VEHICLE COLLISION RISK REDUCTION PROJECT
NARANGBA QUARRY

Jared Groves – Intern Engineer
Daniel Crowe – Project Manager
David Hartzer – Quarries Support Manager
1  PROJECT DESCRIPTION:

Boral has been operating Narangba Quarry since 1996. In 2012, a blending plant was installed to facilitate the requirement of road base materials for the North Brisbane market. After the installation of this plant, an increase in near misses and hazards were reported following interaction between sales trucks accessing the blending plant and heavy mobile equipment operating on the intersecting haul road. A number of solutions were trialled; such as stop signs, traffic lights, call signs, hold points and administration controls with varying degrees of success.

Following a safety focus involving all operational staff, a clear message was highlighted that the intersection was a major safety concern. A solution was presented to management, to relocate the blending plant.

The aerial image below shows:

- Red Circle – Original Location of Blending Plant
- Yellow Circle – New Location of Blending Plant
- Purple Circle – Intersection of concern
Vehicle Collision Risk Reduction Project Narangba Quarry

The concrete foundations were poured on 12 November 2018 with the plant relocation starting on the 10 December. The blending plant was unbolted in sections using Slew Cranes. These sections required floating to the new location by a low loader. The reassembly of the main structure was completed by 19 December 2018 with auxiliary items such as water connections and electricals completed by 9th January 2019 ready for production.
2 INNOVATION/ORIGINALITY:

The highlights of this project were:

1. Site operational staff continuously striving for save solutions
2. Site Management listening to staff engaging in first-hand experience of knowledge
3. Working together of Senior Management, Site Management and Operators.

During planning for the relocation; further improvements were undertaken:

1. Configuring of plant from perpendicular to straight to improvement process flow and better utilising the area - further segregating the feeding of the blending plant with passing sales trucks.
2. Plant control from localised panel to a remote system using an iPad.

3 EFFECTIVENESS AT SOLVING THE ISSUE:

With reference to the hierarchy of controls, the relocation of the blending plant has achieved elimination of the specific hazard, viz. the interaction at the haul road crossing point, improving site safety and increasing plant/traffic efficiency.

Relocating the blending plant has created an area for future potential plant upgrades.

4 IMPACT ON OPERATIONS:

During the relocation of the blending plant, traffic had to be managed as low loader, cranes and light vehicles regularly passed through the sales area, interacting with HME and sales trucks. To counteract this, a temporary traffic management plan was adopted.

Prior to the relocation of the blending plant, a sufficient amount of road base was produced to meet the site sales obligations.

Subsequent to this project, improvements are continuously being identified, eg. further traffic management proposals.
5 TRANSFERABILITY:

The key to success with this project is having good relationships between site management and operational staff, which enables robust hazard identification and reporting processes to function well. These principles could be applied to any site.

6 COST EFFECTIVENESS:

The decision to move the blending plant was not necessarily considered a financially inexpensive option, but rather a mechanism to eliminate a unanimously rated, high consequence hazard, as part of Boral’s zero harm policy.