



Drinking Water Quality Regulator  
for Scotland

# Incident Assessment

Stornoway PWSZ  
Discolouration  
25 March 2014

DWQR Inspector:  
Matt Bower

Event No. 5904

## Event Category: Significant

### Summary of Incident

As part of work to rehabilitate water mains in Stornoway town, a valve was operated at Airigh na Lic service reservoir in order to enable work to commence. This had the effect of unexpectedly restricting the flow of water to the pumps supplying the Marybank area of Stornoway, cutting off the supply of water. When this was realised, the valve was opened creating a surge effect that scoured deposits in water mains and led to approximately 3000 people receiving discoloured water in a part of Stornoway, with 14 calls received by Scottish Water's contact centre.

### DWQR Assessment of Cause of Incident

DWQR is of the opinion that this is a classic example of what can happen when network valves are operated with inadequate understanding of system hydraulics and minimal forward planning and risk assessment. It should have been clear to operational staff that such an activity carried risk, and steps should have been taken to minimise this risk. This should have involved consulting an appropriate hydraulic network model for the system.

### DWQR Assessment of Actions Taken by Scottish Water

Targeted flushing enabled water to be running clear within five hours. Scottish Water has changed the way in which the distribution system at the service reservoir operates to reduce the risk of a recurrence. A programme of flushing and assessment has been undertaken in Stornoway Town to assess and prioritise the risk from discolouration. Finally, the procedure for valve operations at the Airigh na Lic service reservoir has been amended to reflect the lessons learned from this incident.

DWQR considers these actions to be appropriate and notes Scotland-wide efforts by Scottish Water to reduce the impact of valve operations on distribution system quality.

The event has been categorised as significant.

