



## Case Study

# **CDE commissions its largest C&D Waste Plant in Canada for Calgary Aggregate Recycling**

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Recently commissioned at CAR's recycling facility in south east Calgary, the new 250 tons per hour (tph) washing solution, designed and engineered by CDE, will take centre stage on Thursday 7th September 2023 as industry representatives gather to learn more about CDE's innovative recycling process and the positive impact its technology is having on resource availability in the Calgary and Alberta areas.



CDE's new 250 tons per hour washing solution at CAR's recently commissioned recycling facility. (Pictures: ©CDE Group)

Travis Powell, President at Calgary Aggregate Recycling Inc., says: "We have been very busy hosting tours since opening and have received tremendous feedback from the community on how we can help them achieve their business and

environmental goals.” He says the aim of the plant was to disrupt the ‘out-of-date practices’ in the construction industry.

“We set out to establish economical and viable solutions to position Alberta as a leader in sustainable and responsible construction. We started this process by applying for a grant with Emissions Reduction Alberta (ERA). It believed in the impact our proposal could have and gave us the start we needed to get to where we are today.

“With the ERA’s backing and CDE’s incredible support, expertise and proven experience in this space we are strongly positioned to make significant strides forward in our mission to reduce the cost of construction – socially, environmentally, and economically.”

Enabled by CDE washing technology, the company now has the capacity to process an additional 600,000 tons of waste material to produce more than 1.25 million tons of construction sand and aggregate products every year across the wider company operations.

CDE’s Business Development Manager for Canada, Adrian Convery, says: “This plant is both the largest we have ever commissioned in Canada, but also our first partnership with CAR which demonstrates real confidence in our washing technology and recycling process.

“It’s a partnership that is pioneering better ways of managing resources in Canada, driving forward the agenda for change, and building a strong case for the adoption of recycled materials in the construction industry by highlighting the immense potential of C&D waste streams.”

In addition to the significant volume of material the plant is diverting from landfill, the circular approach to resource management is also helping to reduce carbon emissions in Alberta, particularly when it is estimated that the population growth of Canada will double by 2050.

Adrian continues: “CDE waste recycling solutions are perfectly adapted to support urban centres where the need for construction materials is greatest. As well as landfill diversion, our solutions help to realize sustainability aims by reducing, or completely eliminating, the requirement to truck in sand and aggregate resources from other jurisdictions – an approach that generally comes at a significant environmental cost.”

It is expected that the plant will help to reduce carbon emissions in Alberta by an estimated 22,567 tons annually.

## **Engineered for CAR**



CDE's Adrian Convery with Travis Powell, President of Calgary Aggregate Recycling Inc.

CDE's substantial experience in developing waste recycling solutions in North America made the washing expert the ideal partner for CAR when it set out to commission the advanced system to support its economic and environmental goals.

CDE facilitated meetings virtually and utilized 3D modelling and remote technologies to showcase to CAR many of its international waste recycling plants, including Brewster Bros, based in Scotland, a family business that recently announced it was investing in its second CDE wash plant, and the Long Island, New York-based Posillico Materials LLC, home to the first contaminated soils wash plant of its kind in the US.

Confident CDE was the partner of choice and its technology best-in-class, CAR commissioned its first-ever wash plant consisting of an R4500 primary feeding and scalping screen with the M4500 modular sand washing plant and AggMax™ 253R scrubbing and classification system, which combines pre-screening, scrubbing, organics removal, sizing, stockpiling, fines recovery and filtrates removal on a compact chassis.

The solution also features CDE's EvoWash™, a modular sand washing system that screens and separates smaller sand and gravel fractions through an integrated high-frequency dewatering screen and hydrocyclone technology to provide unrivaled control of silt cut points and eliminate the loss of fines, as well as its CFCU (Counter Flow Classification Unit) technology which offers a variable cut (separation) point to provide greater control over sand classification.

Underscoring the solution is CDE's AquaCycle™ thickener water management system, which offers efficient recycling of up to 90% of process water, and its Filter Press sludge dewatering system which presses sludge discharged from the thickener to recover even more water – bringing recovery up to 95%.

## **Seven saleable Products**



Washed aggregate stockpiles.

Processing up to 250tph of raw feed material, the CDE solution is transforming C&D waste into a high value suite of construction products, helping CAR to generate additional revenue while simultaneously diverting significant tonnages of material from landfill.

Among the outputs are 0-1mm fine and 0-4mm coarse sands as well as 4-10mm undersize, 10-20mm midsize, plus 20-40mm, 40-100mm and >100mm oversize aggregates.

Frequently tested to ensure compliance with City of Calgary standards and specifications, the product suite is being marketed to the wider construction industry in the Calgary and Alberta areas and is supporting a range of major public works and infrastructure projects, including a project with City of Calgary, hauling 1,300 tons of contaminated soils out of the Bow River, this project generate 54 tons of CO<sub>2</sub> emissions, saved from the environment.

## **Stepping up to the Challenge**

Prior to CAR working with CDE, it did not have an outlet for contaminated soils. Therefore trucks were taking a 350km round trip to dispose of contaminated soils at a landfill whereas now the trucks have increased load frequencies per day, with less servicing required resulting in a reduction in carbon emissions. Additionally,

CAR are producing in spec material for the Calgary and wider construction sector.

As Alberta's population growth continues, the demand for infrastructure has never been greater.

## **Open House**

CDE and CAR are extending an invitation to the industry to attend an upcoming Open House event at the recycling facility in south east Calgary on Thursday 7th September 2023.

Commenting on the event, Mr. Powell says: "It is a pleasure to host this open house event with our partners at CDE to showcase this impressive facility that its team has delivered and to highlight the benefits of waste recycling."

To register your interest for the event, please visit [cdegroupp.com/calgary](https://cdegroupp.com/calgary).

Please note that registration is mandatory.