ACOTHANE UK LTD

Case Studies

ACOTHANE UK

Acothane DW is the only solvent free polyurethane coating product on the market that is fully approved for use with drinking water for use in steel, concrete and GRP drinking water retaining structures.

Case Studies

Projects across a range of Liquid Retaining Structures

Acothane DW Solvent Free Polyurethane Protective Coatings are the most effective corrosion and erosion resistant protective water tank coatings for the refurbishment of all types of water and liquid retaining structures manufactured from Concrete, Steel or Glass Reinforced Plastic (GRP).

With a history spanning over thirty years Acothane DW is a tried and tested protective coating for all liquid retaining structures.

The products we supply are used worldwide to reline a wide variety of water tanks including GRP Tanks, Steel Tanks, Concrete Tanks and many more.

These Case Studies showcase a selection of projects, across a range of liquid retaining structures:

- **High Level Concrete Water Towers**
- **Concrete Water Towers**
- **Underground Service Reservoirs**
- **Victorian Service Reservoirs**
- **Service Reservoir Pipework**
- **Steel Contact Tanks**
- **Surge Vessels**

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High Level Concrete Water Tower

ACOTHANE CASE STUDY

The high level drinking water storage reservoir within the top of the water tower, underwent a full internal refurbishment in 2017.

After removal of the existing failed waterproofing system and surface preparation to the concrete walls and floors, all expansion joints were sealed using a joint overbanding system, and all concrete surfaces received a cementitious waterproof levelling mortar to provide a blow hole free and consistent surface for the subsequent coatings.

After cure of the levelling mortar, heating and dehumidifaction equipment was installed to ensure that the correct applications conditions were achieved within the tank.

Acothane LV sealer was applied to all concrete surfaces, followed by a first coat of Acothane DW cream at a minimum of 0.5 mm thickness, followed by a second coat of Acothane DW blue at a minimum 0.5 mm thickness, giving a final waterproofing system at a minimum of 1 mm thickness.

All heating and dehumidifaction equipment were removed, and the Acothane system was allowed to cure for a minimum 7 day period at 3 degrees or above.

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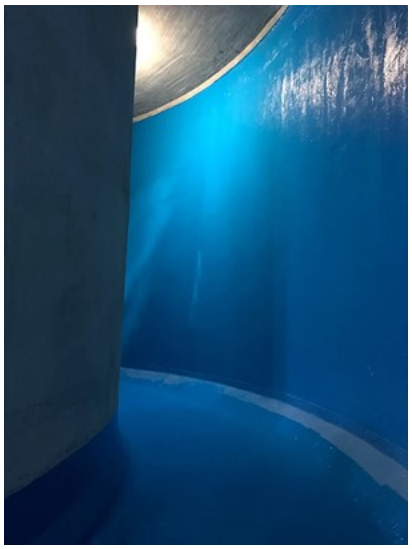
High Level Concrete Water Tower

ACOTHANE CASE STUDY



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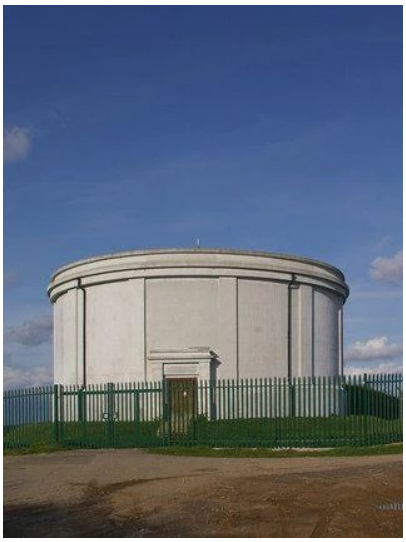
Concrete Water Tower

ACOTHANE CASE STUDY



A full internal refurbishment was carried out to the walls, floor and shaft of the high level tank in this concrete water tower, in 2017.

After removal of the existing failed asphalt render system, all internal concrete surfaces and pipework were grit blasted to remove all traces of the remaining bitumen primer.

All concrete surface were then re-levelled using a cementitious fairing coat, and all expansion joints were sealed using a flexible overbanding system.

After cure of the cementitious render, heating and de-humidification equipment was installed to ensure that the correct application conditions were achieved.

Acothane DW solvent free polyurethane coating system was chosen as the new waterproof lining material.

With its regulation 31 approval from the drinking water inspectorate, tough polyurethane finish with a degree of flexibility and 7 day cure, the system was hand applied to all walls, floor , columns and shaft.

Acothane LV sealer was applied to all surfaces followed by two full coats of Acothane DW to achieve a minimum final thickness of 1mm.

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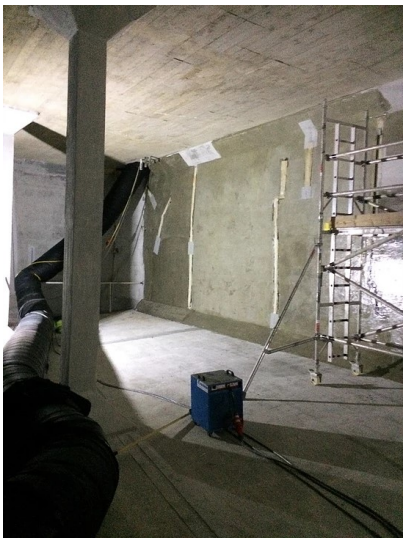
Underground Service Reservoir

ACOTHANE CASE STUDY



This underground concrete drinking water storage reservoir underwent a full Internal and External refurbishment in 2016.

