

**Project:**  
Water Treatment Works

**Location:**  
Dorset

**Owner/s:**  
Sembcorp Bournemouth

**Applicator/Contractor:**  
Concrete Repairs Ltd, Bristol

**Market sector:**  
Clean Water Industry

**Products used:**  
MasterSeal 930/933  
MasterEmaco S 420  
MasterProtect 330 EL  
MasterSeal NP 474

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## Water Treatment Works, Dorset Refurbishment of Filter Beds



Our reference in, Dorset (United Kingdom): Water Treatment Works

### The background

This water treatment works in Dorset extracts water from the River Avon and supplies potable water to around 70,000 homes using slow sand filtration.

The filter beds at the facility required refurbishment and re-commissioning within a short timescale to ensure plant efficiencies within the water treatment plant were maintained.

### The challenge

After removal of the filter sand, concrete repairs were required using a rapid-setting mortar to enable the concrete to be returned to service quickly. A flexible, elastomeric membrane and adhesive system was required to over-band existing failed joints. Both materials were to be approved under Regulation 31, for use with potable water.

Chemically resistant sealants were required for the exposed sections of joint above the waterline. Finally, an anti-carbonation coating was required to protect the concrete structures in a colour sympathetic to the local residential housing.

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# Water Treatment Works, Dorset

## Refurbishment of Filter Beds



Our reference in Dorset (United Kingdom): Water Treatment Works

### Our solution

MasterEmaco S 420 was specified to repair internal and external concrete elements on the walls and parapets, and MasterSeal 930 membrane and MasterSeal 933 adhesive were chosen to over-bandage existing failing joints and cracks in the tanks. MasterSeal NP 474 was selected to seal external joints and internal joints above the water line, while MasterProtect 330 EL provided flexible anti-carbonation coating in the required colour for the external concrete walls for long-term protection.

### Benefits to the customer

- MasterSeal 930/933 bandage system required only one layer of epoxy adhesive, giving savings on both material and labour costs. This also meant only a minimal amount of adhesive was left exposed.
- The system specified allowed over-coating with a product approved for contact with potable water after only 18 hours, permitting an extremely rapid return to service for the filter beds.
- No solvent wipe was required on the membrane and there was no central debonding strip, minimising adhesive waste.

### Projects facts at a glance

- Water treatment works project
- Refurbishment and re-commissioning of filter beds within a short timescale
- Master Builders Solutions supplied flexible, chemically resistant systems including anti-carbonation coating
- Aesthetic needs were met with coloured coating
- Filter beds could be returned to service after 10 days at 7° C

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Further information is available at:  
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