

CASE HISTORY

Badachro & Inverasdale WTW

End User	Scottish Water
Process	Nanofiltration, Remineralisation
Application	Production of Potable Water



Introduction

This project was for the design, installation and commissioning of two turnkey water purification plants for the Scottish Water's treatment works at Badachro and Inverasdale.

Description

Each plant was constructed to produce 200m³/day of high quality drinking water from brackish Highland river water with variable, but generally high levels of suspended solids and colouration. The plant at Inverasdale is designed and built to be readily expandable to 400m³/day.

Both plants combine pre-filtration, chemical dosing, ultrafiltration and remineralisation to produce a high quality permeate, capable of meeting Scottish Water Supply Quality Standards.

ACWA has incorporated a number of design features which extend the life span of spiral wound membrane Systems. These features will ensure continuous operation at optimum efficiency with reduced downtime for maintenance.

The ACWA prefiltration process includes an automatic 15 micron filter, designed to minimise operator intervention and reduce the high running costs normally associated with the use of cartridge filters.

As the infeed water is expected to contain high levels of suspended solids, automatic backwashing will be initiated by excessive differential pressure.

A carbon dioxide dosing system will reduce the pH and membrane fouling is minimised by periodic chlorine dosing.

The quantity of reject water and washwater is kept to a minimum and meets the SEPA requirements for discharge. Other membrane systems have been installed for Scottish Water and many other UK water companies.