

Quarry Specific Compliance Testing Frequency Levels An Innovative Approach for TMR Quarry Assessment and Registration System

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ABSTRACT:

The Queensland Department of Transport and Main Roads manages a road network of over 33,000km, all of which is constructed of either bound or unbound pavement material. Whether this material is constructed of concrete, asphalt or stabilised or unstabilised granular pavement, the Department must manage the quality of the materials involved, to provide best value for the community. Ensuring acceptable quality of these materials has always been a one of the major challenges faced by the State Road Authorities.

To manage this quality, Queensland Department of Transport and Main Roads (TMR) was spending over \$60M annually on quarry material testing. Faced with concerns that the quarry testing frequencies for projects varied markedly between individual projects, particularly on some of the recent Alliance projects, and the massive Transport Network Reconstruction Program (TNRP) the Department standardised its testing frequencies in 2012.

However, it was accepted that this was not an optimal approach, since source rock quality and consistency, quarry management, and product consistency varies markedly between quarries. In this environment, it was obvious that some quarries were required to undertake excessive testing to maintain their quality. Others may still not have been doing enough testing. The challenge for the Department was how to address this issue.

This paper discusses the collaborative and innovative risk based approach that was developed in consultation with relevant quarry industry stakeholders including the Cement Concrete and Aggregate Australia (CCAA) and the Institute of Quarrying Australia (IQA) to achieve an innovative and more cost effective outcome. Queensland will now be applying quarry specific testing frequencies, which are self assessed by quarries based on guidelines developed jointly with industry. The paper also describes proposed changes to the 20-year old TMR Quarry Assessment and Registration System (QARS).





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While the cost saving from implementing the new innovative approach is difficult to quantify, a preliminary estimate is that this will reduce testing costs for quarries, and ultimately to the Department by \$3M per year. And the potential exists to further refine the process to achieve even greater saving as more information becomes available.



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