

ACN 109 200 900

## **AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT**

4 March 2019

## **EDENCRETE® SHOTCRETE APPLICATIONS EXPANDING IN COLORADO**

**Eden Innovations Ltd ("Eden") (ASX: EDE)** is pleased to announce that EdenCrete<sup>®</sup> is being trialled in a shotcrete concrete mix for the first time on a major building construction project in Colorado. This follows the approval of the use of EdenCrete<sup>®</sup> in a shotcrete concrete mix by the Colorado Department of Transportation ("CDOT") on an infrastructure project (the CDOT Central 70 project) in Denver (see Eden announcement ASX: EDE 15 November 2018), which is still continuing.

The new construction project is the US\$190 million Vail Health East Wing Expansion. EdenCrete<sup>®</sup> was recommended by the Project Structural Engineer for inclusion in the shotcrete on the final structural shotcrete liner that is to be built along the building's foundation walls.

The liner walls will be approximately 350 linear feet (91 metres) long x 50-60 feet (15-18 metres) high x 1.5 feet (0.45 metres) thick (see figures 1-2 below).



Figure 1. First section of final structural liner (top left- light grey area) being installed



Figure 2. First section of final structural liner (centre - light grey area) being installed

The General Contractor agreed to evaluate the effects of EdenCrete<sup>®</sup> on rebound waste, dust generation, adhesion, stack ability and ease of pumping. On 28 February, the first 70 cubic yards (54.5 cubic metres) of concrete was installed, including EdenCrete<sup>®</sup> HC at 0.25 gallons (0.95 litres)/cubic yard (see figures 3 -5). Positive results were achieved and the evaluation was extended to the first 300 cubic yards of concrete to be installed over the next 7-10 days. A decision will then be taken whether to add EdenCrete<sup>®</sup> to the approx. 4,000 cubic yards of concrete to complete the liner.

The benefits observed to date included:

- The concrete held its slump and air when being transported to job site. No tempering of the concrete at the job site was necessary.
- The shotcrete contractor observed it was a creamier paste that adhered and stacked better than the concrete mix without EdenCrete<sup>®</sup>, and produced very little rebound.
- The pump contractor was able to use lower pumping pressures of 2000 -2400psi (13.8 MPa) compared with the mix without EdenCrete<sup>®</sup> that required a pressure of 3400psi (23.4 MPa) and appreciated the lower wear and tear on the pumping machinery and the safer handling conditions for the nozzle crew.



Figure 3. Site of installation of first 70 cubic yards of Shotcrete with EdenCrete®



Figure 4. The EdenCrete<sup>®</sup> enriched Shotcrete being applied



Figure 5. Close - up photo of EdenCrete® Shotcrete

The entire Vail Health project involves a number of other components including:

- Demolition and replacement of the existing hospital's parking structure
- Demolition and replacement of the existing emergency department
- New construction of an on-campus helipad
- New construction of a new main entrance with access off Vail's South Frontage Road
- New construction of a concealed loading dock.
- New construction of an imaging and radiology department.

Details of the project are available at: <u>https://www.vailhealth.org/about/master-facility-plan/news</u>

## Conclusion

This project is the second major project in Colorado during the last four months in which EdenCrete<sup>®</sup> has been added, at a low dosage rate (and accordingly at a low additional cost) to a shotcrete concrete mix and has been shown to deliver significant benefits, and further confirms the progress EdenCrete<sup>®</sup> continues to make expanding its sales footprint into the huge U.S. infrastructure and commercial concrete markets.

Additionally, this project again confirms the potential for EdenCrete<sup>®</sup> to be economically used in a wide range of shotcrete applications in both the USA as well as in other parts of the world.

Relevantly, there are many significant tunnel and construction projects that include large amounts of shotcrete being planned or constructed around the world, including in South Korea and Australia (including New South Wales, Victoria and Queensland), in each of which countries EdenCrete<sup>®</sup> is currently intended to be marketed.

## BACKGROUND

EdenCrete® is Eden's 100% owned, proprietary carbon-strengthened concrete additive that enhances a wide range of performance characteristics of the concrete including compressive strength, flexural strength, tensile strength, abrasion resistance, reduced permeability and reduced shrinkage, delivering stronger, tougher, more durable and longer lasting concrete.

One of the primary target markets for EdenCrete® is improving the performance of concrete used in the construction and maintenance of concrete roads, bridges and other infrastructure, particularly where it is subject to heavy wear, freeze/thaw weather conditions and/or high levels of added salt. Additionally, it has potential for use in most other concrete applications including highrise building construction, marine and coastal applications, water storage and pipelines, hardstand areas, shotcrete applications and pre-stressed and pre-cast concrete structures and products.

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**Gregory H. Solomon** Executive Chairman