



ACN 009 253 187

**AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT**

**18 FEBRUARY 2022**

**FIRST LARGE EDENCRETE® SCIP PROJECT**

Please see attached an ASX Announcement by Eden Innovations Ltd (ASX: EDE) for further details.

**Background**

Tasman through its wholly owned subsidiary, Noble Energy Pty Ltd, holds 684,534,029 fully paid shares in Eden representing 29.58% of the total issued capital of Eden Innovations Ltd.

A handwritten signature in black ink, appearing to read "A. Gates", with a long horizontal stroke extending to the right.

Aaron Gates  
Company Secretary



Innovations that work.™

ACN 109 200 900

## AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT

18 February 2022

### EdenCrete® - First Large Scale Structural Concrete Insulated Panel Project

#### Structural Concrete Insulated Panel (“SCIP”) Construction

Eden Innovations Ltd (“Eden”) (ASX:EDE) is pleased to report that EdenCrete® is being used in its first large scale SCIP construction project. Previously, EdenCrete® has been used in SCIP construction projects on a trial basis, a small home in Utah, and an outdoor park in Texas over the past 3 months. SCIP construction, that has been used in USA for 40 years, is experiencing considerable US market growth resulting from the range of benefits it offers. The SCIP panels can be used as walls, ceilings, roofs, and as filler panels for larger metal structures. Each panel is joined by welding trusses together. Once completed, this creates a monolithic structure that distributes the loads in three dimensions, resulting in very high strength.

In addition, SCIP creates a thermal barrier that keeps occupants cooler in the summer and warmer in the winter. The combination of the 5-inch insulated core along with a shotcrete exterior and interior shell provides a higher R-value than typical wood-frame or metal stud structures. The R-value is a measure of the insulation material’s resistance to heat flow, also known as thermal resistance. The greater the R-value, the greater the resistance to heat transfer, and the greater the insulating effect and subsequent energy savings.

A Zero Energy Ready Home is a home that meets all of the criteria found in the Department of Energy (“DOE”) Zero Energy Ready Home National Program Requirements set up in 2017. Zero Energy Ready Homes are verified by a qualified third-party and are at least 40% -50% more energy efficient than a typical new home. All DOE Zero Energy Ready Homes are so efficient a renewable energy system can offset most or all annual energy consumption. Everlasting Home Builders Group, LLC (EHBG) is a qualified partner under this programme <sup>1</sup> (See Figure 3).

In addition to thermal advantages, SCIP construction provides improved sound insulation, fire resistance, mould and insect protection, and ballistic protection.

1. <https://www.energy.gov/eere/buildings/partner-central>

#### First EdenCrete® SCIP Project - 4-storey single-family home – Houston, Texas

The first and largest SCIP construction project built by EHBG utilizing RGS-3D panels in Houston, Texas, started in 2021. The 4-storey single-family residential building’s panels have been erected and joined by EHBG to create interior and exterior walls, ceilings, and floors (see Figure 1). Acting as the General Contractor, EHBG batches and shoots the exterior and interior shotcrete shell to an approximate thickness of 1.5 inches (3.8cm) on each side. This project has required a total of 350

cubic yards (268 cubic metres) of shotcrete, using only US\$3,062 (approx. A\$4,264) worth of EdenCrete<sup>®</sup>, delivering a very cost effective outcome for EHBG.

EHBG specified the use of EdenCrete<sup>®</sup> at 1/4 gallon/cubic yard (approx. 1.2 litres/cubic metre) of concrete for this ongoing project. EHBG uses EdenCrete<sup>®</sup> to take advantage of the improved rheology of the shotcrete mix, allowing the mix, which pumps and finishes exceptionally well, to be easily placed, filling and fully encapsulating the 2-inch wire mesh opening.(see Figure 2) . This SCIP structure delivered a non-combustible building that does not require a fire sprinkler system.



Figure 1. 4-storey SCIP residential home in Houston under construction and including EdenCrete<sup>®</sup>

