

## Carron Valley WTW - Algae Control

16/06/2021

**DWQR Staff Present**

Colette Robertson-Kellie, Ursula Jackson (Scottish Government)

**Scottish Water Staff Present**

Scott Gibson, Lorna Macarthur, Kelly Borthwick, David Connolly,  
David Seales, Graham Gow

### Summary of Inspection

#### Overall Summary

The Carron Valley supply has a history of consumer contacts for taste and odour caused by algal blooms from the supplying raw water reservoir, Carron Valley Reservoir. As a result, Scottish Water has installed an air curtain at the reservoir to disrupt algal growth, and monitors geosmin, MIB (Methylisoborneol), Asterionella, Chlorophyll A, Melosira, Soluble reactive Phosphate and Total Algal Cells. Raw water and final water are sampled three times a week, interstage (clarified and filtered) twice a week. An Operational Response Plan has been developed that sets out the steps that different teams within Scottish Water should follow in order to manage risk from algal blooms in the reservoir.

The air curtain was installed on the 1st May 2020, and to date appears to be working well. There were no taste and odour incidents in 2020, and the Senior Operator advised that since the air curtain was installed there have been no sightings of algal blooms on the edge of the dam, where previously they were clearly visible in algae season. The air curtain remained operational over the winter months. It is powered by diesel generator, but investment has been approved to install an electricity supply.

Regular water quality monitoring shows a reduction in geosmin and MIB in 2020 when compared with 2019. Exception reports highlight exceedances of the geosmin raw and final trigger levels, and the Operational Response Plan (ORP) for the site is activated when this happens. The ORP is well written, and operational staff managing the site clearly know what is required of them. The ORP would benefit from having a flow chart to make the process clearer, and there are plans to add the procedure to TOMS, which would formalise ownership and document control of the Plan. Rosshire Engineering continue to operate the temporary powdered activated carbon (PAC) plant, which has been significantly upgraded since the last DWQR site visit to make it compliant with the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). At the time of the inspection, PAC was not being dosed as it was not needed, but water was being flushed through the PAC plant. Rosshire Engineering are on standby. The process scientist works closely with personnel on the site to set the PAC dose, and the dose calculation is stored on Sharepoint so others can access it. Supernatant return is diverted to the local watercourse, with the relevant discharge consents.

As previously observed at the site, good team working is evident.