

## **Leakage investigations at Lower Carno dam**

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**SYNOPSIS.** Lower Carno reservoir is situated 3 km north of Ebbw Vale. The 27 m high dam, completed in 1911 to the designs of GF Deacon, has a central puddle clay core supported by shoulders of clay and stony material. The dam has had a history of leakage and a succession of remedial works has been carried out.

In January 2005 operations staff, who visit the reservoir on every working day, notified the supervising engineer of increased flows in the toe drains. After investigations to trace the source of the flows were unsuccessful and the rate of leakage increased rapidly, it was decided to empty the reservoir.

This paper describes the history of the reservoir, indicators of the leakage that were observed, the conclusions reached to date on the pathway of the leakage and the ground investigation being undertaken to confirm potential remedial options.