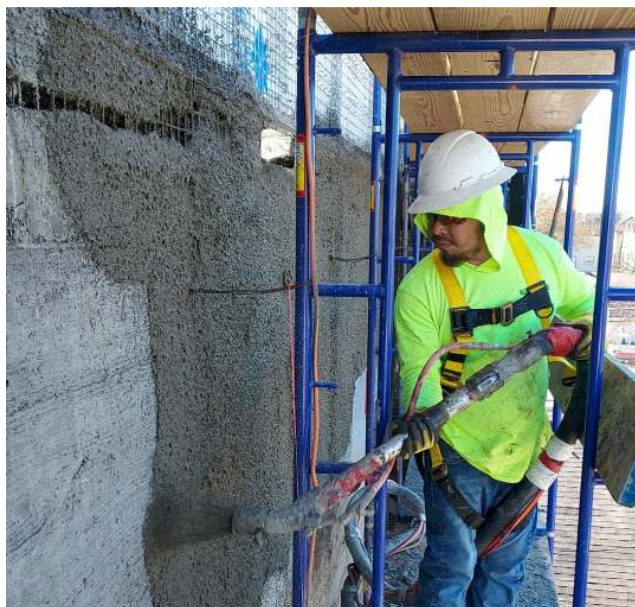


Figure 2. Shotcrete mix with EdenCrete<sup>®</sup> filling and fully encapsulating the wire mesh



Figure 3. US Department of Energy - Zero Energy Ready Home programme – partner certification

### Future SCIP Business in USA

EHBG plans to construct several other SCIP single family homes in Houston this year, and will specify EdenCrete® in all of these structures.

In addition, EdenCrete® is also being used in SCIP structures with a number of other companies in other parts of Texas, as well as in Florida, Utah, Idaho, and Missouri. SCIP structures with EdenCrete® are also being planned for California and New Mexico.

Eden is targeting rapid market penetration of EdenCrete® into SCIP projects around the USA over the next 12-24 months, that will collectively deliver a new and significant emerging revenue source.

The increasing relevance in the US market of the benefits delivered by both the innovative construction techniques such as employed in SCIP construction and the Zero Energy Ready Home National Program, is reflected by the U.S. Department of Energy, in 2020, having also launched the national Advanced Building Collaborative<sup>2</sup> (“ABC”) to help the United States remain globally competitive in high-performance prefabricated and modular approaches for building retrofits and new construction.

This collaborative brings together builders, architects and engineers, manufacturers, building owners and developers, trade associations and workforce training programs, government, research institutions, financiers and insurers, and utilities to align these key stakeholders and accelerate the development, demonstration, standardization, and deployment of innovative high-performance construction technologies. The ABC Collaborative aims to help to facilitate connections between ABC research teams and other stakeholders in order to help transfer ABC technologies to market.

<sup>2</sup>. <https://www.energy.gov/eere/buildings/abc-collaborative>

## **EdenCrete® Background**

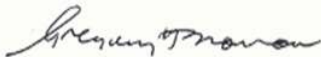
*EdenCrete® products are Eden's 100% owned, proprietary carbon-strengthened concrete additives that enhance a wide range of performance characteristics of the concrete including compressive strength, flexural strength, tensile strength, abrasion resistance, reduced permeability, increased modulus of elasticity, reduced shrinkage and that collectively deliver stronger, tougher, more durable and longer lasting concrete.*

*EdenCrete® is generally used in concrete that incorporates a high percentage of Ordinary Portland Cement (OPC or Portland cement) whilst EdenCrete® Pz is mostly used in concrete that incorporates a high percentage of pozzolans as an alternative cementitious material (including fly-ash and blast furnace slag which are each waste by-products from coal fired power stations and metal smelting respectively, thereby each being treated, as a waste by-product, as having a zero Greenhouse Gas footprint from its production process).*

*As a result, EdenCrete® Pz in particular has repeatedly shown it is capable of enabling the proportion of the Portland cement in the concrete to be replaced by a percentage of pozzolans with far lower Greenhouse Gas footprints, resulting in a reduction in the Greenhouse Gas footprint generated in the production of the various cementitious components used in the manufacturing of the concrete. Both products have been repeatedly shown to be suitable for use in ready-mix concrete, pre-cast and pre-stressed concrete, shotcrete, pumped concrete and volumetric concrete.*

*One of the primary target markets for EdenCrete® products is improving the performance of concrete used in the construction and maintenance of concrete roads, bridges, ports, airports, and other infrastructure, particularly where it is subject to heavy wear, freeze/thaw weather conditions, heavy snow falls, and/or high levels of added salt or de-icing chemicals.*

*Since 2015, EdenCrete® products have been sold in the USA and more recently also in Australia and a growing number of other countries. They have successfully and repeatedly delivered a wide range of benefits when incorporated into concrete that is used in many different applications, including low-rise, medium-rise and high-rise building construction, roads and bridges, ports/marine/coastal applications, bus stations, carparks, water pipes, hardstand areas, waste transfer stations, warehouses, shotcrete applications, stadiums and pre-stressed and pre-cast concrete structures and products.*



**Gregory H. Solomon**

Executive Chairman

This announcement was authorised by the above signatory.

For any queries regarding this announcement please contact Aaron Gates on +618 9282 5889.