

Drainage system 'kerbs' road ponding

The Great Western Highway at Lithgow has recently undergone a stormwater overhaul.

The NSW Roads and Traffic Authority (RTA) approached **ACO** to provide them with a surface drainage system to be installed along the landscaped traffic median on a 110 metre long section of the highway. The requirement was to remove surface water from the road without it encroaching beyond the allowable width of gutter flow. There was minimum fall along the median to assist drainage.

For the design storm, **ACO's Technical Services** proposed the **ACO DRAIN QK200A Kerb Drain**, a modular one piece polymer concrete kerb and drainage unit with a 45° batter. The 200mm wide system had enough capacity to eliminate any residual gutter flow in its immediate and continuous removal of the surface water. The solution displaced the need for a multiple number of closely spaced road gullies, even though inspection lids were still able to be positioned at various points along the run.



For this application, the **ACO DRAIN QK200A Kerb Drain** was manufactured in grey colour to blend with its surrounds.

Subsequent inspections during some recent intense storms have left the RTA satisfied with the performance of the product and with the solution.

ACO's in-depth expertise in engineering solutions for road drainage, results from 30 years of providing channel drains for local, urban and highway schemes worldwide.

ACO acquires CS Crouch

ACO has continued to broaden its drainage range as it enters into related industries, this time through the acquisition of CS Crouch, formerly renowned as one of NSW's most innovative manufacturing steel fabricators and principal suppliers to roads authorities, councils, government departments and a number of contractors statewide.

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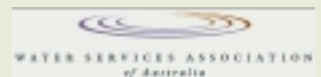
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Slab Drain Launched
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www.acoaus.com.au

NZ Airbase receives civilian upgrade



A \$23 million refit of the Ohakea Airbase runway, NZ will raise it to civilian airport standards to meet the country's forecasted growth potential. This will allow the runway to service both defence and civilian heavy haul aircraft, including Boeing 747s.

The runway reconstruction consisted of the excavation of the old runway, and the installation of drainage and utility works. Over 520 metres of

Both heavy duty systems are designed to withstand the heavy wheel loads imposed once the runway is in service.

ACO DRAIN S300 was supplied along with 50 **ACO ACCESS Rhinocast** covers.

"... designed to withstand heavy wheel loads ..."

The NZ government recommends that Ohakea has the potential to become one of New Zealand's most prominent regional transport and cargo hubs.

New era for intake tests

ACO continues its relationship with the world's leading universities by furthering its research in the field of grating hydraulics.

In recent grating tests, capture rates and salient hydraulic phenomena were recorded at various water flows discharging down a ramp at numerous longitudinal angles and crossfalls. This is the second phase of experimentation conducted by **ACO** with one of Australia's leading universities, part of a curriculum that has spanned over 5 years. It allows **ACO's** Grating Intake computer program to generate accurate and meaningful results based on the data from this empirical full scale modelling.

ACO's Technical Services department will document the

capture specifics corresponding with results generated from its computer program along with the customer's specific design requirements. **ACO's Technical Services** Manager, John Sordo says, 'This is a world first, gone are the days of over-engineering a drain. We are in a unique position to assist customers to accurately select the correct solution without the excessive costs associated with selecting oversized drains, based on old rule of thumb approaches.'

The free service is offered without obligation.

Drainage as an artform



The causeways leading into Kings Beach, QLD have undergone an impressive upgrade. Its design is understated by the themes typical of Queensland's coastal tropical culture and environment.

Kings Beach Redevelopment boasts new public amenities including picnic shelters, water features, a children's playground and a new carpark, all designed to blend harmoniously with parklands adjoining the beach.

Designing for safety was uppermost in the minds of the designers, not only in the children's playground area but also in the highly trafficked pedestrian paved areas which needed to be kept free of surface undulations and obstructions.

ACO's Heelguard 'S (316 Stainless Steel gratings) with ACO DRAIN Systems, KS200S, KS300S and Drain Sumps were selected to meet the design's necessary safety and corrosion resistant requirements.

