

Ashford Water Treatment Works

Case study

Focus products: Intercrete® 4841, Intercrete 4810

Location: Somerset

Client: Wessex Water

Contractor: Ultimate Coatings Limited

Summary: Repair and protection of concrete water tanks



Background

Wessex Water supplies 1.3 million people in the South West of England with around 284 million litres of water daily. The company treats 475 million litres of sewage every single day and operates 110 Water Treatment Works, 340 Service Reservoirs and Water Towers and 405 Sewage Treatment Works. It is recognised by water industry regulator Ofwat as one of the most efficient water and sewerage companies in England and Wales.

Ashford Water Treatment Works (WTW), near Cannington in Somerset, is one of Wessex Water's showcase facilities and incorporates an education centre on-site for visits from local schoolchildren. The concrete water tanks at Ashford WTW had deteriorated over time due to persistent chemical attack from the treatment process. The reinforced concrete substrate was showing extensive signs of erosion, resulting in 20mm losses of concrete in some areas. A well proven concrete repair and protection solution was sought with a lifespan of at least 20 years.

The solution

All areas were first high pressure jet washed to remove the weak concrete before rendering. The whole surface was then overcoated with two 1mm spray applied coats of Intercrete 4841. A highly advanced, two component, waterborne cementitious modified polymer coating, Intercrete 4841 provides an effective barrier against the effects of acid gases, moisture and chlorides, and also has greatly enhanced chemical resistance.

A 2mm coating of Intercrete 4841 provides equivalent cover to 100mm of good quality concrete. It resists positive and negative pressure under a 100 metre head, and is approved under Regulation 31(4)(a) for use in contact with drinking water. It is also CE marked in accordance with EN 1504 Part 2 and is approved by the British Board of Agrément (BBA).

The application of Intercrete 4841 at Ashford WTW will prevent further chemical attack to the concrete. The slab was also cleaned and primed using Intercrete 4810 to prevent any outgassing before a single 2mm spray coat of Intercrete 4841 was applied. In total, around 24 tonnes of Intercrete repair materials were provided for this prestigious project.