

# Design it watertight. Trust Sika



BASEMENT TO ROOF



WATER STORAGE  
DOMESTIC &  
INDUSTRIAL



BELOW GRADE



TUNNELS



BRIDGE DECKS

Be introduced to our mission critical, resilient Waterproof Solutions by Sika for commercial and residential construction (roof, internal, external and basement)

# There's a reason engineers, architects & building developers **rely on** **Sika for Watertight Design**

Economic watertight solutions for even the most challenging situation is made fail proof with the partnerships and the right team to create a solution that services the bespoke requirement of the project. It is important to consider the entire waterproofing process to the very last detail for both new build and refurbishment projects. Navigating systems that are designed for keeping water in and keeping water out is a specialty that only industry experience should be relied upon.

## BELOW GROUND WATERPROOFING SCENARIOS

- Residential buildings, storage rooms, wellness and fitness areas or movie theatres
- Commercial office buildings, computer rooms, storage rooms and print rooms.
- Archives/libraries - Completely dry basement waterproofing solutions for humid sensitive archive rooms.
- Underground parking areas
- Underground rail stations and tunnelling
- Specific waterproofing solutions for cut and cover and TBM construction methods.
- RETAIL UNITS AND WAREHOUSES - Complete dry waterproofing solutions to protect goods against humidity.
- LEISURE FACILITIES - Below ground leisure facilities and indoor swimming pools and other sports rooms.
- PODIUM DECKS AND BALCONIES For balconies and walkways
- TANK LININGS - Attenuation and sprinkler tanks, potable water tanks, reservoirs and dirty water systems

## TYPES OF EXPOSURE AND STRESS

- Below ground structures can be subject to many different exposure conditions including:
  - Different levels of water exposure and pressure (e.g. damp soil, percolating water or water under hydrostatic pressure, and open water, variable water tables)
  - Aggressive ground water containing chemicals (commonly sulfates and chlorides in solution Unequal static forces (due to load, settlement, or uplift) Dynamic forces (e.g. from settlement, seismic activity)
  - Temperature variations
  - Gases in the ground (e.g. Methane and Radon)
  - Aggressive biological influences (plant roots/growth, fungal or bacterial attack)

## EXPOSURE IMPACT ON BELOW GROUND STRUCTURES

These different types of exposure may adversely influence the use, watertightness and durability of a basement structure, resulting in a reduced service life of the entire structure.

Exposure		Impact on Structure
Water ingress	→	Damage to structure, finishes, contents and the internal environment (condensation and mould growth etc.), loss of thermal insulation, corrosion of steel reinforcement
Aggressive chemicals	→	Concrete damage (due to sulfate attack), corrosion of steel reinforcement (due to chloride attack)
Unequal static forces	→	Structural cracking
Dynamic forces	→	Structural cracking
Temperature variations	→	Condensation, scaling or cracking of concrete
Gas penetration	→	Gas penetration and exposure for occupants
Fungal/bacterial attack	→	Damage to the waterproofing system, finishes or contents



### LEAKING STRUCTURES

Water can leak into and out of structures. Reasons for this can be cracks, failed joints and even through permeable substrates. Once identified, if not treated, further problems can occur including the corrosion of reinforcement, thus resulting in the consequential loss of a usable area within the structure. Sika produce a range of resin injection systems designed to stop water ingress through leaks.

### CONCRETE DAMAGE

Damage can occur to the concrete in many ways but primarily through incorrect detailing, inadequate or untimely concrete compaction, or by accident. Sika produces a full range of concrete repair systems, which are compatible with all Sika waterproofing systems.

### CRACKS/HONEYCOMBING

The terms “watertight” and “vapourtight” do not mean “crackfree”. Cracking can always occur in concrete in its plastic or in its hardened state, due to the stresses imposed. Sika has a complete range of products and systems for the repair of “cracks” and “honeycombing” in concrete structures.

## WATERPROOFING – INTERNAL, EXTERNAL WET AREAS & EXTERNAL DRY AREAS

Waterproofing mortars are used to protect structures against water infiltration when applied beneath tiling systems for swimming pools, balconies, bathrooms and kitchens.

