

# CONCRETE

# YOUR ENVIRONMENTAL AND SUSTAINABLE SOLUTION FOR THE BUILT ENVIRONMENT

## BENEFITS

- Reduces rainwater run-off.
- · Eliminates 'peak flow' in a storm cycle.
- Directly recharges groundwater.
- Mitigates 'first flush'.
- Protects streams, rivers and ecosystems.
- Mimics the natural unbuilt environment.
- Reduces surface temperature and heat island effects.
- Reduces the size of retention structures required.

### PROPERTIES

- Infiltration 8,000 10,000mm/hour.
- Compressive strength to 25MPa.
- Slip resistance P4 0v.45 0.54 BPN.
- Run-off coefficient 0.3.



# **APPLICATIONS**



Elbow detail as required for retention volumes

Sub-surface Drain - refer Note 1 for retention volume formula

**DRIVEWAY** (TYPICAL DESIGN)





### FOOTPATH (TYPICAL DESIGN)

### Ground Level

Geo Textile Fabric (if required)

100mm Permcon Permeable Concrete

100mm Permcon Base Course -Sub-Grade

# FREQUENTLY ASKED QUESTIONS

### HOW LONG DOES PERMEABLE CONCRETE LAST?

When properly installed and maintained, permeable concrete can last 15-20 years. It is worth noting that it may require re-sealing or resurfacing approximately every 4 years depending on conditions of use and weather.

### CAN PERMEABLE CONCRETE CLOG UP?

A general maintenance regime of sweeping or surface washing will minimise the opportunity for the product to clog. In situations where this does occur, an industrial vacuum can be used to clear the void.

### HOW LONG DOES IT TAKE BEFORE THE SYSTEM CLOGS UP?

It's difficult to be specific to every location being different. It's also dependant on whether it's located in the right position and how much sediment there is in the run-off.

The location of where Permcon is installed plays an important role due to sediment loading and hence life span of the system. Areas that will be subject to organic loading (leaves from trees) should be carefully considered together with a sweeping (without vacuum) regime. Locations which will have a high clay content in the run-off should be avoided.

### WHAT IS THE VOID RATION IN PERMEABLE CONCRETE?

The amount of void in permeable concrete can vary in the range of 15-30%. Permcon usually has a consistent void structure of 20-25%.

### HOW CAN I TEST THE PERMEABILITY OF MY PAVEMENT SYSTEM?

One of the test methods is ASTM C1701/C 1701M -09 "Standard Test Method for Infiltration Rate of In Place Pervious Concrete" is simple and easy to conduct in on-site locations.

### CAN PERMEABLE CONCRETE BE PUMPED INTO AN INSTALLATION?

Like traditional concrete, there are a variety of different methods used in installing the product. However, given that permeable concrete is a low slump product, it cannot be pumped into place like traditional concrete.

### WHAT KIND OF AGGREGATES CAN I USE FOR THE BASE COURSE?

Specifically designed drainage aggregates that are structurally sound when fully saturated/submerged with water. Normal GAP types of aggregate are not suitable and will lead to pavement failure.

