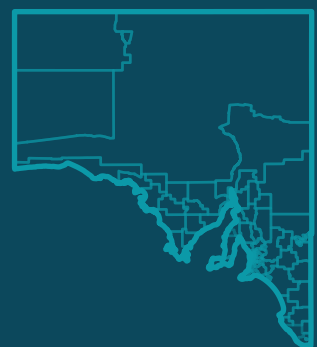




Sustainable Haul Road Management Program **Adelaide - Brighton Cement Ltd**



Vital Bon-Matt HR



Introduction

Established in 1882 and marking the commencement of the Portland cement industry in Australia, Adelaide - Brighton Cement Ltd is an historic facility and local landmark.

Entwined in Adelaide's rich local history, Adelaide - Brighton Cement Ltd provides valuable local employment and regional economic benefits, as the leading manufacturer of lime, cement, and pre-packed products.

Due to the nature and types of product stockpiled on site, there has been ongoing requirements for dust mitigation systems. Vital Chemical Pty Ltd has been the trusted supplier of stockpile stabilisation solutions to Adelaide - Brighton Cement for almost 10 years.

Adelaide - Brighton Cement has utilised Vital Chemicals' Vital Bon-Matt P47-VR1 for stockpile stabilisation and dust mitigation which proved to be both economical and highly effective.

However, using water as the main response to trafficked haul road dust mitigation, the company was encountering regular exceedances recorded on their internal dust monitoring systems.

Road dust mitigation operations were drawing on approximately 200,000L of water per week at peak times in an attempt to manage dust generation from unsealed trafficked surfaces.



Background

As an alternative to the excessive water only applications for haul road dust suppression, Vital Bon-Matt HR was trialled throughout the Adelaide - Brighton Cement site on unconsolidated trafficked surfaces and loading areas. With the aim of achieving cost and water savings, the trial took place over a five-month period.

Vital provided on-site support and training to watercart operators utilising Vital Bon-Matt HR in the Sustainable Haul Road Management Program. The Sustainable Haul Road Management Program consisted of twice weekly applications of Vital Bon-Matt HR with standard watercarts at 1% and 2% dilutions, alternating each week. High risk or high wear areas such as loading bays were closely monitored and Vital Bon-Matt HR product applied more regularly – if required.



Outcomes

The employment of Vital Bon-Matt HR as part of Adelaide - Brighton Cement's standard operating procedures for haul road dust mitigation delivered measurable benefits, including:

- A noticeable and significant decrease in visible dust lift from trafficked surfaces delivering improved safety, health, and environmental outcomes.
- Significant hardening and stabilisation of the haul road surface.
- Repeated applications encapsulated fugitive dust which had settled on trafficked surfaces from other sources.
- Reduced watercart movements across the site on unsealed surfaces. Reductions were from 25 circuits per week (3 to 5 times per day including some weekends) down to 1 to 2 watercart runs per week at peak times. Water is typically not required between Vital Bon-Matt HR applications.
- Significant potable water savings were achieved, from approximately 200,000L per week at peak times, reduced to 10,000L to 20,000L per week (when Vital Bon-Matt HR was used).
- **Water reduction facilitated key sustainability outcomes (reducing fuel consumption, CO₂ emissions, labour, maintenance and vehicle wash downs) and an estimated 90% in water savings for the purpose of dust suppression.**



Conclusion

As a result, Adelaide - Brighton Cement has incorporated Vital Bon-Matt HR as a primary solution to haul road dust and will continue to follow the Sustainable Haul Road Management Program during the 2019/2020 season of operations. Vital Bon-Mat HR will significantly minimise the volume of water typically used for road stabilisation and dust suppression, thus facilitating cost savings and overall sustainability outcomes.

Vital Bon-Matt HR is an environmentally sound formulation, providing a sustainable and highly effective solution to road surface dust for civil, construction and mining clients across Australasia.

For more information please visit the Vital Bon-Matt HR ISCA ISupply listing:
<https://www.isupply.org.au/listing/vital-bon-matt-hr>



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