As of the 1 September this year the new building code will be adopted into the industry throughout Australia. It is a requirement that all builders follow the Building Code and the performance requirements that are stated in the code. The code is referencing the new Australian Standard AS3740 which was published in 2021. As of the 21 September the rules were changed for NSW

It is important to note that the NCC – National Construction Code/Building Code, takes precedence in all matters where there is a dispute between the building code and the Australian Standard. The building code should always be followed and the standards are the reference point. As far as the building code has been structured it is that it covers off most of the issues with internal waterproofing however there are clauses in the code that state you are to use the building code and AS 3740. This ensures that for issues that the code does not pick up on such as rain heads coming out of the ceiling or vertical water stops close to door ways, that’s where you would use the Australian Standards 3740 to supplement what the building code does not cover.

The Building Code has introduced references to the Housing provisions document. This document has a list of things you need to follow when putting together a waterproofing system for internal wet areas.

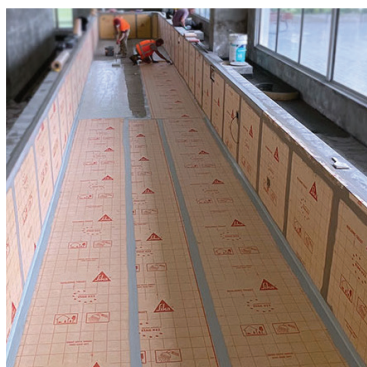


Access our short video series via QR code covering off key issues you should monitor

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## SCHÖNOX® iFIX & AB SYSTEM



The SCHÖNOX® iFix & AB waterproofing system is a globally proven under tile waterproofing system with un-matched productivity and performance. Unlike typical premixed membranes that are totally reliant of the contractor applying at the correct thickness, SCHÖNOX® iFix & AB system takes away the guess work with a guaranteed film thickness with tiling being able to commence after 1/2 hour after the application has been installed. Its is also suitable for pools spas and sauna applications.

## SARNAFIL®



Sarnafil® PVC sheet membrane is one of Sika's most premium membrane systems, and has been used internationally for over 50 years. Local Australian references track back 30+ years, in the most harsh Australian UV conditions, apposed to competitors who have only recently entered into this market. +/- 5 years Roofing applications include fully exposed, bonded to concrete substrates, as a membrane in roof gardens, under pavers/screeds, warm roof designs (over thermal insulation) and on top of existing membranes. Joins are thermally welded and can be tested for integrity, with the membrane has been tested and comply to AS4654, for external above ground applications so designers and clients can be sure their rooftop would be installed with an excellent quality membrane, and they will get longevity they expect.

## SIKASHIELD®



### The global champion of bituminous membranes

SikaShield® membranes have a long history in Australia, stemming back 25+ years, with Sika acquiring the Index company almost 3 years ago. This premium torch membrane has a large range with application options of exposed rooftops, green roofs, below ground and even bridge deck waterproofing options.

The quality and known ease to apply the Index membrane, make it an obvious choice for the experienced applicator.

The Index membranes, Fidia and Testudo have been tested and comply to AS4654, for external above ground application, making it the obvious choice for designers too.

*SikaShield® Formerly known as Index*



## SIKAPROOF® A+



SikaProof® A+ is the second generation of Sika's fully adhered membrane systems. The innovative feature of a "one tape application" and the option to thermally joint the laps, makes it an obvious choice for any good installer. The benefits of the SikaProof® A+ have proven to have a 30% faster application time than the conventional system.

With the SikaProof® A+'s high resistance to soiling, and robustness, installers can rest easy when after trades are working in areas where the membrane has already been installed.

With many international tests been carried out on the SikaProof® A+ system, it proves it can withstand demanding, basement and below ground applications.

## SIKALASTIC®



Fast to apply, crack-bridging, polyurethane and polyurea based liquid membranes. Sika liquid applied membranes (LAM) are highly elastic and flexible polymeric systems, usually based on polyurethane or polyurea resins with excellent technical properties for high performance applications. These materials are applied on prepared / primed external concrete surfaces by spraying and provide excellent solutions for complex detailing.

Liquid applied membranes will also prevent any lateral water underflow in the event of local damage.

Sikalastic® polyurea systems are ideally suited to the waterproofing of podium deck slabs and compatible with Sika solutions for below ground waterproofing, thereby offering a one-stop-shop solution for waterproofing the entire structure.

