



## Drainage in Podium Areas and What's Happening Below.

107 East Derrimut Crescent  
Derrimut 3026  
Melbourne  
Victoria  
Australia  
[allproof.com](http://allproof.com)

**ALLPROOF**  
INDUSTRIES

---

**Looking across a paved area toward a drain,  
it seems like a simple equation:**

Surface water will be directed across this plane,  
through the channel, and then be moved away to  
the stormwater system.

However, a podium or suspended slab with a habitable or dry space below, like *Auckland's City Rail Link* for example, requires additional considerations. Thus, careful planning must be made to control both surface and subsurface water. Additionally, the system design must also consider factors such as loading, available fall, and aesthetics.

Once the base slab is poured this will be membraned to create a waterproof enclosure to protect the area below, an envelope if you will. At this point, careful attention must be paid to any penetrations in this layer. \*Using the **Podium Drain System** from Allproof, the penetration in the membrane can be clamped allowing surface and subsurface drainage to be managed. This is installed into the concrete base slab providing a flange for the membrane to be dressed onto and then a specialised clamp ring that secures the edge of the membrane along with providing an escape for any subsurface water.

\*(<https://allproof.com.au/product/podium-drains/>)



Often it is thought that the tiled or paved surface (*a carpark ramp for example*) will provide a complete surface to direct water to the relevant drain.



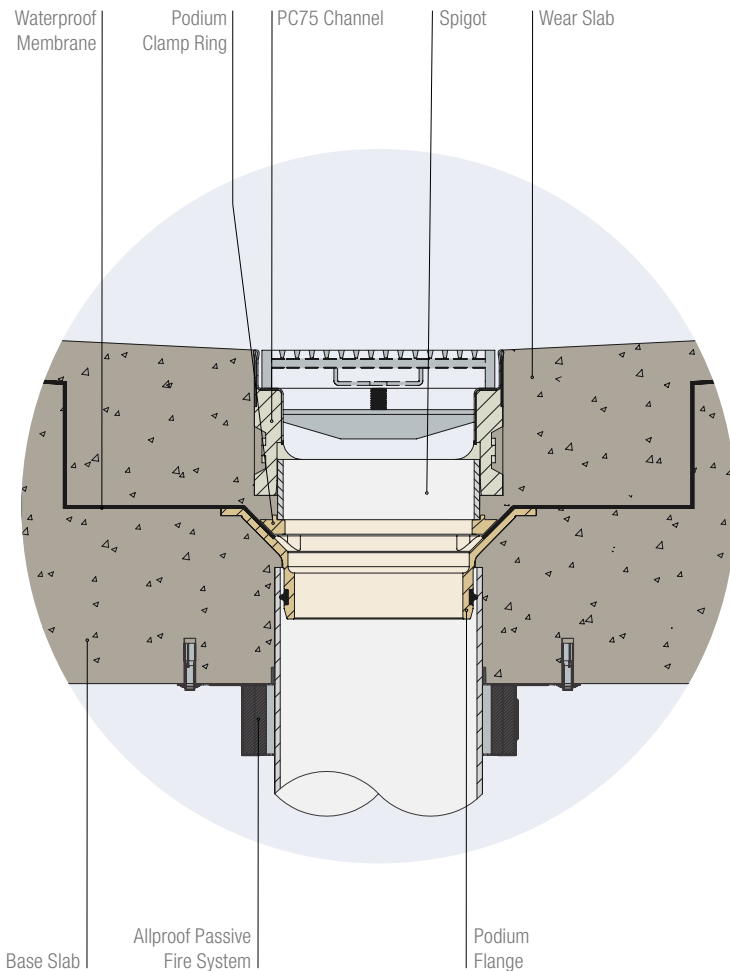
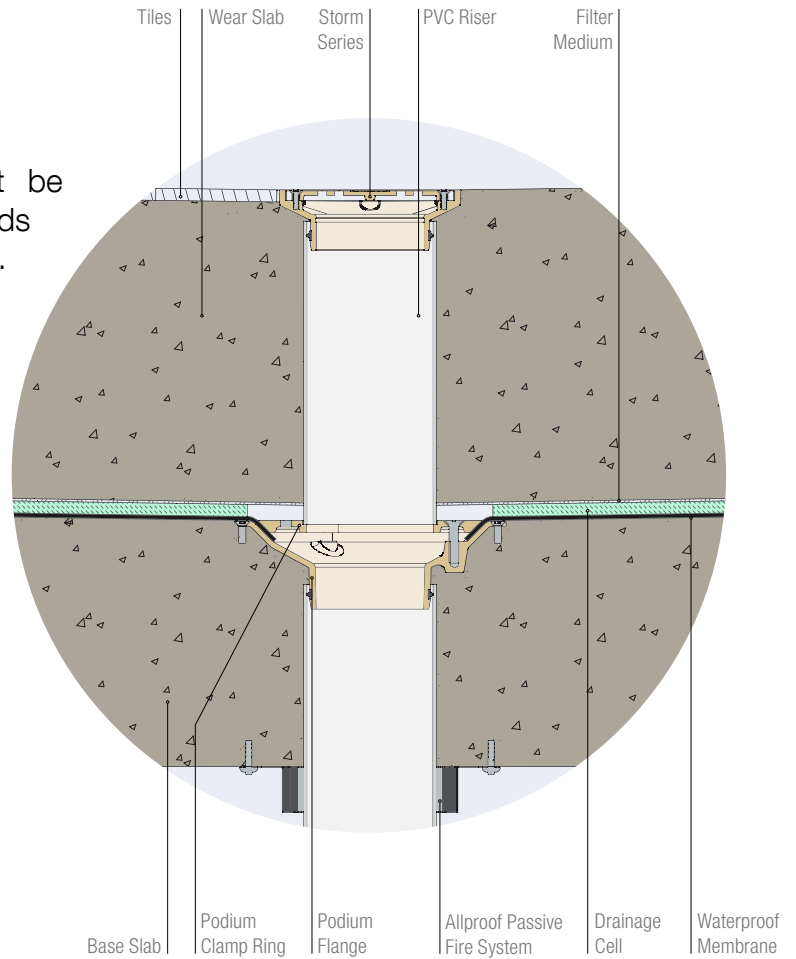
In reality, tiles are **porous**, grout can **crack** and concrete has **many fissures** that allow the surface water to track through the topping/wear slab to the membrane below.

