



## AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT

18 January 2017

### EDENCRETE™

#### Encouraging Precast / Prestressed Bridge Beam Trials

Eden Innovations Ltd (ACN 109 200 900) ("Eden") has been trialling in the US with a significant US manufacturer, the use of EdenCrete™ in precast / prestressed concrete beams used in the construction of bridges (see **Figure 1 below**). When EdenCrete™ was added at 0.5 US gallons / cubic / yard (2.476 litres/ cubic metre) of concrete, the following increases in compressive strength were achieved:

	Compressive Strength (lbs./in. <sup>2</sup> )		
Mix ID	16-Hr	Age 24-Hour	96 Hour
Reference	6450	6930	7850
EC- 0.50 gpy	7390 (+14.6%)	7860 (+13.4%)	9100 (+15.9%)

The EdenCrete™ concrete mixture (0.5 gallons of EdenCrete™ per cubic yard of concrete) was then optimised to reduce the total quantity of cementitious material but to still achieve the design strength at 18 hours. Both the Reference mix and the optimised EdenCrete™ mix exceeded 6200 lbs./in.<sup>2</sup> compressive strength at 18 hours, using the following mix designs:

- **Reference mix - 933 lbs of cementitious material /cubic yard (700 lbs of cement and 233 lbs of fly ash);**
- **EdenCrete™ mix - 767 lbs of cementitious material /cubic yard (575 lbs of cement and 192 lbs of fly ash).**

**This represents a 17.8% reduction in the total amount of cementitious material required to achieve 6200 psi release strength, using only 0.5 gallons of EdenCrete™ per cubic yard of concrete.**

**Further trials are continuing and are achieving similar level of improvement.**



**Figure 1. Typical Precast / prestressed bridge beam being fabricated**

The precast concrete market represents a large portion of the total US concrete market, and this may rise due to the focus of US President – Elect Trump on improving infrastructure.

In July 2015, the US Federal Department of Transportation published a State by State analysis of the condition of Federal roads and bridges in the USA <sup>(1)</sup>, and concluded that of the 604,000 bridges, over 124,000 were functionally obsolete or structurally deficient.

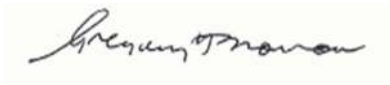
## **Conclusion**

**These results represent a further significant step forward in Eden’s quest to achieve its longer-term goals of broad penetration by EdenCrete™ into the huge US concrete and infrastructure markets.**

## **BACKGROUND**

*EdenCrete™ is Eden’s 100% owned, proprietary carbon-strengthened concrete additive, one of the primary target markets for which is improving the performance of concrete used in the construction and maintenance of concrete roads, bridges and other infrastructure. Additionally, it has potential for use in a range of other concrete*

*applications including high-rise building construction, marine and coastal applications, water storage and pipelines, and pre-fabricated concrete structures and products.*

A handwritten signature in black ink, appearing to read "Gregory H. Solomon", is displayed on a light yellow rectangular background.

**Gregory H. Solomon**  
Executive Chairman

(1) <http://www.transportation.gov/briefing-room/dot-fact-sheets-highlight-grim-state-us-roads-and-bridges>