

## New Branches in Coffs Harbour and Port Macquarie



DP was attracted by the strong client focus of CMG which marries well with the culture of DP. The complimentary capabilities and regional coverage are a natural fit.

### Acquisition of Chandler Morrison Geotechnical

Douglas Partners has expanded to the North Coast of NSW following the acquisition of local firm Chandler Morrison Geotechnical (CMG), with branches in Port Macquarie and Coffs Harbour.

CMG was founded in 2009 by Steve Chandler and John Morrison and has a strong local presence, with over 20 staff providing a range of geotechnical testing services including drilling. Douglas Partners brings additional capability to CMG allowing a full range of geotechnical engineering and geo-environmental services to be provided. The Coffs Harbour and Port Macquarie branches will trade as 'Douglas CMG'.

The two firms have a long standing relationship and DP was attracted by the strong client focus of CMG which marries well with the culture of DP. The complimentary capabilities and regional coverage are a natural fit. Together with DP branches in Newcastle and Gold Coast, this allows provision of locally based services to clients across the north coast region.

Steve Chandler has been providing geotechnical testing services in the region for over 20 years and will continue to manage the Port Macquarie branch. Steve's team will be joined by Jeremy Bear, a geotechnical engineer with

9 years' experience at DP. Jeremy has spent the last couple of years as Geotechnical Design Representative on the Frederickton to Eungai Pacific Highway upgrade and has just recently completed a Master of Engineering Science degree at UNSW.

John Morrison is very well known in Coffs Harbour and the surrounding region, providing excellent client service for over 20 years. John will continue to manage the Coffs Harbour branch and will be supported by geotechnical engineer, John Niland. John Niland grew up in Grafton and is keen to head back up north after 17 years with DP's Sydney and Newcastle branches.

Steve, John and their teams are excited at the prospect of Douglas CMG providing fully integrated engineering and testing services to their clients. As well as having engineers based in the local offices, they will be supported by extensive resources across the wider company, including Ground Test who provide an array of drilling and CPT rigs.

**Coffs Harbour**  
**Port Macquarie**



Steve Chandler



John Morrison



John Niland



Jeremy Bear

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Meet the team



**Matthew Parkinson**  
 GEOTECHNICAL ENGINEER

**DP Deepens Embedment with Centre of Excellence**

DP is pleased with its ongoing involvement as an Industry Partner with the ARC Centre of Excellence for Geotechnical Science and Engineering (CGSE).



At a recent CGSE workshop in WA it was pleasing to see a showcase of cutting edge research which is producing practical real world solutions to numerous geotechnical challenges. We are about to extend our association with the centre of excellence with geotechnical engineer Matthew Parkinson to be embedded in the Newcastle CGSE. Matthew will undertake a Masters Degree focusing on laboratory testing and numerical analyses for predicting the behaviour of soft soils under load. Matthew will be available to practice his new skills on projects with DP over the duration of his research.



**DID YOU KNOW...**

**DP FACTS & FIGURES**

- DP now has 17 branches in six states and territories of Australia providing unrivalled regional coverage for a geotechnical consultant.
- DP has over 400 staff, 74 of whom have been with us for over 10 years and 29 for over 20 years. Staff numbers have grown steadily year after year.
- DP has completed over 80,000 projects since being founded in 1963 and the locations are mapped on our GIS JobMap for easy reference on all desktops.
- As well as being 100% Australian owned, DP is fully owned and controlled by its staff.

# The East Arm Marine Industry Park

## A Major Development in Darwin Harbour

**DP's geophysical team has characterised the site of Darwin's Marine Industry Park, enabling a significant reduction in dredging costs and providing critical information to inform dredging design and the EIS.**

In mid-2015, a team of geophysicists and hydrographic surveyors from Douglas Partners (DP), GBG Australia and Astute Surveying completed a comprehensive marine geophysical survey to characterise 200 ha of the East Arm of Darwin Harbour – the site of a Marine Industry Park proposed by the NT Land Development Corporation (LDC).

Significant dredging will be required to create approach channels, turning basins and berths for shipping, with an ultimate dredged depth of over 6 m. Factors critical to the viability of the project include the total volume of material to be dredged and the proportion of rock that can be removed by available dredging plant, without the need for blasting.

To characterise these areas, DP applied a suite of methods comprising multibeam echosounding for precise seabed levels, sidescan sonar for seabed materials and surface hazards, magnetics for buried ferrous metal hazards, seismic reflection

for sediment, and bedrock depths and seismic refraction for subsurface velocities as indicators of dredgeability.

