



Nant Cae Dudwg – Culvert Inlet Upgrade (2024)

Flood Alleviation Scheme delivered to reduce the risk of ordinary watercourse and surface water flooding to 11 residential and 3 commercial properties in the Cilfyndd area.

Scheme Summary	
Strategic Flood Risk Area	Lower Taf
Location	Nant Cae Dudwg, Cilfyndd
Properties benefiting	11 residential and 3 commercial properties
Type of scheme	Culvert Inlet Upgrade
Cost	£44,030
Contractor	DT Contracting
Status	Completed
Scheme Completion Date	January 2024
Funding Source	Welsh Government FCERM Small Scale Scheme



Culvert Inlet Upgrade – Nant Cae Dudwg Flood Alleviation Scheme 2024 January 2024

Scheme Background

The area of Cilfynydd associated with the Nant Cae Dudwg ordinary watercourse has been subject to several flooding events in recent years, the most significant incident occurring on the 15th and 16th February 2020 following Storm Dennis, where 8 homes were internally flooded up to depths of 1.5 – 1.8m, associated with the overtopping of the watercourse.

Cilfynydd is noted as an area of high surface water and ordinary watercourse flood risk based on Natural Resources Wales's (NRW) Flood Risk Assessment Wales (FRAW) maps and is identified as the 128th most at risk community for ordinary watercourse and surface water flooding in Wales according to the Communities at Risk Register (CaRR), which was developed by NRW to provide an objective means of identifying risk and prioritising flood risk management activities at a Wales-wide, community level.

Scheme Description

The aim of project was to **improve the resilience of the current drainage system at Nant Cae Dudwg to deal with higher volume of water**, especially during times of heavy rainfall such as those experienced during Storm Dennis in February 2020. These works were facilitated in addition to the [Nant Cae Dudwg Flood Alleviation Scheme completed in 2014](#) and the [scour protection works completed in 2022](#).

The scheme delivered an enhanced culvert inlet structure at the Nant Cae Dudwg watercourse that focuses on the control of debris via a **debris screen enhancement**, the **installation of a new overflow network** in addition to a new **overland conveyance route within the inlet area**. In the event debris builds up on the headwall grill, the water has an alternative route into the downstream network, thus reducing the risk of the watercourse overtopping and causing flooding to properties.

These enhancements aim at improving the resilience of the current drainage system to deal with higher volumes of water especially during times of heavy rainfall by providing an alternative route for the water to enter the drainage network in the event that debris builds up on the grill face causing an obstruction.

Scheme Benefits



Reduced flood risk to **14 properties**



Reduces the risk of debris entering the culvert network and causing blockages



Provision of an **overflow network and alternative flood water route** in the event of a blockage at the culvert inlet



Improved the resilience of the culvert inlet and network to deal with higher volumes of water



Facilitated enhancements to the culvert inlet debris screen



Reduced whole life **maintenance costs**