



Raised Crossings with ACO KerbDrain

ACO Working with Auckland Transport
and Local Councils Nationwide for Raised
Crossing Applications.

ACO. we care for water



ACO New Zealand

The worldwide ACO Group. A strong family you can build on.

ACO Limited NZ, a part of the multinational ACO Group, specialises in construction and building industry products. Over 25 years ago, ACO introduced modular Polymer Concrete surface drainage systems to New Zealand.

Presently, ACO Limited in New Zealand serves as a sales and marketing company with access to ACO's robust global manufacturing bases. Established in 2012, ACO utilises various materials for a wide range of surface water drainage, utility enclosure, building drainage and residential products.

ACO NZ provides comprehensive onsite support for all business aspects, offering guidance from specifications to installation expertise.

Renowned for its educational programs on surface drainage for architects and engineers, ACO constantly innovates, introducing new products to the NZ market with the support of ACO's well-established R&D department.

Presently, ACO manufactures diverse drainage and landscape products from polymer concrete, stainless steel, mild steel, ductile iron, and molded plastics, catering to commercial and residential construction, electromechanical engineering, and environmental protection.



ACO.

we care for water

The ACO claim 'ACO. we care for water' embodies the company's dedication to providing innovative solutions that help preserve and protect one of our most precious resources. ACO recognises that water is essential for life, and the company's goal is to create products that optimise its use while minimising its impact on the environment. By caring for water, ACO is demonstrating its responsibility and its commitment to creating a better world for future generations.

ACO's WaterCycle

Increasingly extreme weather must be counteracted by more complex and sophisticated drainage concepts. ACO achieves this with the intelligent WaterCycle which has a dual purpose: protecting people from water, and water from people. Every ACO product within the ACO WaterCycle therefore safely controls the water as it passes along the cycle to ensure that it can be ecologically and economically reused in a viable way.



KerbDrain Transforms Road Safety

ACO KerbDrain is an integral kerb & trench Drain which captures runoff from the street surface that flows horizontally towards the wide inlet slots for a continuous capture and efficient water removal that prevents water from accumulating on the road or spilling into the traffic lanes. This system makes the road safer by channeling and managing surface water effectively.

Hydraulic & Safety

Continuous capture of runoff by KerbDrain inlet slots minimises the risk of ponding or gutter flow encroaching into the traffic lane. This is contrasted against a kerb inlet pit and pipe system, where runoff will flow out onto the road between pits, creating hazards for road users and pedestrians.

36 %

That is how much cheaper the KerbDrain solution is compared to a Kerb Inlet Pit & Pipe solution.

Please take a look at the full cost comparison report by scanning the below QR Code.

Component prices are derived from the Rawlinsons Australian Construction Handbook.



Installation

KerbDrain channels require a shallower trench excavation compared to the kerb inlet pit and pipe system, which necessitates a deeper excavation for the pipes. This minimises the risk of interference with existing services, which could result in high relocation costs. KerbDrain eliminates the need to construct a separate kerb and drainage system.



KerbDrain for Raised Crossings

Raised crossings are elevated sections of a road or pathway that permit water to flow underneath, all while ensuring a level surface for pedestrians. Among such solutions, ACO KerbDrain stands out as the premier choice for raised crossings and continuous water capture due to its superior functionality. This system efficiently collects and directs surface water, while ensuring a safe and accessible crossing. With its proven track record, ACO KerbDrain guarantees optimal performance and longevity.

Maintenance

KerbDrain access units can be used anywhere along the run, allowing for a fast and easy maintenance. Contrarily, it's more difficult to identify the location of the blockage in the underground pipe in the kerb inlet pit and pipe system.

ACO KerbDrain combines the benefits of Polycrete® Channels with a robust one-piece construction. The inlets transfer the captured water into the underlying channel and directly to the stormwater system.





GIVE
WAY

STREET
THE HOUSE
THE COTTAGE

Ayr Street / Parnell Road

ACO's first KerbDrain HB200B install.

In May 2020, a new raised table was installed at the Ayr Street / Parnell Road intersection, necessitating the installation of a drain with lateral inlets to manage the increased water flow. ACO's durable KerbDrain HB200 was chosen for its high capacity and resilience. The lateral inlets prevent blockages, streamlining maintenance. By angling the product components to follow the street and footpath's curve, a neat and visually pleasing finish was achieved.