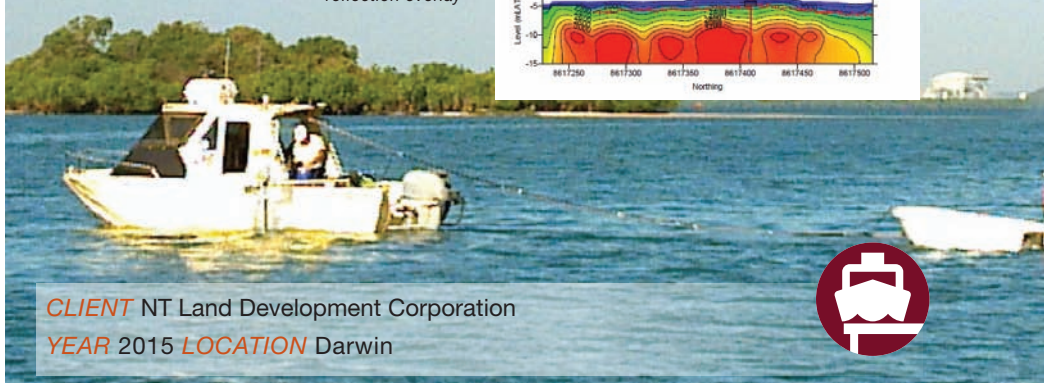
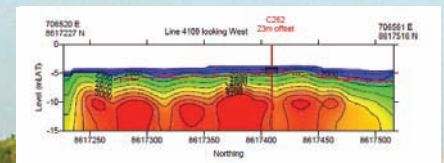
As a result of astute observations and quick decisions, the DP team collected data outside the specified area and identified an alternative channel layout. DP's initiative has potentially reduced the channel length by almost 2 km, for significant savings in time, dredging costs and costs of channel markers.

Additionally, an innovative "full volume velocity model" was developed to benefit the interpretation of dredgeability. The technique allows clear identification of higher velocity (higher strength) zones at various levels within the dredge footprint. As a result, DP was able to provide LDC with parameters for direct input to modelling of various dredging scenarios, assisting the progression of this important development through the upcoming EIS process.

*DP's initiative has potentially reduced the channel length by almost 2 km, for significant savings in time, dredging costs and costs of channel markers.*



Above: Bedrock depths from seismic reflection  
 Right: N-S refraction tomogram with bedrock reflection overlay



**CLIENT** NT Land Development Corporation  
**YEAR** 2015 **LOCATION** Darwin

# Castle Towers Shopping Centre Becoming NSW Largest Retail Centre

## Castle Towers Expansion Project

**Douglas Partners' use of existing information and targeted geotechnical and environmental investigation, combined with numerical modelling provides optimised design outcomes for the Castle Towers expansion project.**

Castle Towers Shopping Centre opened in 1979 and has since undergone several stages of expansion, growing into one of Australia's best performing malls.

Scheduled to commence construction in 2016, the \$900+ million development of Castle Towers proposes to consolidate the new development with the existing Centre to create a destination that will increase the Centre's gross lettable floor area by up to 80,000 m<sup>2</sup> to more than 190,000m<sup>2</sup>. Castle Towers' development also proposes to deliver significantly improved car parking facilities, increasing the Centre's capacity to over 8,000 vehicles.

Since 2014 DP has undertaken detailed geotechnical and environmental investigations to assist the civil and structural design. DP's in-house database of historical projects allowed us to capture all investigation results since 1972 to complement the current investigations and to build a detailed geotechnical model of the site whilst minimising field investigations.

Additional floor levels are proposed to be constructed over the existing parts of the development leading to substantially increased loads. The investigations were targeted and included sonic integrity testing of existing piles and exposure and documentation of existing footings. The analyses of this information by DP indicated that the existing footings could be used to support the additional loads, resulting in considerable cost savings to the project.

The existing NWRL twin tunnels sit less than 5 m below some of the proposed basement footings and a critical design issue was to prevent adverse impacts on the tunnels. DP developed a complex 3D finite difference geotechnical model, incorporating the tunnel structural elements and the proposed footings to optimise the design whilst safeguarding the tunnels.

DP continues to have involvement in the project.

*DP Finalist in Financial Review Client Choice Awards 2016*

Client service is very important to us at Douglas Partners and we are continually looking at ways to improve. That is why we are very happy to be regular performers in the Client Choice Awards. The awards are based on client surveys performed by Beaton Research and, as we all know, clients know best.

This year there is a record field of entries from 91 Australian and New Zealand firms and practitioners.