The **ACO DRAIN System** is manufactured from polymer concrete, a corrosion resistant resin composite material ideal for the aggressive beach environment. The system's versatility allowed designers to incorporate jet sprays and lighting features, transforming **ACO DRAIN** into a spectacular water feature.



'Grate Stuff, this stormwater system'

(Manly Daily - 29/08/2003)



Photo from Manly Daily.

'Grate Stuff, this stormwater system' (Manly Daily) - Steel gutter grating at North Steyne Surf Club.

ACO has provided Manly Council with a drainage solution to overcome flooding hazards in the Pine Street Catchment area, near the North Steyne Surf Club.

"... grating can easily be removed so that the filter can be replaced ..."

ACO's custom manufactured steel grating system laid above a continuous strip of fabric filter has now replaced the interlocking porous pavers, originally installed in an effort to reduce the amount of untreated stormwater from transgressing on to Manly Beach.

Council discovered that the original porous paver only worked for a short time to filter the runoff before it entered underground storage tanks for re-use as irrigation along the beachfront. 'We found that as material (silt) passed through the pervious blocks, it was forming a sediment layer which created a barrier on top of the ecosoils, reducing their efficiency and causing flooding problems;' (Interview with Council – cited from Manly Daily 29/8/2003).

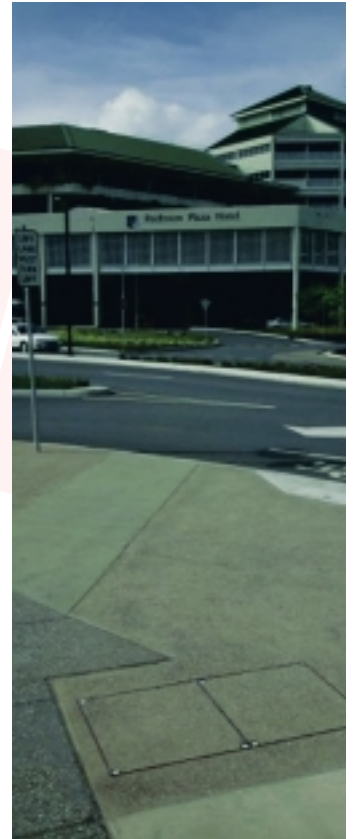
For ease of maintenance, the ACO grating can easily be removed so that the filter can be replaced in one uninterrupted operation.

Discreet covers for Reef Gateway

The Cityport development, City Port North, will create a world class waterfront facility integrating the Cairns Business District (CBD), the waterfront and the Esplanade into a prestigious gateway to the Barrier Reef.

Linked with a mix of spacious promenades and access ways, the development consists of a multimillion dollar upgrade of marine facilities and the creation of an urban waterfront tourism precinct, situated minutes from the CBD.

Over 70 lightweight ACO **CABLEMATE polymer concrete pits** were installed to house the necessary lighting and communications services for the new Cityport facility. As part of the pit system, the designer chose **ACO ACCESS Pavermate steel recessed covers** to hold the pavers and maintain visual continuity of the paver pattern along the promenade.



Crouch acquisition

From page 1.

CS Crouch has added a number of uniquely designed trench and sump gratings, substation ducting solutions and lift hatches to ACO Polycrete's product portfolio.

David Eisenhuth, ACO's Managing Director sees this as a very exciting change for the company. 'We believe the acquisition will benefit customers insofar that it allows us to offer customers total solutions.'

