



DFM 6.1 Doppler Flow Meter Provides Flow Confirmation for Eel Pass in the United Kingdom.

In the UK, there has been a big focus on delivering eel passes. An eel pass is a waterway modification constructed to mitigate the effects of obstructions, especially manmade weirs, on waterways, watercourses, ditches, drains, channels, and flumes, on the movement of eels, fish, and elvers. The UK Environment Agency has guidelines for the design of eel and elver passes for employment in weirs, tidal flaps, and gate and sluice structures. Eel and elver passes have a dual purpose. By separating the eel traffic in the flow of water, more accurate measurement of eel and elver migration is made possible.

Clamp-on Doppler Flow Proves Reliable

The Environment Agency was looking for a solution to stop tripping low flow signals, with a view to reduce callouts and provide a more robust measurement and continuous monitoring routine. Their current flow solution was failing to register low flow on the Colchester Eel Pass, in Essex, which subsequently tripped low flow alarms resulting in a number of costly callouts.

To work effectively, eel and fish passes need to direct the flow of water through the structure so that it is not too fast or too turbulent for the eels to comfortably swim through. Eels and elvers are not particularly known for their swimming ability, and their ability to pass a difficult flow condition is limited. Although the eel can sometimes make use of weak flows on rough surfaces or those covered with vegetation, its passage is often compromised by many situations.

Fishways for elvers and eels are often composed of two sections, and is usually kept permanently moist either by using water fed by gravity from the upstream



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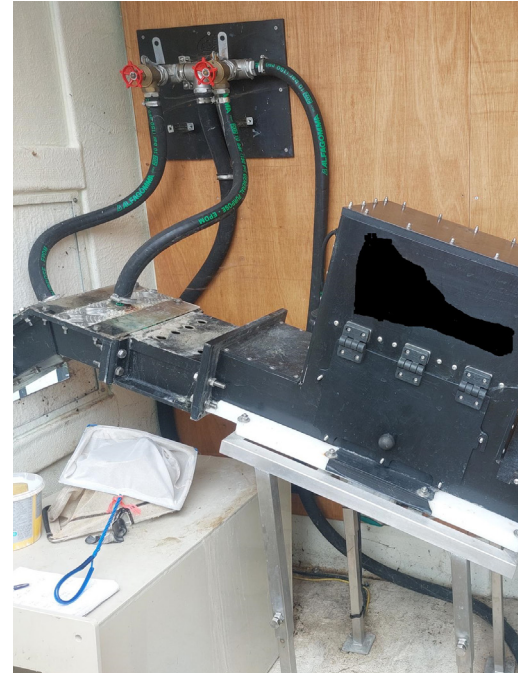
impoundment, or else by sprinkling. The small flow required for moistening the surface is complemented by a more significant flow injected near the base of the ramp for the purpose of attracting migrants to the entrance of the pass, which is why having an accurate and reliable flow measurement solution is so important for these fishways.

DFM Provides Flow Confirmation

The Environment Agency was having trouble with their flow measurement solution on the Eel pass in Colchester as it wasn't registering the low flows that were being seen on the system. After conducting a trial with the PDFM 5.1 Portable Doppler Flow Meter, where the low flows were picked up immediately, they decided to purchase a fixed DFM 6.1 Doppler Flow Meter.

The DFM 6.1 Doppler flow algorithm filters out background noise and interference. The high-speed digital signal processor discriminates against weak and distorted signals for increased reliability and accuracy. Each DFM 6.1 Doppler Flow Meter includes a clamp-on ultrasonic sensor, an adjustable stainless steel mounting clamp, and sensor coupling compound. The sensor fits on the outside of any pipe diameter 12.7 mm (0.5 in) or larger. It takes just a few minutes to install, with no need to shut down the flow or cut into the pipe.

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More Information

DFM 6.1 Doppler Flow Meter: <https://pulsarmeasurement.com/en/dfm-6-1>



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