

Concrete Durability Treatments

## ADDING LIFE TO CONCRETE.

Our complete approach to  
concrete deck waterproofing.

Superior Waterproofing Solution

**TOP-TECT Remediate**

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# Superior Waterproofing Solution

TOP-TECT Remediate

TOP-TECT® is a MARKHAM designed and installed system for concrete deck waterproofing, – focused on waterproofing the concrete itself.

Removing the need for time-consuming, multi-party membrane installations, our system waterproofs what is already part of the build, the concrete, to ensure a dry result, a long lasting performance and a warranted outcome.

## WHY CHOOSE TOP-TECT?

- Easy to design and detail. Easy to construct and control.
- Full performance warranty. Reduce your risk with a strong warranty provided, as MARKHAM is both the product manufacturer, and installer of the system.
- Direct waterproofing costs are typically less than 50% of out-dated waterproofing methods. Add the time and program advantage to this also to net large savings.
- Flexible options. Suits most building methods. No need to design extra to incorporate the waterproofing.
- Long-term durability – concrete and steel permanently protected.
- Protect against acid attack, chlorides, or contaminants. Ensure your structure lasts longer.
- The Final finish – Reduced trades as this system is the final sealed, anti-dusting finish for your structure.

## COMPLETE CONCRETE DECK WATERPROOFING

TOP-TECT is a systematic approach to concrete deck waterproofing, by waterproofing the concrete itself. Combining the benefits of MARKHAM's colloidal silica hydrogel treatments with the advanced technology of delayed-swell gaskets, this is a holistic three-pronged approach bundled into a single readily specifiable package. A membrane is not required, giving the TOP-TECT system a significant cost benefit.



### HYDROGEL ADMIXTURES

ADVANCED WATERPROOFING ADMIXTURES

- Integral waterproofing
- Enhanced workability
- Enhanced durability
- Reduced shrinkage
- Improved long-term durability
- Safety and sustainability



### AQURON 2000 HYDROGEL

ADVANCED HYDROGEL WATERPROOFING SEALER

- Immobilise moisture within the concrete
- Seal and densify the slab
- Waterproofing benefits
- Enhanced concrete curing when applied early
- Anti-dust, low moisture.
- Fully compatible – less preparation



### CONQOR WATERSTOPS

CONTROLLED EXPANSION WATERSTOP GASKETS

- Creates a permanent seal
- Controlled swell to allow concrete to get up to strength
- Resistant to hydrostatic pressure
- Easy and quick to install
- Supply and QA by MARKHAM, installed by the main contractor



SAVING THE  
WORLD, ONE  
CONCRETE  
STRUCTURE  
AT A TIME.

## CREATED TO HELP

- Architects looking for a comprehensive and cost-effective approach to concrete waterproofing
- Engineers looking for long term durability of the structure and waterproofing methods that do not reduce the performance of concrete
- Developers looking for strong warranted performance, and an efficient construction processes and value engineering
- Construction teams looking to save time and money on their construction programme whilst ensuring waterproofing performance is kept at optimum
- Asset owners looking for long term trouble-free property management

NOTE: Roof decks over habitable space may need additional elements included in the waterproofing design.

## HOW IT WORKS

The three-part approach effectively waterproofs the concrete itself by the combination of an admixture and a spray-applied treatment. Joints and penetrations are sealed by means of the waterstop. This combination guarantees permanent waterproofing for the concrete deck, without the need of a membrane.

