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Re-Sheeting Runway 16R/34L at Australia's Busiest Airport

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Introduction & Overview

- Airport work is often complicated, high stress and risky. Hence, airport asset owners have come to expect a high level of service when it comes to managing their assets.
- Airport Projects are often characterised by working within designated boundaries, dealing with short operational windows, managing security risks and requiring an extremely high quality finished product.
- The relationship between asset owner, contractor and sub contractor is vital to managing the associated risks and opportunities and is vital to delivering a successful outcome for all.
- This case study will explore Boral's experiences in re-sheeting runway 16R/34L at Sydney Airports – Australia's busiest airport.

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Sydney Airport Facts & Figures

- Australia's busiest airport in terms of annual aircraft movement (320,000) and passenger transit (37mil).
- The airport carries traffic from 28 regional, 23 domestic and 46 international destination making it one of Australia's most important pieces of infrastructure.
- The airport is directly responsible for approximately \$8bn worth of goods and service flow and double this indirectly.
- Sydney airport has 3 runways:
 - Main North/South (16R/34L)
 - East/West &
 - Third runway.
- Runway 16R/34L is 3,962m long and only 1 of 4 commercial runways capable of landing a space shuttle.
- By the time the paving shift is underway there will be more than 50 aircraft from all parts of Australia and the world in the air and heading for Sydney Airport.

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Managing Risk & Reward

Common Risks

Risk	Client	Contractor
Safety	✓	✓
Quality	✓	✓
Cost	✓	✓
Time	✓	✓
People	✓	✓
Reputation	✓	✓

Risks are aligned, good outcomes from working together

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Pre-Construction & Mobilisation

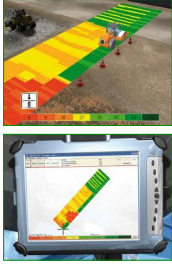
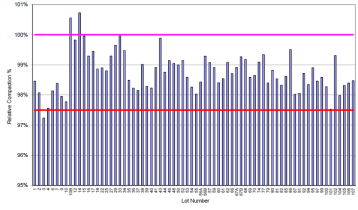
Cost Influence Curve Sydney Airport

The graph shows the relationship between 'Ability to influence cost' (left y-axis, 0% to 100%) and 'Project Expenditure' (right y-axis, 0% to 100%) over the project lifecycle from 'START' to 'FINISH'. The project is divided into 'Pre-Con' and 'Construction' phases. A vertical line marks the transition to 'Pre-Construction & Mobilisation'. Three curves are shown: 'Cost of Construction' (solid orange line), 'Cost of Influence - Traditional' (dotted blue line), and 'Boral' (dashed green line). The Boral curve shows a significantly higher ability to influence cost during the Pre-Construction & Mobilisation phase compared to traditional methods.

BORAL VALUE MANAGEMENT PROCESS

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Construction 'Smarts' – Quality Control

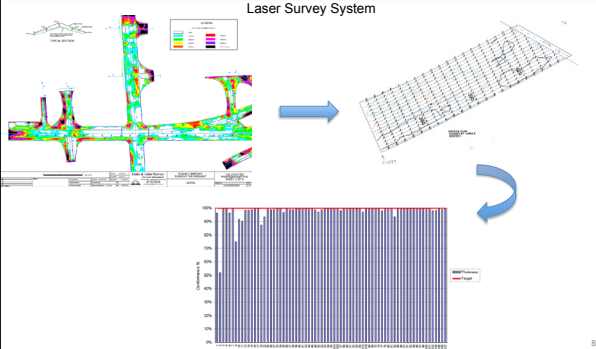
GPS Compaction System

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Construction 'Smarts' – Level Control

Laser Survey System




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LEAN Contracting

Waste Removal
 TIM WOOD

Transport
 Inventories
 Movement


Waiting
 Overproduction
 Over processing
 Defective Parts



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People

"High stress but enjoyable"



"Well planned and organised was key"

"Very proud of our achievements"

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Project outcomes


- 365** Number of people inducted to work on the project.
- 6.5** Maximum time allowed onsite during nightly curfew.
- 255,000 m²** Total area of Re-sheet.
- 45,000 T** Total volume of asphalt supplied to the project.
- ~99%** Compaction Compliance.
- 9** Calendar months worked.

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Fuel Resistant (FR) Asphalt

- Boral FR binder meets A35P specs
- Boral FR asphalt
 - can be produced at all plants
 - available in quantities > 2 tonnes
 - resistant to diesel & Jet A1 spillage

After 24 hour soak in diesel




C320 **Boral FR**

Perth Airport trials with AC14 mix showed Boral FR binder vs. Multigrade was:

- Fuel resistant**
 - 4 x more fuel resistant (mass loss)
- Wheel tracking**
 - 85% more rut resistant
- Resilient Modulus**
 - 10% higher modulus

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Nationally Technically Competent



NATIONAL

- Business Planning
- Key Account Management
- Asset Planning

REGIONAL MANAGEMENT

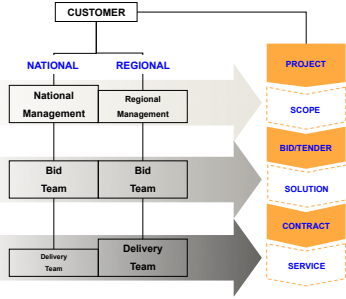
- Account Management
- Opportunity Pipeline

BID TEAM

- Tender Preparation
- Tender Submission
- Contract Execution


DELIVERY TEAM

- Project Controls
- Project Review
- Project Close-Out



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Construction – Quality Control



- Good Planning
- Good People
- Good Resources
- Good Communication
- Good Management

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Construction – Quality Control



- Mix Design
- Materials Control
- Manufacturing Control
- Construction Process

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