Effective management of aggregate sources to provide good skid resistance

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Valid and consistently named aggregate source data is critical to the management of surfacing asset performance, especially in relation to good skid resistance. NZ Transport Agency have a specific focus on the in-situ performance of aggregates based on the inherent properties from the aggregate source, not the distribution or processing point, for the following reasons:

- Ensure we use compliant materials: Ensuring aggregates meet the M6 laboratory test acceptance criteria by linking tests to the correct aggregate.
- Correlating the aggregate source with on road performance as per T/10 (from RAMM).
- Looking at specific performance trends (e.g. the model produced for analysing on-road skid performance by aggregate type).

NZ Transport Agency performance research identified inaccuracies in the naming of aggregate sources in surface data held in our central data management system (RAMM). The historic issues identified included reference to the same source by a different name, company names, broad geographical locations and duplicates through spelling errors etc.

The solution to the issue was to establish a system that consistently references each specific aggregate source based on spatial location (i.e. the aggregate from a particular quarry has one name and the name is relevant). NZ Transport Agency created an online map of all current approved sources, which is available to all customers and allows users to search for / identify any new or missing sources and view relevant metadata, without creating duplicates of the approved sources.

The project involved a review of existing aggregate sources/quarry names in RAMM to confirm the correct name, actual aggregate source, location and operator of each quarry. The next phase of work is to revisit historic surface data in RAMM to update the invalid aggregate sources (where possible) to be able to use the updated surface data in the “on-road skid resistance performance model”, which is used to monitor the use of appropriate aggregate on the high risk sections of the State Highway to provide sustainable skid resistance and reduce wet road crashes.