

# DALRADIAN - HELPING TO PROTECT THE PEARL MUSSEL



**A clear commitment to clean water**

**Dalradian is proud to assist local community and conservation groups in safeguarding the environment. A priority is keeping the rivers and waterways clean to protect the freshwater pearl mussel, an endangered species found in Co. Tyrone.**

Freshwater pearl mussels are nature's litmus test for the cleanliness and purity of our rivers and streams. Formerly abundant in Europe and a common sight in Northern Irish waters this ancient mollusc is now classified as a critically endangered species. Only six populations remain in Northern Ireland and three – in the Ballinderry, the Owenkillew and Owenreagh Rivers – are in County Tyrone.

Historically, freshwater pearl mussels were over-harvested by pearl fishers. In addition, the mollusc's complex life-cycle makes it vulnerable to environmental change and impacts related to agriculture.

For the first nine months of its life, the freshwater pearl mussel attaches to the gills of young salmon and trout, before detaching and burrowing underneath the gravel beds of rivers and streams. Therefore, both a healthy fish population and a clean water system are essential for its survival.

The mollusc lives underneath a riverbed for its first four years, where it feeds on algae. During this critical phase, too much silt and sediment in the water will deprive the mussel of oxygen, and potentially cause suffocation or poisoning.

Eventually the young mussel works its way to the surface where it faces new challenges, such as the risk of being crushed when livestock enter the rivers to drink.

Remarkably, a freshwater pearl mussel can live for more than 100 years, but only in the cleanest rivers. So, by protecting the mussel we also are safeguarding the wider environment.

Over the past 5 years, through match funding and other support, Dalradian has provided £25,000 to community groups involved in protecting the species. We work with these groups on an ongoing basis, doing things like providing fencing and automated water pumps for livestock to prevent further damage to riverbeds, and taking part in outreach programmes to build awareness of the issue.

Our commitment to environmental sustainability is also apparent at our Curraghinalt exploration site, where Dalradian frequently goes beyond regulatory requirements for environmental protection. For example, water at the site is released under a water discharge consent from the Northern Ireland Environment Agency (NIEA). The consent specifies a maximum sediment content of 50mg per litre; typically, the sediment content in the water we discharge is less than 10mg per litre.

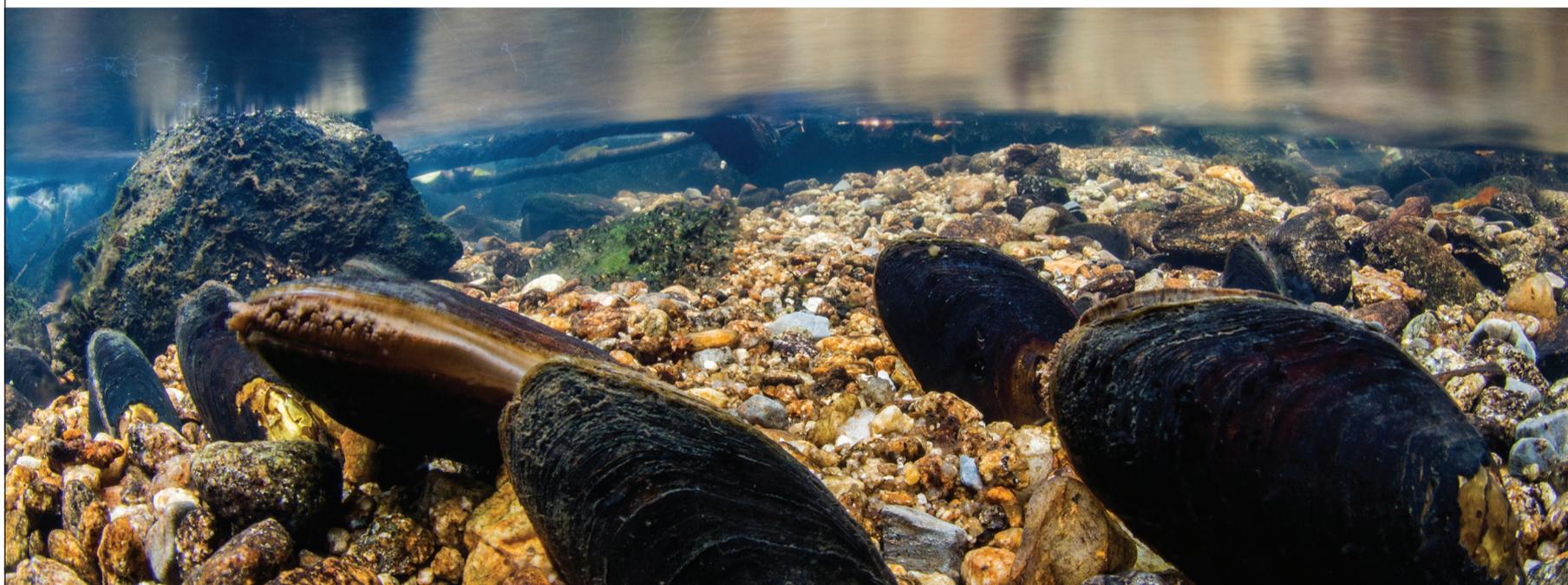
Dalradian also monitors the local river

network in west Tyrone, an area covering some 30 square kilometres. This gives us a benchmark for current water quality, so that going forward we can protect the water environment in accordance with EU Directives and local legislation.

In the coming weeks, we are preparing to submit a planning application for a gold mine at our proposed site off the Crockanboy Road between Rouskey and Greencastle. Our plans include a state-of-the-art water treatment facility that uses ultra-filtration and reverse osmosis technology. The resulting discharge will meet drinking quality standards for the compounds we monitor and control, helping to maintain a healthy river system.

Our application includes a commitment to monitor and protect the freshwater pearl mussels that live upstream from our project in the Owenreagh and Owenkillew rivers.

Dalradian's goal is for the fresh water pearl mussels to thrive in our local rivers for years – even centuries – to come.



**DALRADIAN**  
GOLD

DALRADIAN GOLD LTD.  
NORTHERN IRELAND OFFICE  
67 Main Street Gortin,  
County Tyrone,  
BT79 8NH  
Tel: 028 8164 8012  
Email: [community@dalradian.com](mailto:community@dalradian.com)

**World-class Mine  
Jobs in Tyrone**