





## SUCCESS STORY:

AX-S™ CITADEL LPCB WATER COVERS AT A NEW STATE OF THE ART WATER FACILITY



Project: LLywn Reservoir and Pumping Station

Client: Dee Valley Water

**Contractor: Farrans Construction** 

Products used: AX-S<sup>™</sup> CITADEL LPCB Water Covers

Llwyn Onn is Dee Valley Waters' largest water treatment works, supplying water to people in Wrexham and the surrounding area. Dee Valley Water have just completed the construction of a new water treatment facility, with contractor – Farrans Construction, to replace the aging existing reservoir, pumping station and associated infrastructure.

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Llywn Onn WTW was constructed during World War II, to supply water for a munitions factory in Wrexham. Water is abstracted from the River Dee and pumped to the Marchwiel Reservoir before treatment at Llwyn Onn.

Although the works at Llwyn Onn has provided consistent service, age and structural condition dictated replacement. Rather than refurbishing the existing process plant an entirely new treatment system was deemed essential.

The new reservoir tank completed at the site is 74m long, 32m wide and 6m high that can hold 12 million litres of water. Cubis Systems supplied high-security access covers for the reservoir.

The covers from Cubis are part of their AX-S<sup>™</sup> access cover range, known as Citadel. Citadel Upstand AX-S<sup>™</sup> Hydroloc LPCB steel fabricated covers were chosen for this project due to their high quality, safety and security features.

The Citadel cover range is available in an 'upstand' and 'solid top' type design. The upstand access covers were chosen and fitted on top of the roof of the finished reservoir providing fully waterproof access points. A total of 12 access covers were installed on top of the newly built water treatment facility.

The Citadel covers are prevented from slamming shut by the presence of a safety arm with manual pull. Opening of cover leaves is aided by a torsion spring and a lifting handle which makes it safer to lift. Cubis' Citadel cover is rated to Level 4 of LPS 1175, suitable for protecting Critical National Infrastructure sites.

Cubis Systems products were also used in this major infrastructure overhaul. With underground access around the site, Cubis supplied. STAKKAbox™ ULTIMA Connect access chambers.



This product offered a quick, easy to install underground system, enabling easy access and connectivity to the networks around the existing site.

The STAKKAbox<sup>™</sup> range, which includes ULTIMA Connect chambers, offers a flexible access chamber system with no compromise on strength. Due to the design and the material used (GRP), they can be used anywhere where sidewall loading is a concern.

The STAKKAbox<sup>™</sup> ULTIMA Connect system provides contractors with a means of constructing access chambers quickl, whilst offering improved build quality, reduced defects and enhanced site safety performance. Using the STAKKAbox<sup>™</sup> system, complete chambers can be constructed from excavation to reinstatement in less than one hour.

Dee Valley Water is one of England and Wales' ten water supply companies and was formed in 1997 with the merger of the Chester Water Company and Wrexham Water Company. The utility serves approximately 258,000 customers in a 831km<sup>2</sup> area of north east Wales and north west England. Dee Valley Water currently supplies 23 million tonnes of water per year.

The River Dee is the utility's principal source of water, supplying 90% of annual requirements. Water is also obtained from eight impounding

reservoirs which are fed from collecting grounds on the local hills and around Llandegla, and two small groundwater sources. Along with the impounding reservoirs the utility's asset base includes 6 treatment works, about 2,000km of mains, 36 service reservoirs and 28 booster stations. Llwyn Onn, the largest of the treatment works, supplies 98,000 people in and around Wrexham.

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