ACN 109 200 900

ASX Quarterly Report

For the Quarter Ended 30 September 2016

HIGHLIGHTS

EdenCrete™

- **GDOT has advised that it proposes to use EdenCrete™ in several state funded forthcoming highway slab replacement projects in Georgia and proposes to specify in the requests for tender that EdenCrete™ be added to the concrete.**
- **Very encouraging test results from EdenCrete™ enhanced concrete at new MARTA bus garage in Atlanta, Georgia- a further contract is anticipated.**
- **Eden assembling a highly experienced EdenCrete™ concrete admixture sales staff, 8 full time sales staff having already been appointed together with a highly experienced senior vice president responsible for national and international product development.**
- **US commercial trials have now commenced: More than 20 trials are underway or scheduled across USA during 2016 for many possible applications, including trials for :**
  - **Pervious concrete – underway**
  - **Pre-cast –underway and scheduled**
  - **Ready mix concrete – underway and scheduled**
  - **Low shrinkage concrete suitable for dams – underway**
  - **Shotcrete – scheduled**
- **Installation of on-site bulk EdenCrete™ storage/ dispensing equipment in Denver ready mix plant to be completed by end of October 2016.**
- **The expansion of Eden's Colorado based production capability of EdenCrete™ to a targeted maximum of 2 million - 2.4 million gallons per year is on schedule to be operational later in first quarter of 2017.**
- **Purchase of Denver premises completed.**

Optiblend™ Dual Fuel

- **Four orders received in the USA during the quarter for seven units totalling US$251,000.**
- **Two orders received in India for two units valued at approx. USD $27,000.**

Corporate

- **Eden placed A$15 million additional capital through Bell Potter (A$6 million is subject to shareholder approval), with the majority to 4 Australian institutions.**
- **Proposed Re-branding of "Eden Energy" to "Eden Innovations", to reflect the future focus of the Group, is to be voted upon at the Annual General Meeting on 28 October 2016.**

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DETAILS

EDENCRETE™ (Eden 100%)

Georgia Department of Transportation

During the quarter the Georgia Department of Transportation ("GDOT") advised that it is in the process of identifying several suitable upcoming, state funded highway slab replacement projects in which it proposes to specify in the request for tender, that EdenCrete™ be added to the concrete.

This decision follows GDOT reviewing the considerable improvement in performance shown by the EdenCrete™ enriched section of concrete laid in August 2015 as a field trial of EdenCrete™ on a troublesome section of the Interstate Highway I-20 in Augusta, Georgia. A further review of this field trial in October 2016 (after 14 months of service) showed that the EdenCrete™ slab shows no signs of cracking or wear, whilst the standard concrete slab has now cracked across its entire width (see Figures 1 and 2).

Figure 1. Control slab on I-20 Field trial showing visible crack extending across slab after 14 months

Figure 2. EdenCrete™ trial slab on I-20 Field trial showing no cracking or visible wear after 14 months.

GDOT has also advised that it is now in the process of identifying several upcoming, state funded slab replacement projects in which it proposes to specify in the request for tender, that EdenCrete™ be used. In accordance with Federal regulations, federally funded projects will still only specify performance characteristics that must be achieved.

By requiring the use of EdenCrete™, GDOT will be able to ensure that EdenCrete™ is used in the nominated projects, and will enable it to monitor the results achieved, including where different sub-surface conditions and wear conditions may exist.

As and when received, details of the number, size and the likely timetable of these projects will be released to the market. These projects, if awarded, will be the first commercial projects involving the use of EdenCrete™ on US highway repair projects.

Eden considers that the intention of GDOT to both decide to use EdenCrete™ and to specify the use of EdenCrete™ in several requests for tender for state funded, highway repair projects (15 months after discussions commenced with GDOT), to each be major milestones in Eden's longer-term goal of broad penetration by EdenCrete™ into the huge US infrastructure market.

GDOT has indicated that over the next two years it has scheduled repairs to approximately 200 bridges in the Georgia.

MARTA Brady Mobility Facility Project Test Results

During the quarter, Eden received the test results from two independent laboratories of its first commercial government infrastructure project. These tests, taken after the concrete test cylinders had cured for 28 days, produced further very encouraging results.