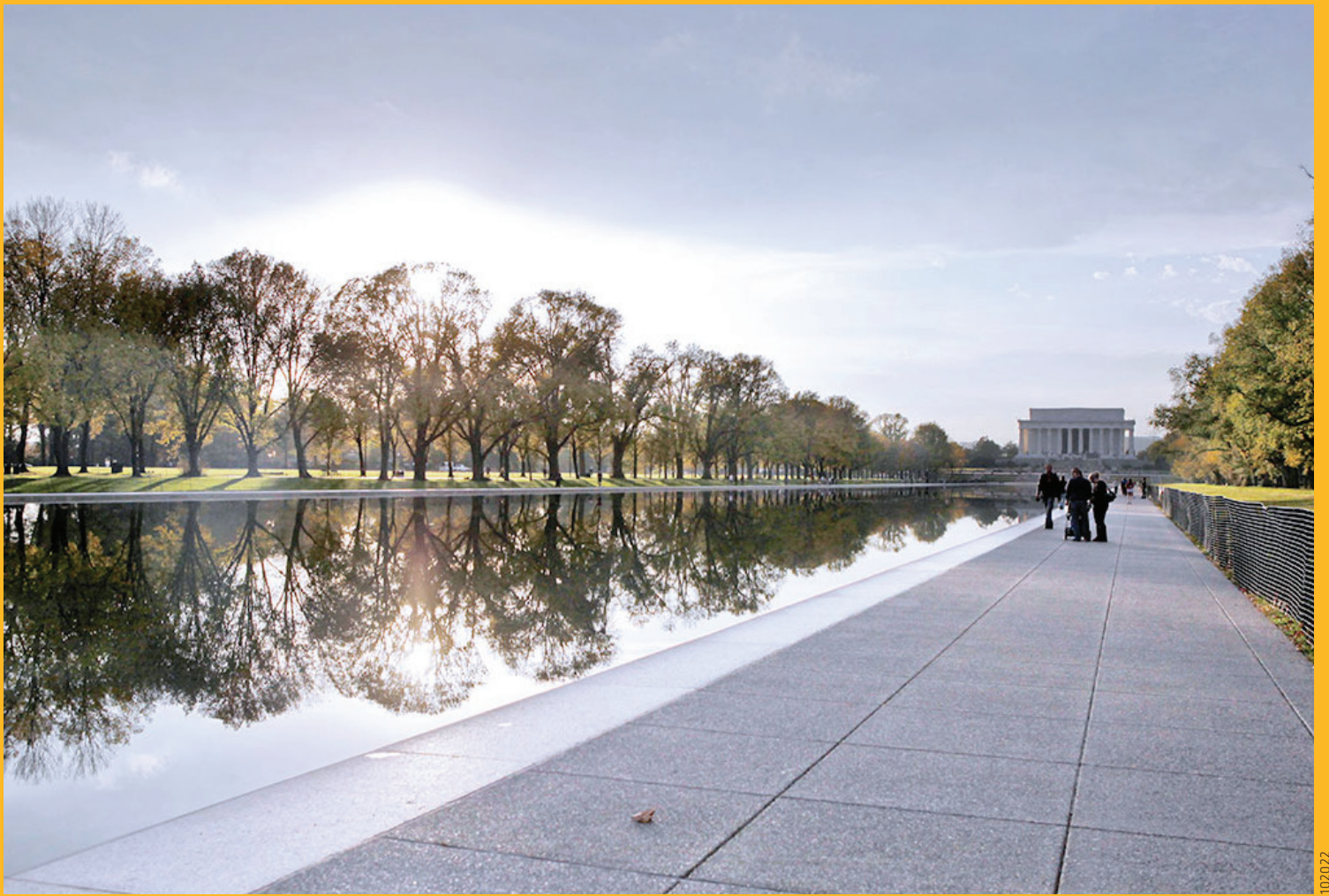
## SIKATILE®



**When our distributors and end-users share their knowledge and experiences, Sika listens.**

Confidence in selection, making it easier to deliver a safe and design driven solution for tilers has paved the way for the new brand of SikaTile® to join our under stone and tiling range alongside our established brands of Davco.

Through high-touch, personal service, SikaTile® offers professionals and end-users trusted solutions and expertise across a full line of innovative tile and stone installation systems. From an efflorescence inhibiting primer with Crystalline Technology to a fibre reinforced membrane for superior strength to a safer, environmentally friendly, Dustless® dry mix adhesive with 0% Crystalline Silica, your tiling system is secure with SikaTile®.



102022

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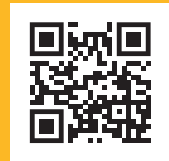
Find out more  
about our latest  
under tile water  
proofing in our  
**SikaTile® Secure  
Tiling System**



Explore  
**Sarnafil®** and  
the Art Gallery of  
NSW Case Study



**Mission Critical**  
Sustainable,  
resilient roofing  
**solutions for  
data centres**



Contact our  
**Waterproofing  
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Team**