
**Correlating geological properties with
durability of construction aggregate**

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Physical testing of crushed bedrock material for construction applications is a common engineering practice. Micro Deval and Los Angeles Abrasion, tests used to determine the durability of coarse aggregate, are considered time-consuming and expensive. Mineralogy and texture of a rock are among the main geological factors that impact its mechanical behaviour and therefore its suitability for road surfacing and related construction materials. Despite this generally recognized connection, correlation between the geological properties of rocks and standard aggregate durability testing has not been examined in New Brunswick.

Petrographic analysis and whole rock chemistry will be used to correlate quantifiable geological data with durability values obtained from micro Deval and Los Angeles abrasion testing from a suite of plutonic and volcanic rocks in northern New Brunswick. This type of investigation has the potential to serve as an accurate and reliable means of pre-screening proposed aggregate material for various end uses, resulting in savings of time and money.