The project was undertaken in May 2016 (see Eden announcement ASX: EDE 16 May 2016) at the Metropolitan Atlanta Rapid Transit Authority (MARTA) Brady Mobility Facility in Atlanta, Georgia. A section of a new concrete hardstand area was installed using EdenCrete™ enriched concrete at a new state-of-the-art bus garage that was being constructed to replace the existing garage at the MARTA Brady Mobility facility in Atlanta, Georgia (see Figure 3).

Figure 3. Brady Mobility Facility with EdenCrete™ slab site being prepared (shown in upper left)

The dosage rate used for the trial of 3 gallons of EdenCrete™ per cubic yard of concrete, was lower than the 4 gallons per cubic yard that had originally been planned, due to the increased volume of concrete that was finally required. However, based on other trials, the EdenCrete™ had still been assumed would at least double the service life of the concrete by enhancing the concrete's performance characteristics. The results produced from these tests are considered to clearly support this assumption.

As previously announced, two independent test laboratories in Georgia each took test samples of both the standard concrete and the EdenCrete™ enriched concrete. The results reported from each of the two laboratories are shown in Figures 1 and 2 below.

ATC Laboratory Results

Identification	Pour Date	Test Age (Days)	Compressive Strength (lbs./in.^{2}) Sample 1	Sample 2	Sample 3	Average	% Improvement by EdenCrete Truck 1	% Improvement by EdenCrete Truck 2
EdenCrete Truck 1	5/12/2016	28	9510	9610	9360	9493		
EdenCrete Truck 2	5/12/2016	28	8210	8480	8370	8353		
MARTA Reference Truck 1	5/14/2016	28	8010	7850	7890	7917	20%	6%
MARTA Reference Truck 2	5/14/2016	28	6480	6670	6290	6480	47%	29%
MARTA Reference Truck 3	5/14/2016	28	7020	6670	6750	6813	39%	23%
MARTA Reference Truck 4	5/14/2016	28	6890	6790	6940	6873	38%	22%
MARTA Reference Truck 5	5/14/2016	28	7630	7730	7510	7623	25%	10%
			Avg. of ALL Marta Reference Trucks		7141			
			Avg. of ALL EdenCrete Trucks		8923		25% overall improvement	

Figure 1 - ATC Laboratory Test Results -MARTA Brady Mobility

TEC Normalised Laboratory Results *

Property	Test Procedure	Reference	EdenCrete	% Improvement by EdenCrete
Air Content (%)	ASTM C231	6.1	4.0	
Slump (in.)	ASTM C 143	7.25	7.25	
Concrete Temperature (^{o}F)	ASTM C1064	84	82	
Unit Weight (lbs./ft.^{3})	ASTM C138	140.8	145.1	
Compressive Strength	ASTM C39	6160	8490	38%
Split-Tensile Strength	ASTM C496	255	405	59%
Modulus of Elasticity	ASTM C469	3161600	3933767	24%
Abrasion Resistance	ASTM C944	0.17	0.08	47%
Length Change	ASTM C157	0.048	0.044	9%
Note: Freeze/Thaw and Permeability testing in-progress				

Figure 2 - TEC Laboratory Test Results -MARTA Brady Mobility

* Due to the 2.1% reduction in air content (which increases the strength) in the EdenCrete™ concrete, the compressive strength results have been normalised in accordance with conservative industry standards by adding 500 psi per 1% difference in air content (i.e. adding 1050 psi) to the results for the control cylinders.

The anticipated extension of concrete service life would reduce the in-service total cost for the project by deferring disruptive and costly repair projects due to excessive cracking and/or abrasion over time.

MARTA has served the Atlanta metropolitan area for more than 35 years. It operates a number of sustainability programs that are applied to many areas within the organization including its fleet of compressed natural gas (CNG) buses. MARTA's Laredo Bus Garage has the largest solar canopy installation in the state of Georgia, and the second largest structure of its kind at a U.S. transit system.

