**Mandorah Jetty**

# Mandorah Jetty, Dorwin NT

Service Focus

# Tight Work Upgrading Mandoroh Jetty in Darwin.

**Client:** Port of Darwin

**Contractor:** Wolpers Grahl / DEC Projects

# **Project Manager:** Alan Eckert

# **Contract Type:** Cathodic protection to underside of existing Mandorah Jetty

# **Location:** Mandorah Jetty, Darwin NT

# **Project Date:** Sep 2011

# **Services utilized:** Track Sawing

## Purpose:

The structural integrity of the concrete jetty has been monitored over a number of years with vulnerable areas being fitted with Cathodic Protection to enhance the asset’s serve life. A recent survey of the jetty indicated further Cathodic Protection was required to ensure

the structural integrity of the jetty. Super City was subcontracted to cut a slot 10mm wide and 50mm deep to the underside of the jetty surface.

## What is Cathodic Protection:

Cathodic Protection (CP) is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell.

The simplest method to apply CP is by con- necting the metal to be protected with another more easily corroded “sacrificial metal” to act as the anode of the electrochemical cell.An- other method of protection impresses a small direct current on a structure Cathodic Protec- tion Systems are used to protect a wide range of metallic structures in various environments.

## Common applications are:

* steel water or fuel pipelines storage tanks
* steel pier piles
* ships and boats
* offshore oil platforms and onshore oil well casings
* and metal reinforcement bars in concrete buildings and structures.

## Best results indicated that the overage underside cover was around 60mm from the existing reinforcing layers

**Procedure:**

Super City Concrete Cutting supplied a WX15 track saw and a custom built blade manu- factured by Tyrolit Australia to complete the works.

* A series of 10mm wide x 50mm deep slots were cut using the track saw system to provide access for the cathodic protection.
* 280 lineal meters of inverted sawing 10mm wide x 50mm deep was completed on the jetty so the cathodic protection could be installed.
* The start of the jetty structure from waters edge proved most challenging as the ac- cess area to the underside of the jetty was only 650mm high.
* Operators worked their way through setting up the track in very tight areas, suc- cessfully aligning the track so all specified tolerances were achieved.

## Safety:

Due to the restricted work area safety blade guards that are normally fitted to the unit could not be fitted This safety issue was identified prior to work commencing and a safe work method statement was complied and present- ed to the client for approval. The ability to re- mote control the track saw from a safe working distance reinforced our capabilities to maintain a safe work environment for this section of the work.

## Project Completion:

The inverted sawing took 4 days to complete, providing the client with sufficient time to install the cathodic protection and grout in the electrical knes. Wolpers Grahl had not before seen a track saw used in this type of application and was very pleased with its versatility and production rates.

Stage 2 of this project will take place in the near future and we are looking forward to working together on the next phase of the upgrade.