This approach not only ensures efficient water capture and conveyance across raised crossings but also proves to be cost-effective. It eliminates the need for additional pit infrastructure, relying on intelligent water management methods to direct water toward existing sumps and infrastructure, thereby saving both time and resources.



Carrington Road Auckland

ACO KerbDrain QK200B evolved to a 100mm raised crossing.

In the Auckland Transport roading upgrade project, ACO's KerbDrain QK200B was installed during the first week of July 2019. This choice was primarily motivated by the presence of critical utility services, such as gas lines, traversing the area, making excavation for access to stormwater outlets impractical. Instead, the KerbDrain facilitated continuous water capture along the route.

This system not only mitigates the risk of blockages, outperforming traditional multiple inlets, but also effectively conveys water to the network's outlet, ensuring optimum drainage performance. Furthermore, it has the capability to regulate water flow, allowing controlled release into the existing kerb for eventual transfer to the stormwater collection pit, making it a versatile and efficient solution for the project.









Great North Road Auckland

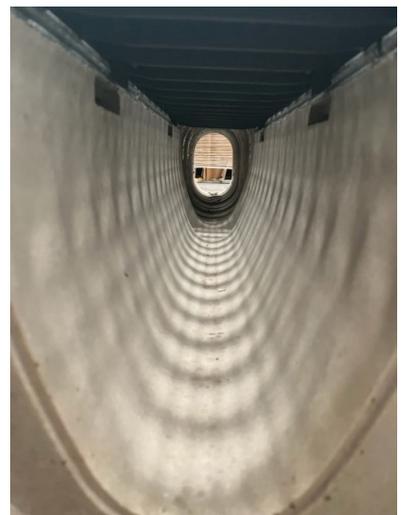
ACO KerbDrain QK200B along with KlassikDrain K200 for continuous capture and ease of maintenance.

At Great North Road in Auckland, ACO collaborated with AT (Auckland Transport) and played a crucial role in creating a safer environment for pedestrians and cyclists while ensuring road user safety. ACO installed KerbDrain QK200B and KlassikDrain K200 to consistently capture surface water splashing from the road, thereby preventing the accumulation of standing water.

Moreover, KlassikDrain offers level access for road crossings, efficiently draining them. This solution allows for quick and easy maintenance access. By aligning the inverts of both systems, a seamless transition between the channel bodies was achieved, enhancing hydraulic capacity and flow rates for improved functionality.