Whilst this first infrastructure contract was only for a small demonstration project, the results of these laboratory tests have greatly increased the probability that the longer term performance of the EdenCrete™ section of the concrete slab will reproduce similar positive results to those achieved in earlier trials focusing on similar performance characteristics. These results are a further significant milestone for Eden in its ongoing efforts for EdenCrete™ to penetrate and become accepted for use in the huge U.S. infrastructure market. In discussions with MARTA subsequent to receipt of these test results, Eden was advised that MARTA proposes to include the use of EdenCrete™ in the specifications for an upcoming MARTA project.

Establishment of Specialist US EdenCrete™ Sales Team

Eden also continued building a specialist US EdenCrete™ sales team. The full sales team will comprise perhaps 10 experienced sales staff, each of whom will have significant experience in successfully selling concrete admixtures in the different areas of the US with top admixture suppliers.

Eden has now appointed 8 full time highly experienced sales staff, 5 of whom have now commenced work and with the remainder due to commence over the next 4-8 weeks. They will be spread out across continental USA.

The western region sales manager, based in California, previously had a successful career as sales manager with a major admixture supplier, responsible for more than 10 states in the western region of the US.

The sales manager for the eastern region of the US, a highly experienced person based in New Jersey, has also been appointed and has commenced work.

Additionally, a highly experienced senior vice president responsible for national and international product development, with many years' experience in high level government liaison, has also been appointed with primary responsibility for opening up opportunities with US state and federal government departments.

The collective task of the sales team will be to cover the entire US market, with the intention of selling all the EdenCrete™ that Eden will produce in 2017 from its expanded Colorado production facility, which is targeted at approximately 2-2.4 million gallons of EdenCrete™ per year. Initially the task is to secure trials with potential customers.

In the longer term, the sales team will be expanded both in the US and also into the global arena as the market expands and to sell the planned production increases that will result from the future establishment of Eden's proposed large scale, global production facility in Augusta, Georgia.

The proposed Georgia production facility will have easy access not only to the entire US Interstate Highway network, but also to the whole North American railway network as well as to the global export market through the Port of Savannah, the third largest US port for containerised cargo, which is 130 miles away and accessible by both Interstate Highway and rail.

Trials of EdenCrete™

As at the date of this report, the sales team has already secured more than 20 strategic trials of EdenCrete™ by potential customers in various parts of the US, for a number of different uses and potential applications, including the following trials:

- Pervious concrete – underway
- Pre-cast –underway and scheduled
- Ready mix concrete – underway and scheduled
- Low shrinkage concrete suitable for dams – underway
- Shotcrete – scheduled.

After each of these trials takes place, the results of laboratory tests will be known later in the year or early in 2017, usually at least 56 days after the trial is conducted.

Considerably more trials are also anticipated to occur during the forthcoming months. These future trials are also hoped to test a range of other applications/ performance characteristics including for freeze/ thaw applications and permeability applications.

Arranging trials by potential customers is the first task for the sales team. This will include approaching the Departments of Transportation and other state and federal government agencies across the US, to try and arrange trials similar to those undertaken and planned in Georgia, based upon the results achieved to date with the Georgia Department of Transportation and MARTA.

It is not anticipated that every one of these trials will result in future sales, because each application will be governed by the economics of the particular project, but as most of the companies undertaking the trials are large groups, it is hoped that at least a reasonable number of trials will result in significant future sales.

First Commercial Contract for Warehouse Floor Secured

The first US commercial project using EdenCrete™ to strengthen concrete for flooring in a warehouse, to be used for the floor of a warehouse expansion in Indiana, is scheduled to be completed in November 2016.

This project will involve the addition of EdenCrete™ to 200 cubic yards of concrete at a dosage rate of one gallon per cubic yard.

Installation of on-site Bulk EdenCrete™ Storage and Dispensing Equipment

The installation of the first on-site, bulk EdenCrete™ storage and dispensing equipment will be completed by end of October 2016 in a Denver based ready mix plant. This will enable EdenCrete™ to be seamlessly incorporated into the normal ready mix production process when it is required. One of the first contracts will include supplying Eden with the required EdenCrete™ enriched concrete as part of the current up-scaling of Eden's Denver plant.

