

Concrete and Asphalt Recycling Options Webinar

Context of the Webinar

Metro Vancouver has retained Stantec to undertake a study to identify and assess opportunities for concrete and asphalt recycling in support of efforts to maximize waste reduction and recycling. As part of this study, Metro Vancouver is hosting a webinar to:



Share

- findings related to barriers, opportunities and actions to support the use of concrete and asphalt recycling applications that maximize benefit.
- knowledge on proven and future applications for recycling concrete and asphalt aggregates.



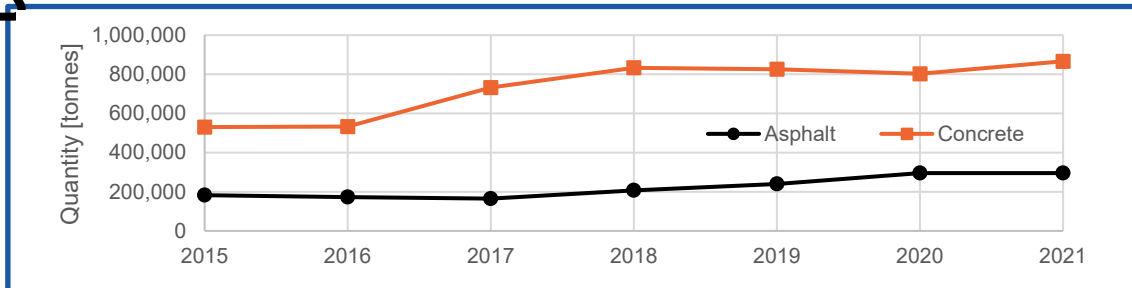
Receive Feedback

- from participants on potential opportunities to recycle concrete and asphalt aggregates.
- on potential actions that could be undertaken by Metro Vancouver and interested parties to recycle concrete and asphalt.

Context of Recycled Aggregate Use in the Metro Vancouver Region*

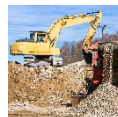


Quantities Recycled



Common uses

- New asphalt
- Road base
- Road sub-base
- Trench backfill
- Other street applications (sidewalks, bike lanes, curbs, and/or gutters)



Potential uses

- In new concrete
- In higher road classifications
- To increase % use in design mixes
- In backfill for walls and pipe bedding
- Ideally recycle materials back into their original use

<i>Findings & Implications</i>	Challenges (top ones per interviews)	Opportunities (top ones per interviews)	Potential Actions
Quality	<ul style="list-style-type: none"> Variable quality of the final product. Additional testing requirements compared to virgin materials. 	<ul style="list-style-type: none"> Improve quality assurance and quality control standards. 	<ul style="list-style-type: none"> Establish clearer and context specific quality requirements. Pre-qualify contractors to ensure they have sufficient experience with recycled aggregates.
Environmental	<ul style="list-style-type: none"> High pH of concrete leachate. 	<ul style="list-style-type: none"> Reduced CO₂ emissions. 	<ul style="list-style-type: none"> Clarify environmental regulations with respect to using recycled aggregates.
Operational	<ul style="list-style-type: none"> Lack of space to stockpile and process recycled aggregates. 	<ul style="list-style-type: none"> Increase the percentage of allowable RAP in asphalt. 	<ul style="list-style-type: none"> Allow the use of recycled concrete aggregates in the concrete in lower traffic loading, non-structural, and/or low-strength contexts. Increase the number of contexts in which the use of recycled aggregates is permitted.
Regulatory	<ul style="list-style-type: none"> MMCD standards for recycled aggregates need to be updated. Different standards applied by municipalities to recycled materials supplied in-house vs by third-party suppliers. Varying regulations among jurisdictions. 	<ul style="list-style-type: none"> Revise MMCD specifications for recycled aggregates to encourage and increase use. 	<ul style="list-style-type: none"> Increase the amount of RAP incorporated in new asphalt. Streamline the process of approving the use of recycled aggregates. Standardize and regularly update regulations on recycled aggregate use across Metro Vancouver. Provide guidance on the use of recycled aggregates in contract provisions for public projects. Minimise modifications to the MMCD's standards on recycled aggregates.
Change Management	<ul style="list-style-type: none"> Lack of experience using recycled aggregates. Clients and their consultants are wary of real and perceived technical risks. Use of recycled aggregates is at the discretion of the contract administrator per MMCD. 	<ul style="list-style-type: none"> Recycled aggregates generally cost less in Metro Vancouver. Education on the use of recycled aggregates is needed. 	<ul style="list-style-type: none"> Reduce the reliance on contract administrator approval of use. Set municipal and regional aggregate recycling targets as part of zero waste and/or circular economy plans. Increase knowledge sharing, education and collaboration between stakeholders. Support additional research and development, collaborations, case studies, and pilot projects in different contexts and environments. Support regular updates to the MMCD's standards on recycled aggregates. Gather and track data on projects that have used recycled aggregates and share lessons learned.