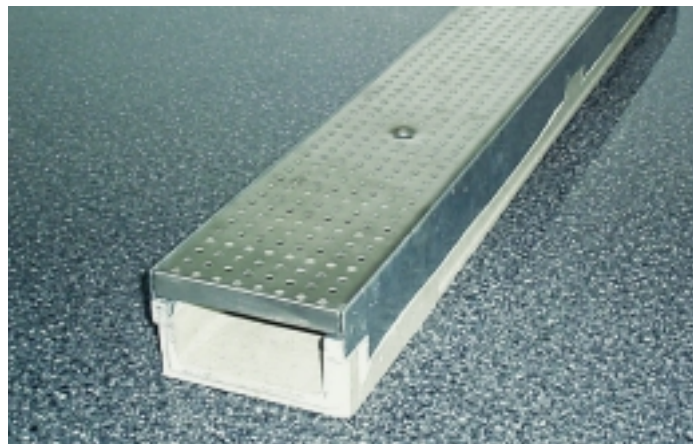


This is ACO's second acquisition in as many years with the purchase of DJ Muller in 2002. 'We are serious in leading the market in product innovation and have employed both former owners. Having the expertise inhouse allows us to be more responsive to our customers' needs,' added Mr Eisenhuth.

ACO supports the broad product range with its technical advisory department.

Proud to be shallow

ACO have launched the shallowest surface drainage system in the industry.



It measures 80mm overall in depth with an invert of 65mm and weighs a light 8.5 kilograms, ideal for quick and easy installations. Precast knockouts for vertical outlet connections are standard for each channel.

The Slab Drain extends the **ACO DRAIN K Range** for applications ideal for retrofit, suspended slabs, balconies, parking decks, etc. It comes complete with a protective integrally cast steel edge and can accommodate over 10 different types of **ACO** gratings in various materials and finishes.

Type test approval for ACO's bathroom drainage systems

ACO Stainless is synonymous with building drainage. Part of its very broad range are trough & grating line drainage systems designed for wet areas in buildings.

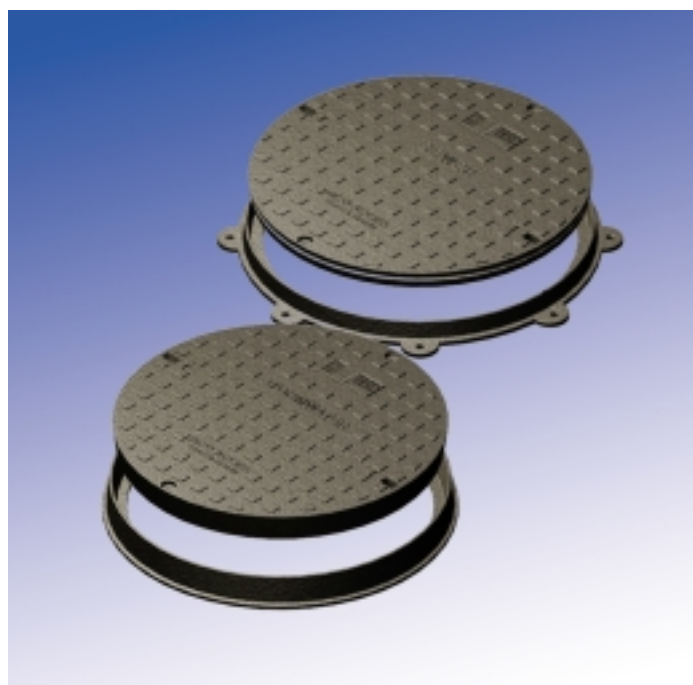


ACO has just been awarded the Australian Standards Type Test Accreditation MP 52, spec 40. This allows specifiers to use this unique **ACO** solution with confidence.

ACO STAINLESS line drainage systems give designers the freedom to eliminate step-downs in shower areas, makes configuring tiles and fixtures easy and allows for the construction of simple floor gradients.



WSAA compliant access covers



ACO's Rhinocast Circular Ductile Iron Solid Top Access Covers have been appraised by WSAA. Water Services Association of Australia (WSAA) is the peak body of the Australian urban water industry.

The appraisal provides the industry with confidence in the quality of these covers and assurance that WSAA members and associates (Australia's major urban water businesses) that **ACO ACCESS Rhinocast** circular, solid top covers are authorised and acceptable for use. A copy of the appraisal can be obtained from WSAA's website www.wsaa.asn.au



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