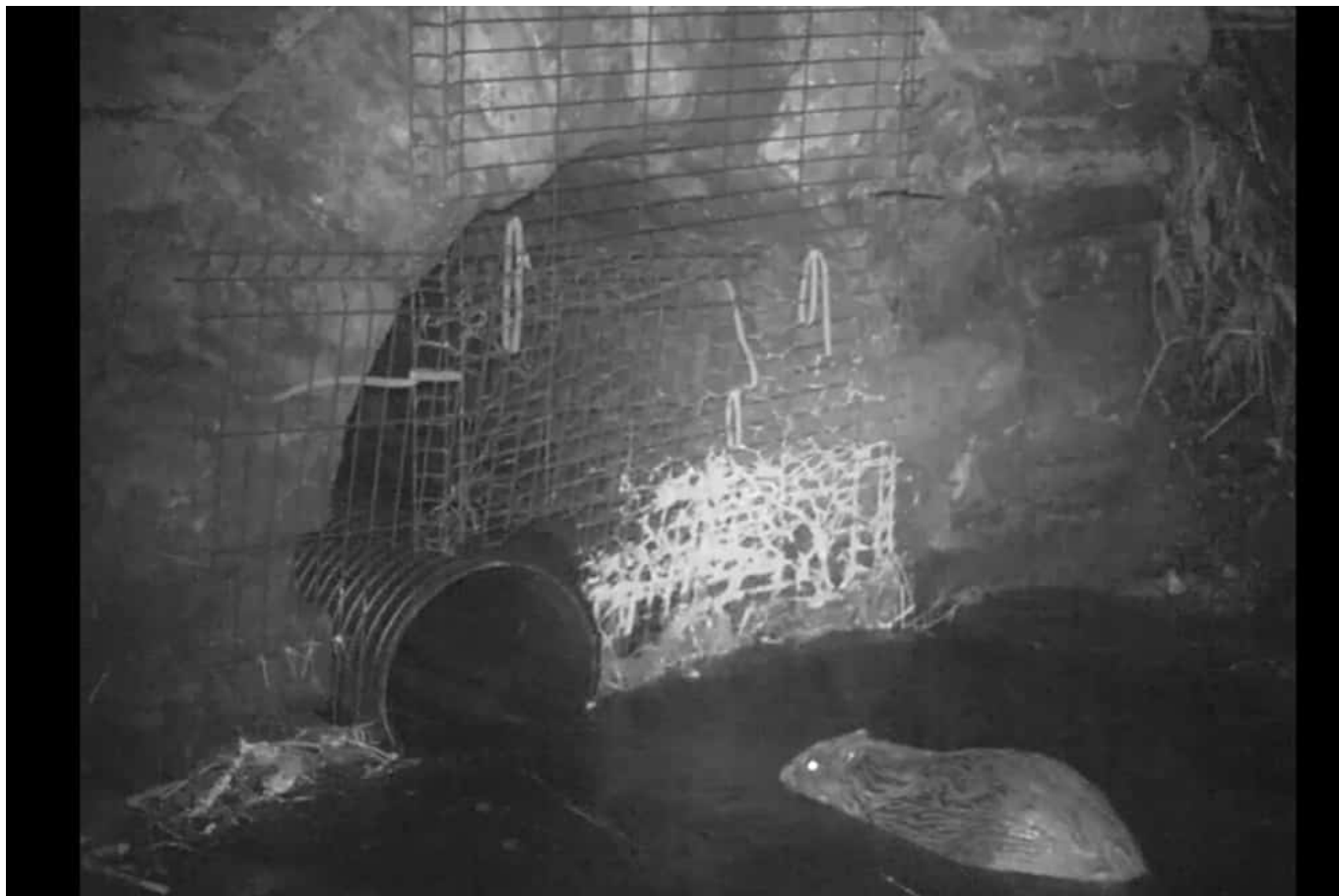


Network Rail builds Scotland's first 'Beaver tunnel' under the Highland mainline

July 23, 2021



Network Rail engineers have constructed what is believed to be the first 'beaver pass' in the country under the Highland mainline.

The new tunnel has been constructed to help the protected species pass under the railway and to help prevent flooding issues caused by the animals building dams across the railway's drainage culverts under the line.

As part of the project an additional 45mm pipe has been inserted through an existing larger culvert drain with wild mesh fitted either side to protect the railway while still allowing the movement of wildlife.

The Tay catchment around Perth has a growing beaver population and is a recent example of an area where their impact was felt on the rail network and a solution was needed to a flooding issue caused when a resident pair of beavers dammed a culvert under the track.

A culvert near Gleneagles was blocked by part of a beaver lodge – leading to flooding on an area of land which formed part of a Site of Special Scientific Interest (SSSI) designated for wet woodland, scrub and fen

meadow habitats.

After obtaining the appropriate licenses to work in the SSSI and working with species specialists at NatureScot, the Network Rail team pumped the water out of the area over a number of days before removing the 2m high 5m wide beaver dam by hand.

When the culvert was clear, the beaver pass was installed and wild mesh fitted at either side of the tunnel, in line with SEPA best practice guidelines for altering culverts, to enable wildlife, including beavers and otters, to pass safely under the railway.

James Morrison, ecologist, with Network Rail Scotland, commented: “To a beaver, a culvert probably looks like a hole in a dam – the barriers they build to restrict the flow of water – so they are very popular damming spots.

“The action we took near Gleneagles is the first beaver pass installed in the country that we are aware of. It is a repeatable solution which works to protect Scotland’s Railway as well as safeguarding the beaver populations and other wildlife.

“The beavers will naturally expand across Scotland and as they do it is possible they could occasionally impact Network Rail’s infrastructure through felling trees on to the line, flooding caused by their dams or burrowing into railway embankments. However, they are an important keystone species and we need a proactive approach and sensitive solutions that allow us to co-exist.”

Network Rail’s Ecology team has been praised for its work to co-exist with Eurasian beavers – listed as a European Protected Species – while keeping Scotland’s railway safe.

NatureScot advised Network Rail throughout the process. Dr. Roo Campbell, a member of NatureScot’s Beaver Mitigation Team, said: “Beavers are an important component of a healthy ecosystem whose presence usually brings a host of benefits, including creating ponds and wetlands where other species thrive, alleviating downstream flooding, and improving water quality.

“But occasionally they can cause issues. Our team advise on and provide mitigation against beaver issues across Tayside, but this situation is definitely one of the most challenging we’ve faced.

“We are pleased that Network Rail have been so proactive in working to live with the beavers at the site. NatureScot will continue to monitor the effect the beavers have on the SSSI.”

Photo and video credit: Network Rail