Acothane DW was chosen as the preferred new waterproofing and protective coating system for the internal concrete walls, floor and columns, due to its drinking water approval under regulation 31 of the drinking water inspectorate, solvent free technology and its tough polyurethane flexible finish.

After surface preparation all concrete surfaces received a cementitious levelling mortar, to provide a consistent and blowhole free surface for the subsequent coatings, and all expansion joints and movement cracks were sealed with a joint overbanding system.

After cure of the levelling mortar, heating and de-humidification equipment was installed to ensure that the correct application conditions were achieved within the reservoir.

All surfaces were then sealed using Acothane LV sealer, followed by a first coat of Acothane DW cream at 0.5 mm minimum thickness, followed with a second coat of Acothane DW blue at 0.5 mm minimum thickness to achieve a final 1 mm minimum thickness.

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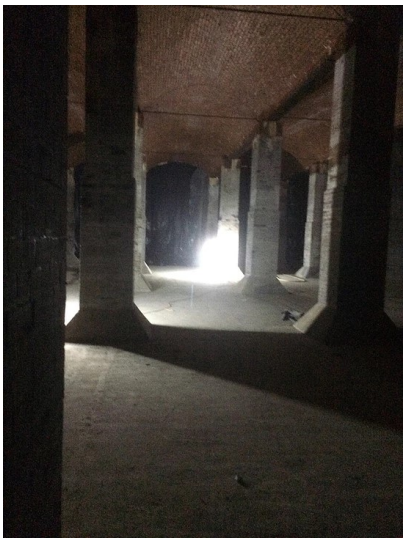
Victorian Service Reservoir

ACOTHANE CASE STUDY



This enormous underground Victorian reservoir benefited from an extensive refurbishment in 2016, which along with the installation of a new external roof membrane, included the relining of the internal wall surfaces.

After removal of the existing failed waterproofing system, the walls were levelled using a sprayed concrete, finished off using a wood float.

Whilst this was curing, Heating and de-humidification equipment was installed to ensure that the correct application conditions were achieved, and to ensure that the moisture content within the new cementitious lining was below 16%.

Acothane DW was chosen as the preferred final waterproofing system, due to its approval under regulation 31 of the drinking water inspection act, its tough polyurethane finish, solvent free composition and flexibility.

All walls were first sealed using Acothane LV Sealer, followed by a first coat of Acothane DW Cream to a minimum thickness of 0.5 mm, followed by a topcoat of Acothane DW Blue at a minimum thickness of 0.5 mm, giving an overall thickness on minimum 1mm. Acothane DW also benefits from a 7 day curing at 3 degrees C, offering a fast return to service.

All cast iron beams within the vaulted soffit, column bases and pipework were treated with Acothane DW after needle gun and grit blasting preparation.

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Service Reservoir Pipework

ACOTHANE DW APPLICATION

Acothane DW is suitable for hand application on to small diameter pipework, ladders, weld joints, brackets & associated steelwork often found in a corroded condition within service reservoirs.

Requiring a minimum preparation standard of ST2 followed by two coats of Acothane DW at 500 microns per coat and being supplied in small 2 Litre composite packs Acothane DW provides the perfect solution for treating corrosion on small localised corroded steel work.

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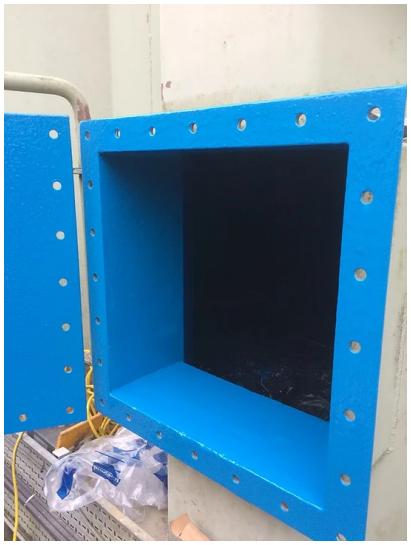
Steel Contact Tanks

ACOTHANE CASE STUDY



Acothane DW was chosen as the preferred water proofing solution for re-lining this above ground steel contact tank at a water treatment plant.

After removal of the existing failed bitumen coating, heating and de-humidification equipment was installed to ensure that the correct application conditions were achieved.

Two full coats of Acothane DW were applied by brush and rollers to achieve a final thickness of a minimum 1 mm, Acothane DW with its solvent free technology, also benefits from an approval under regulation 31 of the drinking water inspectorate for use in contact with drinking water, tough polyurethane finish with a degree of flexibility and fast 7 day return to service at 3 degrees.

Surge Vessels

ACOTHANE DW

A viable protective coating system

Surge vessels or pressure vessels play a very important role within the water industry with regards to assisting in the prevention of leakage from pressured water mains and preventing bursting pipe joints.

These vessels are periodically inspected by independent insurance inspectors, to ensure that they conform to current standards and are fit for purpose.

The internal steel surfaces often show signs of corrosion and if the vessel is large enough for entry then the preparation and application of Acothane DW can be considered as a viable protective coating system.

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