Invert of KerbDrain transitioning into KlassikDrain



Invert of KlassikDrain

Milford School

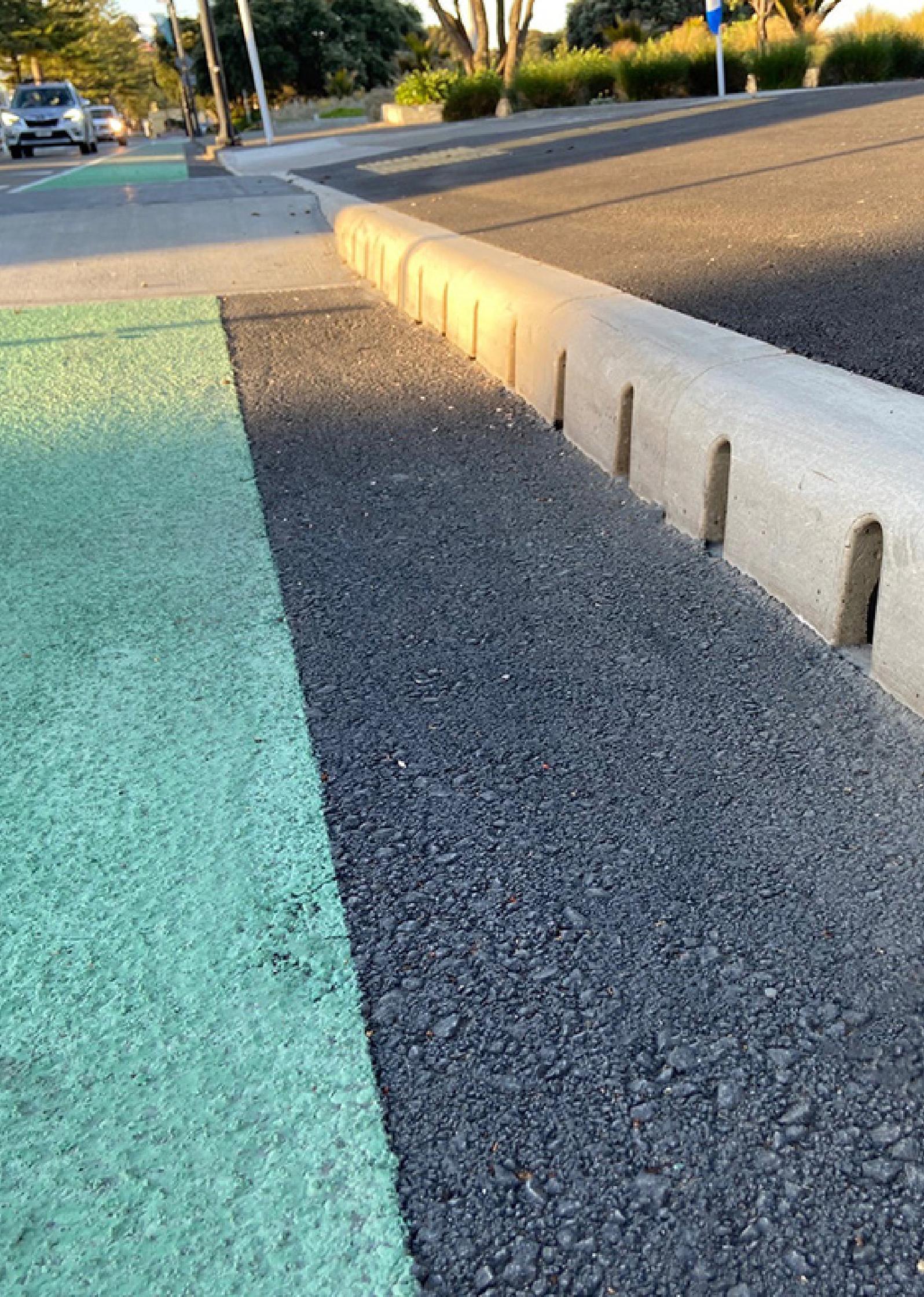
ACO KerbDrain HB200 evolved to a raised table.

This project, completed in 2021, is part of an initiative for safer school roads by Auckland Transport and includes two raised tables to reduce traffic speed near Milford School. A total of 35 meters of ACO KerbDrain HB200 were specified to capture the runoff from the raised tables and the surface water from the street, directing it to the inlet slots of the drain, which simultaneously functions as the kerb.

With the traffic calmed and all surface water efficiently managed by the KerbDrain, safety for the school's students and other road users is guaranteed. This KerbDrain installation follows the same functional principles as the Auckland Transport raised table project at Ayr Street in Parnell, Auckland.









Napier Marine Parade

ACO KerbDrain QK100 for a raised crossing at Napier's Marine Parade.

ACO was specified for this project with the increasing popular KerbDrain and for the first time in New Zealand, ACO KerbDrain QK100. Unique to this system is the inclusion of unique 'drop curbs' allowing the KerbDrain to maintain a continuous channel regardless of driveways or footpaths. The design allows water to convey easily whilst maintaining continuous capture, minimising the risk of ponding, creating a clear crossing point and safe area for pedestrians on a busy summer's day in Napier.



Omana North Apartments

ACO KerbDrain QK200B for a safe road and level access crossing.

This raised crossing guides the visitors and residents safe across the busy road in front of Omana North Apartments. ACO KerbDrain QK200B efficiently manages surface water while accommodating a raised crossing. The lateral inlets prevent blockages, ensuring uninterrupted drainage.

Similar projects demonstrate cost-effectiveness by eliminating the need for additional pit infrastructure and relying on smart water-management techniques to direct water to existing sumps.



MANANA
NORTH







Victoria Street Wellington

ACO KerbDrain HB200 leading to a raised crossing.

Victoria Street in Wellington provides a bustling example of ACO KerbDrain's reliable management of surface water from the road, seamlessly accommodating raised features like pedestrian crossings while maintaining effective drainage.

Even in the presence of leaves and debris along the road's edge, the generous inlet slots remain unblocked, ensuring continuous water capture. By carefully aligning the product components at an appropriate angle, a curved design that follows the street and footpath's alignment was achieved.





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