

Barrow Compensation Reservoir Grouting Works

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SYNOPSIS.Barrow Compensation Reservoir has a long history of leakage and remedial works. The 12m high embankment dam, constructed in 1863, was eventually emptied in 1882 after many attempts to stem leakage. The reservoir has normally remained empty since this time, but the reservoir can substantially fill under flood conditions. Some doubts that were raised in relation to dam safety under flood conditions led to the development of a comprehensive grouting programme to seal both the puddle clay core of the dam and its rock foundation in 2004-2005. The paper summarises the history of remedial measures at the dam, and describes the site investigation works carried out to scope and measure the effectiveness of the remedial measures. The paper discusses the effectiveness and limitations of the remedial works carried out and the implications for the future monitoring.