Road Construction Challenges and Initiatives Developed

Brendon Gardner
University of Canterbury Graduate - 2011
BE(Hons) Civil Engineering

Assistant Contracts Manager
Downer
2012-present
Introduction

Two specific techniques developed over the past year:

- Methodology improvements in carting aggregate
- Cement stabilisation of in-situ material
Methodology of Carting Aggregate

Anzac Drive

- 15,000T AP65
- 6800m²
- 9 weeks
Establishing traffic management plan:

- Largest challenge
- Suitability for heavy vehicles
- Drove the construction method
Methodology of Carting Aggregate

- Cut-to waste in background
- Placing imported fill in the foreground
- Maximised return trips
- Through movement of truck and trailers
Methodology of Carting Aggregate

- Monitoring of truck numbers to keep excavators and grader busy
- Stockpiles to reduce impact of peak traffic
- Reducing wait at the site entrances
Cement Stabilisation of In-situ Material

Benefits:
• Reduced importing of material
• Significant material and time savings

Developments:
• Significant investment
• Crew development
Cement Stabilisation of In-situ Material

Specific loading method developed:

- Opening technique
- Remove working under suspended loads hazard
- Reduce dust
- PPE requirements
Conclusion

Two road construction techniques discussed:
1. Methodology improvements in carting aggregate
2. Cement stabilisation of in-situ pavements
Questions?