**DP is finalist in four categories for 2016:**

- Best consulting engineering firm (revenue \$50m - \$200m)
- Best provider to property
- Best provider to construction and infrastructure
- Best NSW firm



**CLIENT** Queensland Investment Corporation Ltd (QIC)  
**YEAR** 2014-2016 **LOCATION** Castle Hill, NSW



**Ray Blinman**  
PRINCIPAL/SYDNEY  
GEOTECHNICAL  
MANAGER



*"DP's in-house historical project database optimises geotechnical investigations and design outcomes to save QIC time and money."*

## Congratulations

### Masters of Engineering and CPEng



Brett Egen

DP strives to provide industry leading service and integrated practical solutions. This is no small goal and requires our staff to be continually upskilling themselves in this ever changing world.



Jeremy Bear

Our technical skills are of paramount importance to the continuing success of DP. Hence many of our staff complete post graduate courses. We would like to congratulate Toby Cairnes from Newcastle, Jeremy Bear from Port Macquarie and Tom Mrdjen from our Macarthur Branch for recently completing the requirements for a MEngSc at the UNSW.



Jane Smalley

Jane Smalley who manages our Environmental Section in Brisbane and Brett Egen our Sunshine Coast Branch Manager, have been awarded Chartered Status by Engineers Australia and are also now on the National Engineering Register, joining many others from DP.

### HOT OFF THE PRESS

We are also pleased to announce these promotions recently announced at the Douglas Partners' Annual Technical Seminar in February.

- **Principals:** Scott Easton, Chris Kline, Peter Oitmaa
- **Senior Associates:** Gavin Boyd, Brett Egen, John Niland
- **Associates:** Atha Kapitanof, Steve Lankshear, Sergio Neves & Dana Wilson.

# New to the Team

## Welcome Dr Richard Merifield

PRINCIPAL ANALYST



**After establishing himself as a leading academic and then honing his skills in design, Dr Richard Merifield has returned to where it all started, in the role of Principal Analyst.**

Richard never really strayed far from DP in the years since he left for academic pursuits, maintaining a close relationship with many staff, including Managing Director Will Wright. Richard and Will joined the Newcastle office as graduates in the early 90s, learning the basics of soil logging and laboratory testing together and found they shared a love of sailing and windsurfing.

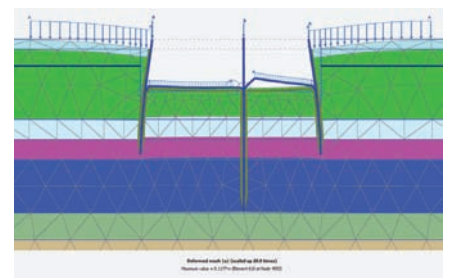
As the years passed Richard found the allure of academia too strong and in 1997 joined Professor Scott Sloan's team at the University of Newcastle to complete a PHD in geotechnical numerical analyses and then take up the post of Research Engineer. During his time at UON, Richard and Will continued to enjoy sailing together on beautiful Lake Macquarie.

In 2002 Richard was offered the role of lecturer at University of South Queensland and, given his formidable communication skills, it was a role he excelled at and was soon elevated to the role of Senior Lecturer. Richard caught the eye of the Western Australians and in 2006 took up the post of Senior Lecturer at UWA however, after a few years, he started to get a little home sick. Richard returned to UON as an Associate Professor. Richard was soon working part time at DP providing specialist geotechnical inputs on a range of projects including complex numerical modelling for expansions of the Port Waratah Coal Terminal and Port Botany as well as GPTs Newcastle East End Project.

When the Centre of Excellence for Geotechnical Science and Engineering (CGSE) was established in 2011, with DP as an Industry Partner, Richard became a Chief Investigator, with Will on the board of the CGSE.

In 2012 Richard was tempted to join SMEC as a Technical Principal. He left academia to pursue geotechnical design, working on a variety of projects including design for Lake Macquarie Interchange and North West Rail Link and Design Verification for North Connex and Gosford Passing Loops. Richard and Will didn't have time for sailing but still managed a regular breakfast catch up and one thing led to another.

Richard is now based in DP's Newcastle Office and has a corporate role providing high end analytical support for projects across Douglas Partners. The 50 technical papers he has published in international journals and conferences come in very handy, as does his enthusiasm for all things geotechnical. Richard has been busy from the start, adding value to many projects including analysing a piled raft in Maitland and retaining systems for Grade Separation projects in Melbourne.



*The 50 technical papers he has published in international journals and conferences come in very handy, as does his enthusiasm for all things geotechnical.*

### FOR MORE DETAILS

If you would like further information regarding our projects or articles featured in this Newsletter, please email: [marketing@douglaspartners.com.au](mailto:marketing@douglaspartners.com.au)

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