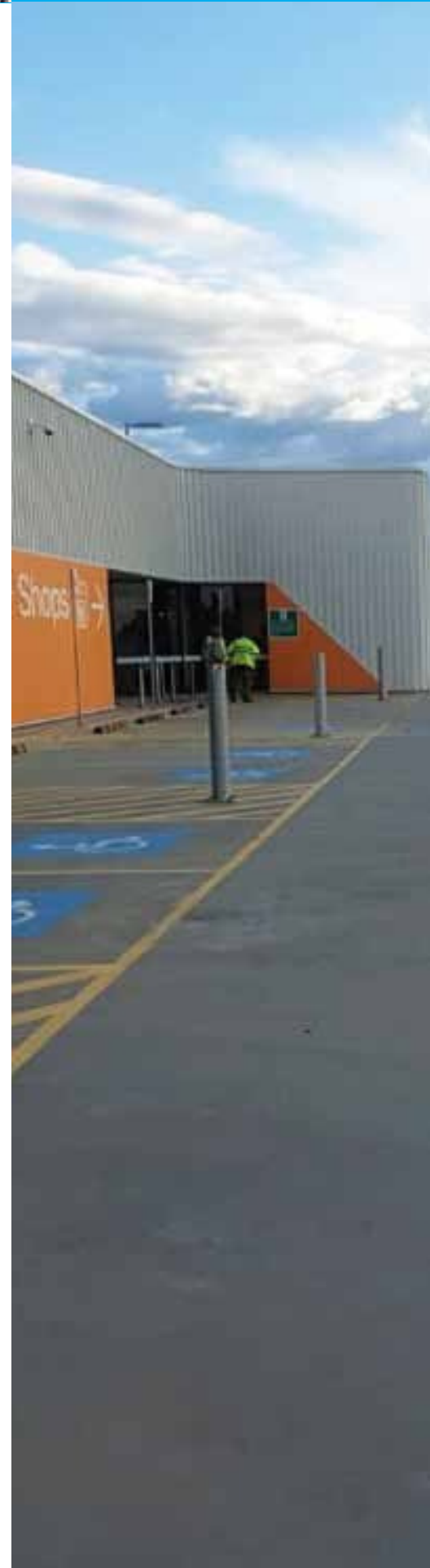
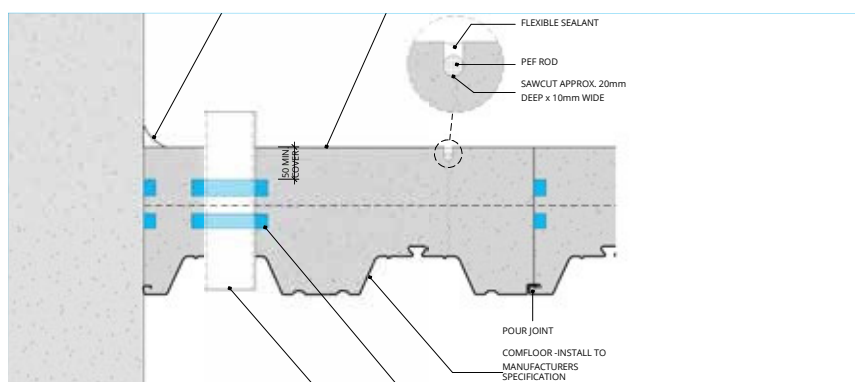
All system components are supplied, installed, quality controlled and managed by MARKHAM. You can be sure of a quality result that is managed by one provider, one party to work with, one result.

The system is tested and proven to perform and protect against conditions deep in the water table, over contaminated soils, and with most types of concrete construction.

Admixture is provided via your preferred ready mix provider, AQURON spray applied treatment is installed by Team MARKHAM and the waterstops are supplied and the installation quality checked by MARKHAM, pre-pour.

Slab sawcut location design is included as part of controlled crack avoidance.

Waterproofing is an investment - MARKHAM guarantees a great return on that investment!



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TOP-TECT Remediate



## Amazon Aylesford MSVP

Pannatoni Park, Aylesford, UK

Full TOP-TECT system used in new build multi storey van park for the Amazon distribution centre in Aylesford, Kent, UK

The car park is a private commercial car park that required a waterproofing system with maximum design life and a 25 year warranty.



## Tesco Service Yards

Multiple Tesco sites, UK

Exposed concrete service yard with significant chloride activity and abrasion issues on the podium deck at 5 Tesco extra stores. The car parks were suffering significant leaking, moisture seepage and calcium leaching. TOP-TECT remediate was used as an effective all in one remediation package.



## Friarton Bridge

Perth, Scotland

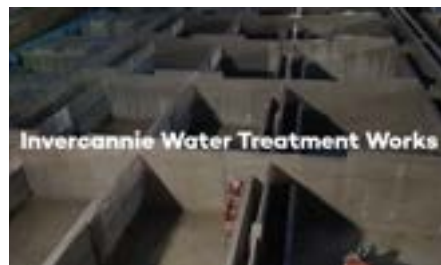
AQURON 7000 colloidal silica hydrogel treatment was selected as an alternative to cathodic protection. This provided not only protection of the steel reinforcing, but also the concrete itself to provide durable, corrosion-resistant concrete for this vital safety element of the bridge.



## BRIDGE DECK REMEDIATION

Scottish Highlands, UK

As part of the ongoing maintenance cycle for this aging structure, AQURON 7000 was chosen as an alternative to cathodic protection and to prevent further degradation.



## Water Treatment Plant

Invercannie, Scotland

The contaminating environment of water works is very challenging for concrete. In this project, hydrogel treatments were applied during construction to give durability from day one.



## DIRFT3 MSCP

Daventry, UK

Buckingham Group chose to use Markham's TOPTECT system on the new build DIRFT MSCP.

All penetrations in the decks and upstands were sealed with CONQOR 47B waterstop gasket to provide a fully waterproofed (zero-maintenance) deck solution.