Weeping penetrations in a basement carpark roof showing a penetration has not been adequately fitted off are clear examples of this.

The build-up on top of the base slab will vary depending on the requirements of the finished surface. Generally, a drainage cell and filter media are installed on top of the membrane to facilitate drainage; after which a wear/topping slab is poured as either the finished surface or base for tiles to be applied.

The surface water drainage system must be designed to all applicable Australian Standards before a drainage outlet will be selected. This drainage outlet or channel will be connected to the previously installed podium flange via a cut-to-length PVC riser. This completes the function of the podium outlet, collecting surface and subsurface water through a single outlet. \*Point drains, such as the Allproof **Storm Series**, provide a subtle outlet that has excellent hydraulic properties and can simply be attached by O-rings to the PVC riser.

*\*(<https://allproof.com.au/product/storm-series/>)*



Where a longer run is detailed a channel drain may allow for shallow falls with outlets along the run being dropped into the podium bases below. Early planning by the main contractor will ensure all these outlets are aligned with the finished channel when installed in the base slab to final fit-off dimensions.

This system was installed to great effect in **Auckland's Commercial Bay** shopping precinct, with the protected space below being *Auckland's City Rail Link* and its approaches to the *Britomart* station. The *75mm deep polymer concrete channel* with heel-proof cast iron grating was selected due to the shallow wear slab and tile combination finish.





**Melbourne's South Wharf** has also successfully implemented this system. Similarly, the *75mm deep polymer concrete channel* was used as a result of the combination of shallow wear slab and tile finish, in conjunction with the stylish Wedge Wire stainless steel grate.

Allproof's *Wedge Wire grate* has achieved an R11 classification in accordance with AS4586 Slip Resistance, this provides an excellent option for the pedestrianised area catering for commuters and visitors to the conference centre, hotel and retail precinct.



Heavier load rated podiums require the use of a **cast iron grated channel system** or a completely custom **stainless steel channel** with suitable grates.

This was detailed and installed successfully at the **Wynyard Mews** development in Wynyard Quarter. In this project a load class B system was required to drain a 60 metre laneway between buildings taking local traffic and service vehicles with a basement garage below. This included a three stage install of podium bases, edging mouldings, which allowed the two topping slabs to be cast, then a fully welded stainless steel channel and heel-proof cast iron grates dropped into the rebate formed to complete the trafficable system.

Allproof's selection of stocked products creates systems that will help you detail a **reliable drainage solution** to meet the **aesthetic and performance** requirements of your project.

107 East Derrimut Crescent  
Derrimut 3026  
Melbourne  
Victoria  
Australia

[allproof.com](http://allproof.com)

**ALLPROOF**  
INDUSTRIES