

# Newcastle Port

**Surface Type:** Concrete | **Products Used:** DRY-TREAT 100N™ & CONCREME™ | **Completed:** 2009

## THE PROJECT:

Newcastle reaches out to the sea, creating Australia's only city centre bounded by pristine beaches and an active working harbour. Newcastle Harbour is one of Australia's busiest shipping ports. Growth over the years has required The Newcastle Harbour Authority to extend the existing jetty and hardstand in answer to the increasing demands in the area.

The site's exposure to an extreme marine environment meant it was prone to damage caused by chlorine ion ingress (salt damage). Having made a significant investment in the extension of the wharf, the Authority wanted to seal the structure to protect it from such damage in the future. The sensitive marine environment of the harbour was also of concern. For this reason, the authority wanted the sealing products used on the underside of the structure to be environmentally friendly—minimizing any chemical pollution to the harbour waters.

## SPECIAL REQUIREMENTS:

When selecting the right sealers for this project, The Harbour Authority needed to consider these performance requirements:

- The sealer should protect the concrete jetty and hardstand against chloride ion (salt) ingress.
- The sealer should not diminish the slip resistance of the surface.
- The sealer needed to have a long lifespan to minimize future expenses and service disruptions.
- A low VOC sealer was required for the underside of the structure.
- The product needed to be non-drip to minimize excess entering the water during application.
- The sealer needed to be applied quickly due to high wind and site access problems.



## THE DRY-TREAT SOLUTION:

Dry-Treat™ was able to provide a total solution for the treatment of the harbour extension. The high traffic on the surface (upper side) of the wharf required a heavy duty and reliable sealer. Historically, silane sealers are known to be the most effective and economical way to protect concrete structures from salt damage (chloride ion ingress).

The upper side of the hardstand and jetty was treated with DRY-TREAT 100N™ – a silane sealer. DRY-TREAT 100N™ is an impregnating, invisible and breathable sealer that will ensure the long term protection of the structure from any damage caused by water and water-borne salts. DRY-TREAT 100N™ provides permanent protection, making it perfect for the busy wharf and reducing future maintenance disruptions. Dry-Treat™ offer a 30-YEAR PERFORMANCE WARRANTY for DRY-TREAT 100N™ when applied by a Dry-Treat™ Accredited Applicators.



The underside of the wharf was an entirely different issue. Silane based sealers were not considered acceptable due to fears that any dripping or runoff during application would contaminate the harbour. After consulting with Dry-Treat™, The Newcastle Harbour Authority approved CONCRÈME™ for this area. CONCRÈME™ is the only silane for concrete protection which meets all the worlds' strictest new carbon emission VOC requirements - including the LEED standard created by the USA, UK and World Green Building Councils and EU VOC Directives 2004/42/CE and 1999/13/EC.

CONCRÈME™'s green credentials made it perfect for the underside of the wharf. CONCRÈME™ provides the ultimate protection against the damaging effects of water and salt – crucial in this harsh marine environment. CONCRÈME™'s specially formulated molecules penetrate deeply and bond permanently to the surface of the structure without changing its breathability. CONCRÈME™'s non-drip single coat application makes application in difficult areas easier and quicker – whilst ensuring that there is minimal runoff. CONCRÈME™ is backed by a 15-YEAR PERFORMANCE WARRANTY when applied by a Dry-Treat™ Accredited Applicator.