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(article written by the Acting Bulletin Editor)

The Dolgarrog Dam Disaster

November 2nd 2025 marks the centenary of the Dolgarrog dam disaster.

Planning for an aluminium works at Dolgarrog began during the 1890s with reservoirs in Snowdonia providing water for the adjacent hydro-electricity plant.

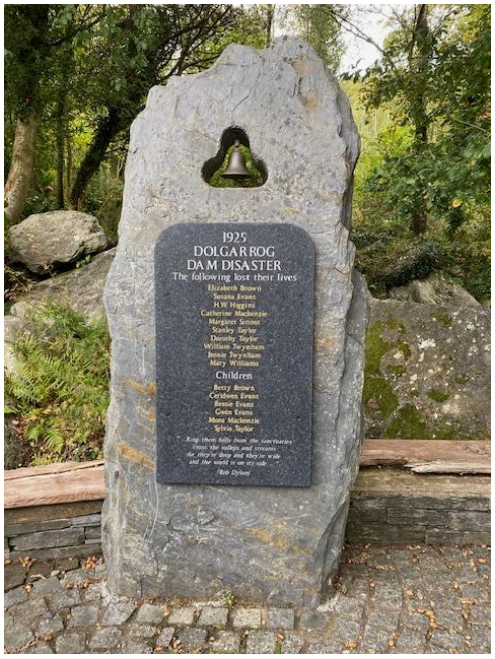
In 1907 aluminium reduction ("Aluminium smelting") began in the works utilising electricity from the distant Cwm Dyli power station, and in 1916 a rolling mill was added. In 1924 a hydro-electric plant was built next to the aluminium works. By this time, water was supplied through two pipelines: one from Coedty Dam on Afon Porth-llwyd to the west of Dolgarrog and the other from Cowlyd Dam a little further away to the south west. Coedty Dam was completed in 1924. A dam further west on Afon Porth-llwyd, at the head of the river at Llyn Eigiau, had been completed in 1911. The two pipelines ran towards each other and then descended, in parallel, down the steep incline towards Dolgarrog,

Near Left: A view down the Dolgarrog incline in the spring of 1924. The pipeline from Coedty Dam is to the left. The second pipeline and the new power station are both under construction (image from '*Dolgarrog An Industrial History'* Eric Jones & David Gwyn. Gwynedd Archives, 1989)

Far Left: looking up the incline. Date unknown but prior to the second pipeline.
(Gwynedd Archives)

On 2nd November 1925 the failure of two dams caused a flood that swamped the village of Dolgarrog. The disaster was started by the failure of the Eigiau Dam. Water released from the reservoir flooded downstream, and overtopped the Coedty Dam. This dam also subsequently failed, releasing the huge volume of water (up to 350 million cubic metres) that flooded Dolgarrog. There were 16 deaths: 10 adults and 6 children. Many more villagers could have been killed had they not been at work or in the local theatre watching a film that night.

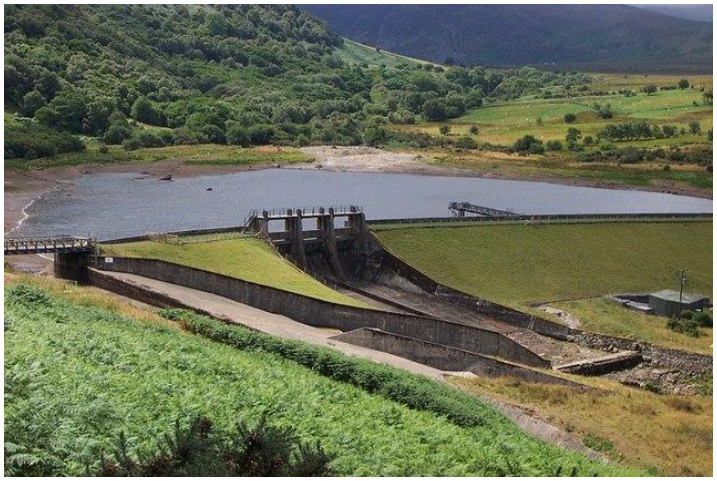
The Eigiau Dam was not fully repaired, instead a tunnel was built, opened in 1928, connecting Llyn Eigiau to Llyn Cowlyd. The outflow from Llyn Eigiau is the Afon Porth-llwyd which flows to Coedty reservoir and then either through the pipeline or directly into the Afon Conwy.



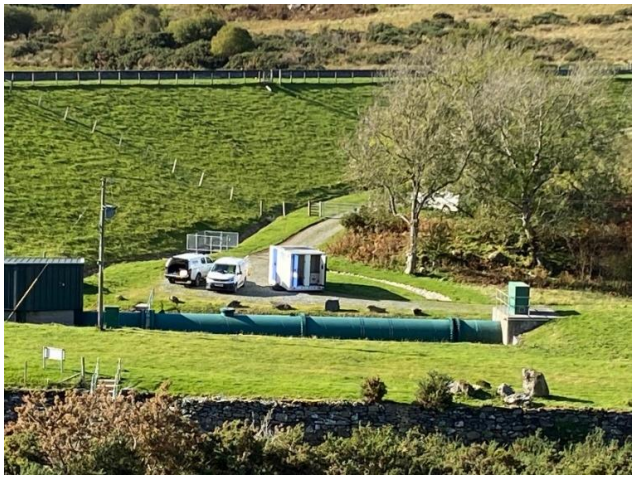
The memorial at Dolgarrog (Roger Brice)

The disaster at Dolgarrog led Parliament to pass the Reservoirs (Safety Provisions) Act 1930 which introduced laws on the safety of reservoirs. This has since been updated, and the current law is the Reservoirs Act 1975

The new Act applied to reservoirs holding more than 5 million imp gal (0.023 million m^3) and mandated that construction had to be supervised by a qualified engineer and the filling of the reservoir also had to be supervised and certified. It also set out for the first time an inspection requirement that every qualifying reservoir had to be inspected every ten years by an engineer included on a published list or panel of engineers. These panels were compiled by the relevant Secretary of State in liaison with the President of the Institution of Civil Engineers.



Coedty Dam by Terry Hughes, CC BY-SA 2.0, https://commons.wikimedia.org/w/index.php?curid=9339999



The pipeline and embankment at Llyn Coedty (Roger Brice)

Explaining the flow of water today into and between the three reservoirs is beyond the scope of this short article. The extensive changes made following the disaster of 1925 are explained, with maps, in the book by Eric Jones and David Gwyn (‘*Dolgarrog An Industrial History’* Gwynedd Archives, 1989)).