

Press release: Fish stocks boost for endangered pearl mussel

Thousands of sea trout have been released into rivers in Northumberland to stock rivers for anglers and help protect the future of a critically endangered species, the freshwater pearl mussel.

Pearl fishing and water pollution from industry have led to worldwide decline of the pearl mussel.

A healthy population of endangered freshwater pearl mussels is important for water quality – each mussel filters 50 to 70 litres of water. They improve the quality of the habitat, increasing the ecological diversity, which includes juvenile trout and salmon numbers.

The Environment Agency's Kielder Salmon Centre staff Richard Bond and Jess Anson have developed a technique to enable pearl mussel larvae to attach to the fish gills, replicating their natural life cycle in the wild.

The larvae will drop off the sea trout gills towards the end of May where they will settle on to the river bed. Given the right conditions, these juveniles could survive into adulthood and live for up to 100 years.



Close up of pearl mussel larvae (white dots) attached to the sea trout gills

Around 12,000 one-year-old sea trout, which have been bred at Kielder Salmon

Centre, were released this week into North Tyne tributaries of the River Tyne.

The larvae attached to them were harvested from 80 adult mussels which are cared for at the centre.

Kielder Salmon Centre breeds 360,000 salmon and between 10,000 and 20,000 sea trout every year to stock rivers.

Complex life cycle

Richard said:

The pearl mussel has a complex life cycle which begins as larvae. These larvae, called glochidia, requires salmon or sea trout to host them for the first stage of their development.

They attach to the gills of trout in the River Tyne between late July and early August, where they remain until the following spring when they drop off the fish's gills. They need clean water and gravel, and well oxygenated water where they continue to grow.

The survival rate for juveniles has declined over the years, which has led to an ageing population, with few mussels under 50 years old.

This means they are a critically endangered species with only around 30,000 adult mussels in the wild in the North Tyne area, and 500,000 across the country.

This work at the hatchery is to try to increase the numbers of juveniles in the river, boost future numbers, natural reproduction and survival rates in efforts to halt the population decline.



Water quality improvements

After considerable investment, water quality has improved dramatically across the UK and rivers in England are the healthiest they have been for 20 years.

The improvements in water quality of the River Tyne and its tributaries has been excellent, and along with the continued work of the Environment Agency and partners, has resulted in improved conditions for natural breeding in the rivers, and a flourishing ecology.

[Kielder Salmon Centre pearl mussel project](#)

Richard added:

In 2010 we first managed to successfully get freshwater pearl mussel larvae to attach to the gills of sea trout. Since then we have released sea trout every spring to the River Tyne tributaries.

Over the next two years we will be carrying out surveys, looking for the first of these juvenile mussels that were released to see if or where they have survived.

Even at 7 years old they will be less than 3cms long, most of which will be buried under the river bed. In another 7 to 10 years they should be old enough to breed.

[Guidance: Heat Networks Investment Project \(HNIP\) pilot scheme](#)

Updated: The Sheffield District Energy Network project will now not go ahead.

The supported heat network projects provide heat to approximately 5,000 domestic customers and 50 non-domestic buildings. Of the domestic customers on the supported networks, approximately 2,500 will see bill savings against the counterfactual heat source and, of the non-domestic customers, 19 will see savings. A total of 216,324t CO₂ will be saved over the next 15 years, across all 9 heat networks. Total heat supplied annually by these networks will be around 85,000 MWh/year.

[Find out about more heat networks and other funding available.](#)

The pilot

The Heat Networks Investment Project (HNIP) pilot ran from October 2016 to March 2017. We are building the lessons from the pilot into the main scheme design and delivery approach.

Update: The Sheffield District Energy Network project will now not go ahead. [See the project update for further information.](#)

The main scheme

The £320 million HNIP capital investment programme is expected to support up to 200 projects by 2021 through grants and loans and other mechanisms and to lever in up to £2 billion of wider investment, reducing bills, cutting carbon and forming a key part of wider urban regeneration in many locations.

The main funding round will open and start receiving applications in autumn 2018, with first year funding to be allocated by March 2019.

Applications were limited to local authorities and other public sector bodies during the pilot phase. We expect the main scheme will have a wider scope. Eligible sponsors could include the private sector, community groups and not-for-profit groups.

Press release: Appeal for information following pollution in Hampshire

The Environment Agency were alerted to a pollution of oil on the River Anton close to Andover College on 4 April.

Since then, Environment Officers have been working on site to determine the source and reduce the impact on the environment, and booms have been deployed across the river to contain the pollution.

Adam Fulton, Area Duty Manager for the Environment Agency, said:

Our Environment Officers are working hard at the site to manage the environmental impact, and at the moment we have had no reports of dead fish.

