

Project Profile - Utilities



PROJECT

**Pontsticill Water Treatment Works,
Merthyr Tydfil, Wales**

SUMMARY

Repair and protection of secondary filters

PRODUCTS

**Monolevel 844SP
Cementitious Coating 851**

CLIENT

Dŵr Cymru Welsh Water

CONTRACTOR

Stonbury

BACKGROUND ►

Pontsticill Water Treatment Works, operated by Dŵr Cymru Welsh Water, is located within the boundaries of Brecon Beacons National Park. Drawing water from the Pontsticill Reservoir, it holds up to 3,400 million gallons for supply throughout South Wales. The original Water Treatment Works was built in 1927 but this was superseded by a new treatment plant completed in 1995, consisting of a DAF (Dissolved Air Flotation) plant and primary and secondary rapid gravity filters.

Investigations in 1998 revealed that wash-water volumes were greater than expected due to erosion of the concrete. Analysis of the concrete confirmed that an average of 5mm had been eroded and aggregate was exposed due to the aggressive nature of the water.

THE SOLUTION ►

Flexcrete products were chosen to reinstate the integrity of the secondary filters, due to their proven track record of protecting structures subjected to aggressive water. Rapid application and quick curing properties were also crucial, as repairs on the eroded concrete took place whilst the Water Treatment Works was still in operation. **Monolevel 844SP**, a fully waterproof, engineering quality fairing coat, was initially used as a levelling coat before the application of **Cementitious Coating 851**. This two component, waterborne cementitious modified polymer coating also benefits from microsilica inclusion which reacts with lime to form insoluble hydrates, thereby protecting the concrete from leaching and erosion with aggressive waters.

In addition to its excellent chemical resistance, a 2mm coating of **Cementitious Coating 851** resists 10 bar hydrostatic pressure (100 metre head of water) and provides the same degree of waterproofing as 1000mm of good quality concrete. Both **Monolevel 844SP** and **851** are CE marked in accordance with EN 1504 and are approved under Regulation 31(4)(a) for use in contact with drinking water. The application of Flexcrete products at Pontsticill will provide effective waterproofing and protection for many years to come.



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