

The identification and sealing of a leak in the Ardnacrusha headrace canal containment embankment

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SYNOPSIS. The 11.5km headrace canal servicing Ardnacrusha Hydro Station in Co. Clare, Ireland, was constructed during the period 1925-1929. The canal is partly through rock cut but is largely contained by earthen embankments. Over the lifetime of the headrace, seepage problems have been remedied through leakage route detection and grouting programmes. This paper discusses the recent development of a significant leak and the thermal leak detection procedure adopted to identify the route of the leak through the embankment. The steps taken to seal the leak using gravity cement grouting are also described.