

Daer Camps A RSZ Discolouration 14th October 2021

DWQR Inspector:
Andrew Kennedy

Event No. 12156

Event Category: Significant

Overnight on 14 October 2021, a planned isolation of a 15" main in the Daer Camps A RSZ was carried out to install two tee pieces for the diversion of the existing pipe due to the risk of the carriageway slipping and causing structural damage to the main. The DOMS (Distribution Operation and Maintenance Strategy) Impact Assessment Form (IAF) for the work was authorised by Scottish Waters Network Control, with a backfeed and tankers in place to maintain supplies overnight, and with the work to be completed and water main recharged between 5:00 – 6:00am.

The work over-ran with the backfeed not returned to normal until 8:10am. A total of 213 water quality contacts were received across 5 District Meter Areas (DMA's) on 15 October 2021 and 16 October 2021, with 207 of those contacts reported as discolouration. 31 samples were taken between 15 – 17 October 2021, with six failing for manganese (248.8µgMn/l) and one failing for iron (275µgFe/l).

Overnight on 14 October 2021, a planned isolation of a 15" main to Overtown and Netherton DMAs (District Metered Area) took place, to install two tee pieces as part of a mains diversion. In order to maintain water supplies whilst this work took place, a backfeed was introduced from Greenhills DSR to the North of the isolation, and a tanker was deployed to the South of the isolation for a small number of properties directly fed from the isolated main.

A DOMS IAF valve schedule form was submitted to Scottish Waters Network Control and approved with what Scottish Water believed to be acceptable contingencies in place to



maintain supplies and reduce the impact of the isolation, along with undertaking advanced flushing either side of the boundary valve to eliminate dead legs of main either side of the valve. The isolation was undertaken overnight, with the backfeed introduced after 22:00pm and the work completed and water main recharged by 6:00am.

2 Contractor squads and 2 Scottish Water teams were in attendance, so that tee pieces could be installed simultaneously at each end of the diversion. Scottish Water's assessment indicated that the only aspect of the work which did not go to plan was the time taken to cut through the original 15" CI main using a Stihl saw and tie into the new pipe. As a result of this delay, the backfeed was not closed by 6:00am as planned, with the normal direction of flow being restored at 8:10am.

It is clear that this incident was caused by the over-run of a planned intervention, which resulted in the backfeed from Greenhill DSR still being in place through morning peak demand. This failure to return the network to its normal direction of flow before peak demand resulted in increased flows through the 15" main out of Greenhill DSR above the conditioned flow of the network and stripping of biofilm and particulates causing discolouration across 5 DMAs.

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 two additional recommendations.