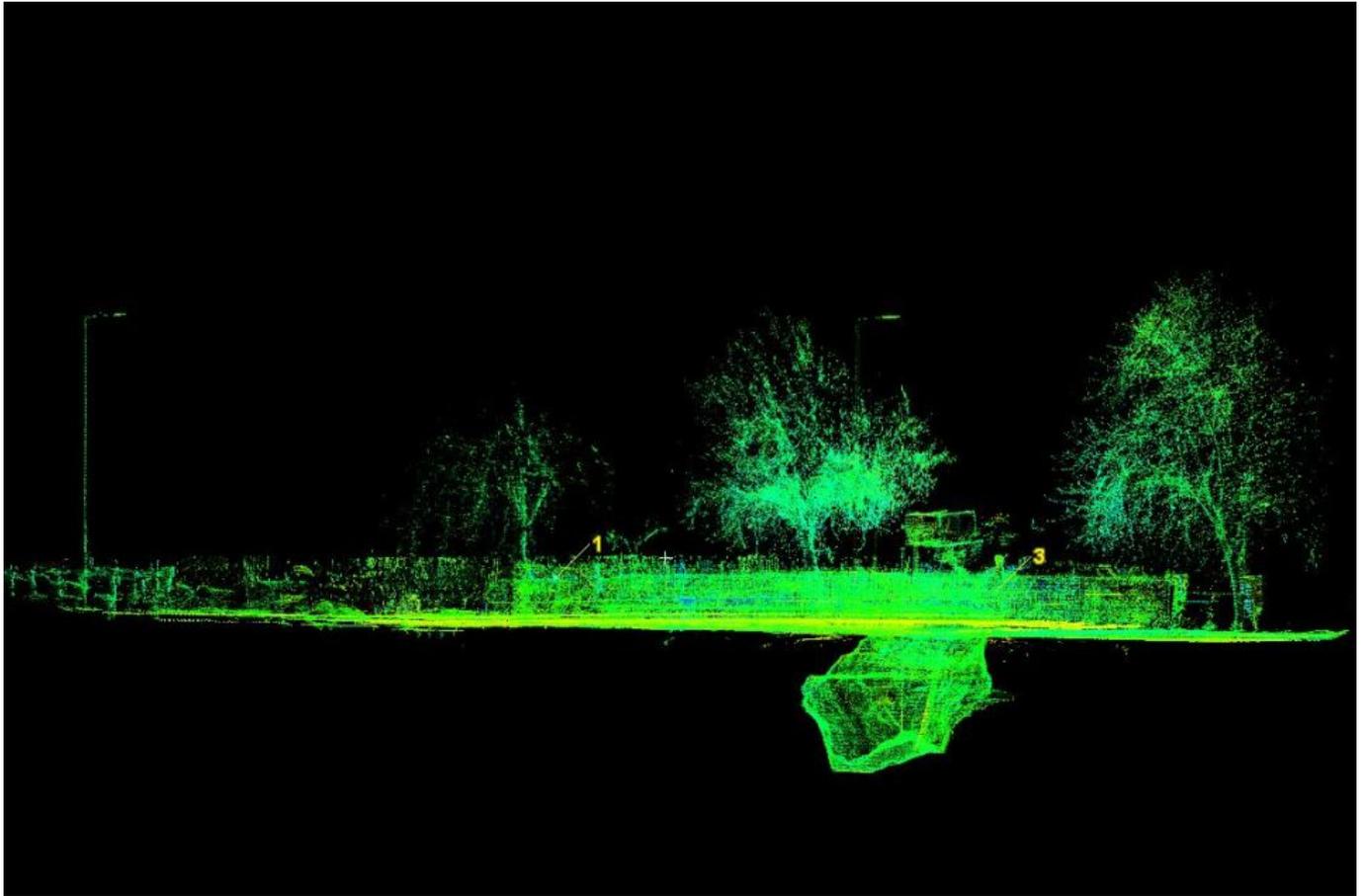
We will continue to investigate the source of pollution, and are asking anyone who might be able to assist our enquiries to call our Incident Hotline on 0800 807060.

News story: Laser technology used in works to secure mine shaft

Works are now complete to secure an unrecorded mine shaft, which caused a ground collapse at Kilbowie Road, Clydebank.

The collapse was caused by a mine shaft that was not detailed in historical mining records, but we believe that it was used to extract coal, limestone and iron ore over 100 years ago.

While only a 6 metre diameter hole was initially visible at the surface, investigations using laser scanning technology identified this led to a 200 cubic metre void on top of the unrecorded mine shaft, which went down a further 56 metres.



Laser scan showing the void beneath Kilbowie Road

The depth of the mine shaft is the equivalent to the height of 14 double decker buses stacked on top of one another.

Our team of experts designed a solution to safely:

- fill the shaft with 140 tonnes of stone and inject 217 tonnes of pressurised grout
- construct a reinforced concrete cap

This repair was further complicated by exposed utility services in the void that needed to be protected during the works. A fractured foul water sewer and storm water drain within the ground collapse also made the repair more complex, with water needing to be pumped over 150 metres around the void during the works.



The Coal Authority's works at Kilbowie Road, Clydebank

Tim Marples, Head of Public Safety and Subsidence, said:

"Our team has now completed works to secure the mine shaft and we've handed over the site to West Dunbartonshire Council who are leading on the road reinstatement works.

"It's been a complex repair project, but our team's been operating 7 days a week to ensure it was completed as quickly as possible.

"We'd like to thank residents for their patience while our works have taken place."

A West Dunbartonshire Council spokesperson said:

"Following the completion of the Coal Authority's repairs, work will begin to fill the void above the shaft, reinstate services, commence the road reconstruction and resurface the road.

"This phase of the repairs was anticipated to take up to 16 weeks, however, we hope to have completed this work by the end of June.

"If residents have any specific queries we would encourage them to email roads@west-dunbarton.gov.uk so that we can help."

Notice: Alwalton Lock: 150 metres downstream

When: until further notice.

What's happening: shoal approximately 150 metres downstream of Alwalton Lock.