choice at this year's 20th Anniversary show. The show attracts thousands of visitors each year from across the world with a shared passion for fly fishing and conservation. This year's show marked the second year of our Wild Salmon Without Borders EWF partnership, connecting with brands and conservation organisations across Europe to advance the collective cause of wild Atlantic salmon recovery.

We also teamed up with well-known fly tyer, Erin Hyde, known as 'She Ties Flies' on social media. Erin has a huge following of over 300,000 people and generously gave up her time to help spread awareness of the need to protect, conserve and restore wild Atlantic salmon. Erin created an incredible, one-off display case of decorative flies which depicted the freshwater lifestages of wild Atlantic salmon. This was generously donated to our 2025 fundraising auction.

Thanks to a tombola-style raffle with hundreds of prizes donated by individuals and fishing brands, visitors to the show raised an incredible €19,422 for the Atlantic Salmon Trust. We are sincerely grateful to the Stroh family for giving the Trust this wonderful fundraising opportunity, and to all those who took part by donating a prize or buying entry tickets.

Funding raised at the show will provide a huge boost to our important research and restoration work which looks to contribute underlying knowledge to wild salmon recovery efforts across Europe and the wider North Atlantic.

YETI Presents Wild Atlantic Salmon – Restoring the Run

In autumn 2024 we worked together with our partners at YETI to produce a new film to raise awareness of wild Atlantic salmon conservation to a global audience.

Following the film's premiere event held on the banks of the River Tyne in June, and a screening at the GWCT Scottish Game Fair in July, the full film is now available to watch online via the YETI YouTube channel.

The making of this film was a huge combined effort with YETI, the Atlantic Salmon Trust, Tyne Rivers Trust, Deveron, Bogie & Isla Rivers Charitable Trust, Bywell Salmon Fishing, Deveronside Fishings, Fly Fishing Nation, and our ambassadors Marina Gibson and Richard Davies. It covers the ways in which wild salmon connect us with family and friends, with our environment, with community and history, and the efforts underway to put the species on the path to recovery.

Reaching the Next Generation

On 5th June 2025 our team attended the Children's Countryside Day in Wooler, Northumberland, hosted by the Glendale Agricultural Society. The event saw over 1,700 children from 44 schools coming along to learn about rural ways of life, nature and conservation, including the importance of wild salmon and their role as a keystone and indicator species.

Curzon Mayfair, London

At the end of last year we were joined at our Curzon Mayfair event by over 100 supporters who gathered to hear about how our research, restoration and advocacy efforts are progressing. This event was generously sponsored by Lycetts and was supported by YETI.

Speakers included our CEO, Mark Bilsby, and Restoration Director, Alison Baker. Major themes were the contextualisation of wild Atlantic salmon as an endangered species – one of over 45,300 across the world, indicating that wild salmon recovery must not be viewed in isolation but rather connected to wider biodiversity recovery efforts. Catchment-scale restoration was also a key topic for the evening, as the team led our audience through the aims of the Core Rivers and Watershed Connections programmes. Trustee, John Miller, gave an inspiring, personal talk about the River Dee and the Save the Spring partnership, while Teresa Dent CBE spoke about the potential of 'farming clusters' to transform the way in which land and waterways are managed.

Atlantic SalmonTrust

CHARITY EVENTS

The Fin & Fairway Cup

Driving change for wild salmon

2026 Charity Golf Day

Swinley Forest Golf Club, Berkshire

Thursday 14th May 2026

Enter a team of four golfers: £2,000

Join us for a round of golf at stunning Swinley Forest, where teams compete for the Atlantic Salmon Trust Golf Cup, as well as an individual champion, longest drive and nearest the pin contests. Featuring a delicious clubhouse lunch, prizegiving and Grand Raffle – all in support of wild Atlantic salmon conservation.

Email events@atlanticsalmontrust.org to reserve your team spot.

Generously sponsored by Sladen Estates

The Lock Stock & Salmon Challenge

Pull! together for the king of fish

2026 Charity Clay Shoot

Holland & Holland Shooting Grounds, Greater London

Friday 12th June 2026

Enter a team of four guns: £2,000

Whether a crack shot or novice, enjoy a wonderful day out with us in support of our work to restore wild Atlantic salmon and their environment as teams compete round the Holland & Holland clay shooting course. Featuring a stunning three-course lunch from Chef Josh Hunter, prizegiving and exclusive fundraising auction.

Email events@atlanticsalmontrust.org to reserve your team spot.

