



Boral Resources (Qld) Pty Ltd
Boral Construction Materials
Quarries QLD/NT
Level 6 / 88 Musk Avenue
Kelvin Grove QLD 4059

T: (07) 3867 7600
F: (07) 3867 7463

www.boral.com.au

31st August 2016

RE: Phillip Pallisier Metso Excellence in Crushing & Screening Award

Phillip (Dick) Palliser is the Quarry Manager of Boral's Mt Bunday Quarry, which is located approximately 120km from Darwin, NT. As a 26 year employee, Dick has developed his career from an operator at Mitchell; into supervisory roles in Brisbane; and Quarry Management roles in Roma and Longreach. Dick relocated to Darwin in 2007 as Quarry Manager prior to the plant upgrade to bring experience and stability to the strategically important business unit.

Following the commissioning of the 250t/hr crushing and screening plant, Dick has managed several significant challenges at Mt Bunday:

- Commissioning phase of plant 2009;
- Major operational challenges due to change in raw feed from Hornfels to Granite 2010-2012;
- Focused operational improvement, including change in raw feed from granite to hornfels, during 2012;
- Secured and supplied quarry materials to the Ichthys Onshore LNG projects, as well as the associated infrastructure boom (>2Mt without delays, or a single rejected load in three years) from 2013-2016;
- *Focused optimisation project during FY16 aimed at improving productivity by >10%*

The FY16 crusher optimisation project was initiated by Dick in June 2015 as part of Boral's annual Value Improvement Project ideas phase. At that stage, he presented objectives to improve Barmac throughput and closed crushing circuit performance as concepts only. Importantly, he proposed a systematic way to:

1. Develop operational ideas by running workshops with operators to identify bottlenecks
2. Monitor beltweigher traces to understand spikes/surges which may affect production
3. Consultation with Metso to consider best practice and optimisation ideas
4. Execution of projects during the planned Christmas shutdown

The project aimed to increase throughput by >10%. Dick determined the cost of the CIP initiatives would total <\$80k, and were estimated to reduce costs by \$160k/annum. The projects were reviewed by myself, and endorsed by Wayne Manners, the EGM of Boral Western Region.

The actual results of the project exceeded all expectations:

- Aggregates increased from 262t/hr to 322t/hr (+23%)
- FCR increased from 278t/hr to 369t/hr (+33%)
- Project costs were \$60k, \$20k below budget
- These benefits increased cost reduction from \$160k to >\$500k/annum
- Additional benefits were realised such as improved manufactured sand grading and consistency of aggregate grading and shape.

The project was entirely initiated and executed by Dick and his team. He used targeted technical support from OEM Metso and planning/budgeting reviews by myself as required. During this time, the site was still operating at high capacity to supply the Ichthys Onshore LNG Project – which was successfully delivered on time, on budget, without a single quality issue for >2Mt. Darwin is also a notoriously difficult place to operate due to labour/skill shortages; costs of operations; and due to the tyranny of distance.



The Mt Bunday crushing improvement initiative was the best planned; budgeted and executed projects I have witnessed. The project created innovative solutions such as hydraulic gates on chutes, which could be applied to most quarry sites. Dick managed the project during the peak supply of the second largest project in the country, in some of the most difficult operating conditions in the country. The results are truly a testament to resilience; commitment; and passion to continuous improvement.

I am deeply proud of Dick and his team, and strongly support his nomination for the Metso Excellence in Crushing & Screening Award.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Travis Potts", written over a horizontal line.

Travis Potts
General Manager – Northern Territory
Boral Construction Materials
Mobile: 0401 896 608
Email: Travis.Potts@boral.com.au