



Drinking Water Quality Regulator  
for Scotland

# Incident Summary

Balmore E RSZ  
Discolouration  
20<sup>th</sup> April 2022

DWQR Inspector:  
Moira Malcolm

Event No. 12532

## Event Category: Significant

Scottish Water planned an operation on 20th April 2022 to isolate and service Springfield pressure reducing valve (PRV) in Balmore E RSZ at Linlithgow. During the bypass operation a burst occurred upstream of the PRV losing in excess of 100 litres per second. The upstream isolation valve was partially closed to protect Preston Distribution Service Reservoir (DSR) and flow diverted from the burst site. This did not significantly increase pressure to the affected Springfield District Meter Area (DMA), so Linlithgow North was back fed to supplement the supplies at Springfield. The main was repaired, recharged and the backfeed removed.

Between 20th and 24th April, a total of 76 consumer complaints for discoloured or cloudy water were received by Scottish Water from the affected area. Failures were recorded in distribution from 3 DMAs for turbidity (9.5NTU), aluminium (400mg/l), iron (1923mg/l) and manganese (249.3mg/l).

Scottish Water's investigation concluded that the discolouration and PCV failures were caused by disturbance in the sediment in the main due to the change in flow and pressure from the burst main, backfeed, and the drawdown of the main during this time. The burst main was most likely caused by the PRV maintenance downstream which caused pressure changes when valve alterations were made.

The event has been categorised as significant. Scottish Water has identified three actions which DWQR accepts are appropriate and will monitor to ensure they are completed prior to signing off the incident. DWQR made no additional recommendations.