Change Makers

Corporate Partners driving us forward

Our Corporate Partners play an essential role in enabling us to carry out our work to restore wild Atlantic salmon and their environment. Their generous, unrestricted core funding means our team can take research and restoration projects through the design and development phase, to the all-important delivery stage. Core funding is what also supports our communications, advocacy and awareness work – a critical component in the fight to save wild Atlantic salmon.

We thank all of our existing corporate partners for their valued support and welcome prospective partners getting in touch with us to start their journey. If you're inspired to get behind us on our mission, we'd love to hear from you.

To discuss sponsorship and support options, please email our Corporate Ambassador, Mark Cockburn, at **mark.cockburn@atlanticsalmontrust.org**

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Leave a Legacy

A lasting gift to the King of Fish

Including the Atlantic Salmon Trust in your will is a significant and lasting way to support our work.

The world is constantly evolving, and so too are the pressures affecting wild salmon and sea trout. With your legacy we can be ready to meet those future challenges head-on.

Your legacy will help us to:

- Continue to design, develop and deliver the most ambitious and innovative salmon research projects in the UK, filling the knowledge gaps that still exist.
- Expand our network of Core Rivers and Watershed Connections partnerships to enable action at a catchment scale.
- Communicate our message and spread awareness of the salmon crisis to wider audiences through media and events.
- Continue to engage at a high level with governments, regulators and international bodies.
- Bring together the greatest salmon minds in the world through conferences, workshops, and meetings.

How to remember us in your will

There are several ways to leave a gift in your will. These could include:

- A share of your estate.
- A fixed sum.
- A particular item for sale in our fundraising auction.

If you need more information about remembering the Atlantic Salmon Trust in your will, we'd love to hear from you.

Contact us at **info@atlanticsalmontrust.org**

The Giles Wilson Fellowship: Supporting future salmon saviours

'Thanks to the Giles Wilson Fellowship, I've been given the opportunity to take my first steps into a career as a wild Atlantic salmon conservationist. As Research Assistant for the Trust, I'm now working across our many workstreams, from analysing data and writing technical reports, to wading through rivers in all weathers helping to carry out electrofishing, fish tagging and tracking, and other environmental surveys. This hands-on experience is broadening my understanding of both science and management, and I'm thrilled to be contributing to efforts to restore this iconic species which has both national and global significance.

Working in freshwater and marine conservation has long been a dream of mine. Now it's a reality.'

Maaike Vrancken,
Research Assistant

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Watershed Connections Programme Coordinator and Project Laxford Catchment Restoration Manager

Jamie Gordon
Project Deveron Catchment Restoration Manager

Curtis Williams
Project White Hart Programme Coordinator

Salmon & Biodiversity Research Team

Dr Jon Emery – Theme Leader for Data Management & Analysis
Dr Jessica Rodger – Theme Leader for Biodiversity & Fish Communities
Maaike Vrancken– Research Assistant

Likely Suspects Framework Team

Dr Colin Bull – Co-Principal Investigator
Graeme Diack – Data Specialist
Dr Emma Tyledesly – Marine Data Modelling Specialist
Dr Neil Banas – Ecological Modeller

A member of

THE MISSING SALMON ALLIANCE

Thank You

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TO OUR 2025 AUCTION AND CURZON EVENT SPONSOR

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Ian Richardson
John Shields
David and Kim Stewart
Justin Maxwell Stuart
Jonathan Wood

And Those Who Wish
To Remain Anonymous

TO OUR PROJECT DELIVERY PARTNERS

Grosvenor's Reay Forest Estate
Deveron, Bogie & Isla Rivers Charitable Trust
Dee District Salmon Fishery Board
& River Dee Trust
Soval Estate
Project White Hart partners

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TO OUR AMBASSADORS

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Lord Botham
Jim Murray MBE
Robson Green
Craig Somerville
Marina Gibson
Will and Al Peake
James Stokoe
Matt Harris
John Olav Oldren
Richard Davies
Lara Stroh

And Finally To **You**
For Putting Wild Salmon First

How you can help

Ways to support the Atlantic Salmon Trust

We can't continue our work with you – our supporters. There are a range of ways to support our work and we are grateful for any support you may give us, whether that's a one-off donation or becoming a more regular member of our family through our monthly Salmon Club membership programme, or by joining the President's Club to play an even more significant role in fundraising for the Trust.

Don't forget our annual fundraising auction either – this is live in October and November each year, featuring a range of wonderful auction lots to bid on from fishing and sporting experiences to holiday accommodation, tickets for unique events, spectacular art, and delicious food & drink – there's truly something for everyone.

To enquire about joining our President's Club, please email Tiggy Pettifer at
tiggy@atlanticsalmontrust.org

To join our Salmon Club as a monthly member, please visit
atlanticsalmontrust.org/salmon-club

Putting #WildSalmonFirst