

# CASE HISTORY

## Port Charlotte WTW - Islay

**End User** Scottish Water  
**Process** Clarification and Filtration  
**Application** Production of potable water



### Introduction

ACWA was awarded this contract from Scottish Water to increase the treatment capacity of Islay's Port Charlotte WTW and tend the island's water distribution capability by constructing additional pumping stations and service reservoirs.

### Description

The surrounding communities are served from the existing Torra water treatment works by new pumping and service reservoir facilities. As part of the upgrade project ACWA designed and supplied, installed, tested and commissioned two Flat Bottomed Clarifiers each sized to effectively treat 50% of the new design flow.

The treatment process includes pH correction, coagulation, clarification and filtration. An additional Rapid Gravity Sand Filter was also installed. As part of the total contract, ACWA also supplied and installed new inlet pipework and all associated instrumentation and controls.

In addition the modifications and process extensions ACWA installed pumping stations at Blackrock and Port Ellen and service reservoirs at Skerrols and Tighandrom. Blackrock pumping station feeds the Skerrols service reservoir with water from the Port Charlotte WTW, whilst Port Ellen pumping station feeds the Tighandrom service reservoir with water from the existing Torra WTW. Both reservoirs are constructed of welded profiled steel sections, bolted and sealed to a reinforced concrete base.

#### TYPICAL RAW WATER QUALITY

Iron	500-2000µg/l
Colour	50-200° H
Turbidity	1-10 FTU

#### FINAL WATER

Iron	<50µg/l Fe
Colour	<5° H
Turbidity	<1.0 FTU