

Barra WTW WTW Audit May 2025

An excellent, well run treatment works. Although the treatment process is relatively simple, stable raw water quality and careful management enables a very high quality of water to be produced.

Overview

Barra has one water treatment works, abstracting from Loch an Duin, next to the WTW. Treatment consists of Dynasand and chlorination followed by chloramination. Treated water pumped up to complex arrangement of clear water tanks at top of hill.

Site and Staffing

One operator - currently recruiting for a second. All Blue cards in order. Site in reasonable structural condition.

Raw Water

Raw water fairly consistent due to size of Loch. Monitoring for turbidity and pH. pH usually in range 6.2 - 6.8 - correction done with soda if necessary.

Chemical Dosing and Treatment

Most chemicals are shipped in small packaged amounts due to island situation.

The Dynasand appear to be performing extremely well, helped no doubt by the stable raw water quality. Turbidities were reading approx. 0.06NTU off the dynasands. Supernatant is returned to the head of the works, with a shutdown at 10NTU, although when viewed it was

much less than this (2.62). It is clear that the treatment process is closely monitored and well managed.

Disinfection

Disinfection uses hypochlorite, before water enters the contact tank. After this, ammonium sulphate is added and water enters the balancing tank and then the clear water tank. Final total chlorine residual was 1.13 on the day of the audit. Chlorine dosing operates on mode 4, full residual control.

Housekeeping and Recording Information

Calibrations of all instrumentation were done, and recoding was exemplary; among the best seen anywhere. The works was extremely tidy.

Water Storage

The clear water tank is situated above the WTW and appears complex in arrangement

DWQR identified eight findings. Proposed interventions to address DWQR's findings, along with completion dates and any interim mitigations that will be put in place have been agreed with Scottish Water.

DWQR will monitor completion of agreed interventions, and may request evidence of completion or re-visit the site.

