

# CASE STUDY

# TITANIA STREET, RANDWICK

# SYDNEY, NSW

PLATIPUS® S6 ANCHOR SYSTEMS



CONTRACTOR	Access Piering Pty Ltd
ENGINEER	Cardno
CLIENT	Randwick City Council
LOCATION	Titania Street, Randwick Sydney
PRODUCT USED	Platipus S6 Anchors Systems

## ADVANCED GEOSYNTHETIC SOLUTIONS

### The Project

An existing old brick retaining wall, up to 1.5m in height and built in the 1960's, was showing signs of movement and instability. Cirtex® Australia with the Engineer, Cardno developed a remedial wall stability solution using Platipus anchoring systems that would minimise disturbance to the existing wall and eliminate the total dismantling, design and construction of a new retaining structure.

### Design

To stabilise the brick retaining wall, 53no. Platipus S6 anchor systems were driven up to 6m from the wall face, sufficiently past a potential slip/failure plane and into a sandy backfill. The anchor systems were spaced at a maximum distance of 1.75m along the wall and the Engineer detailed bespoke load plate arrangements which were fabricated by the contractor to spread load at the wall face and conceal the top terminations of the anchor systems. Working or Design Loads of 10kN (1 ton) were immediately verified and tested on site. Design life requirement for the remedial works was 40+ years.

### Installation

Coring through the brickwork took approximately 5 days to complete with the Platipus anchor installation and load testing taking 3-4 days. Once the anchor systems were driven to the required depth, they were tensioned and extended up to 200mm and 'Proof' loaded to 12kN (1.2 tons). All Platipus anchor systems were load locked against bespoke galvanized load plate arrangements with a small active load of 0.5kN.

### The Platipus anchoring systems were chosen and deployed for the following features & benefits:

- No expensive demolition and additional costs of design and construction of a new retaining structure
- Bespoke top terminations detailed to address health and safety and facilitate on-going maintenance if required
- Extended the serviceability and design life of an old retaining structure effectively, efficiently and with minimal environmental impact
- Minimum road closure and local disruption from the works due to speed of anchor installation



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