This installation will open the way to supply EdenCrete™ for a potential market of up to 150,000 cubic yards of concrete per annum, for use in outdoor applications that are subject to freeze/ thaw conditions that cause ordinary concrete to crack.

EdenCrete™ New Product Development

Further product development of EdenCrete™ is underway in the hope of developing a wider range of specialty variations of EdenCrete™ for various specific specialist concrete applications.

This development work is technically complex and will take time and require comprehensive testing of each new application before any new products will be made available commercially.

Expansion of Eden's Colorado EdenCrete™ Production Capability

The expansion of Eden's Colorado based production capability for its EdenCrete™ concrete admixture continued during the quarter. The expansion is intended to increase the annual production capability of the Colorado plant from its present level of approximately 108,000 gallons of EdenCrete™ to a target of between approximately 2 million - 2.4 million gallons (7.6 - 9.1 million litres) per annum.

To achieve this scale-up and handle the throughput of product, the entire plant is being up-scaled. The design of all items is completed, and most of the items have either been ordered or are currently under construction. These include the following:

- The equipment to produce the quantity of catalyst required for production of the necessary carbon nanotubes;
- Two new reactors to manufacture the carbon nanotubes; and
- All the necessary processing, mixing, storage, and dispensing equipment.

Additionally alterations to the layout within the building and its surrounds are underway to accommodate the new equipment. This included disposing of all redundant equipment such as the original gen-set that was first used in the development of Eden's OptiBlend dual fuel system, to create sufficient area for the EdenCrete™ expansion.

Minor delays have been encountered due mostly to the time required to obtain the necessary building permits. However the up-scaling is still scheduled to be completed and operational, later in the first quarter 2017. As previously advised, the project is approximately 20% above the initial preliminary budget, as a result in part to changes in the equipment required for the storage and delivery to road tankers of the 40,000 gallons (151,000 litres) of finished product per week that is to be despatched from the relatively small site.

Purchase of Colorado Production Facility Completed

During the quarter, the company entered into a contract to purchase its Denver based Production Facility for approximately US$1.2million, payable over 5 years and carrying interest to the vendor at the rate of 2% p.a.

Settlement of this purchased took place earlier this month (October 2016). This gives Eden total security over its Colorado production facility, that is intended to remain as the long term research and innovation centre for the Eden Group.

Proposed Georgia based EdenCrete™ Production Facility

As previously announced, Eden's wholly owned subsidiary, EdenCrete Industries Inc. ("ECI") has secured an attractive financial assistance and incentives package worth an aggregate of US$24.76 million to assist it establish its large scale global manufacturing plant in Augusta, Georgia on 45 hectares (112 acres) of industrial land.

ECI proposes to establish its large-scale global EdenCrete™ production facility in Augusta over the next seven years at an estimated cost of US$67 million to create 251 jobs, and upon which the incentive package is conditional.

The facility will be built in up to 10 separate buildings, each with four production lines with a total planned annual production capacity of 189 million litres (50 million gallons) of EdenCrete™ concrete admixture per building. The site has sufficient area to accommodate up to 10 of these buildings as demand grows.

During the September quarter, a request for tender for the construction of the access road was advertised and a contractor engaged. The construction of the access road has now started, with the ground breaking ceremony to mark the commencement having taken place occurred earlier this month (October 2016).

High strength CNT enriched concrete requiring little or no reinforcing steel

The research project with Deakin University ("Deakin"), partly funded by an Australian Research Council ("ARC") Linkage Grant into ultra-high strength carbon nanotube enriched concrete requiring little or even no reinforcing steel formally commenced during the quarter. A range of different initials formulations of EdenCrete™ are being produced and are to be sent to Deakin for use in the research program.

The Principal Researcher named in the application, Dr Frank Collins, who was formerly Associate Professor and Head of Structures Department at the Civil Engineering Department at Monash University, was appointed as Professor of Infrastructure Engineering, at Deakin University's Institute for Frontier Materials in Melbourne during 2015. With the agreement and co-operation of Monash University, the project was transferred to Deakin University.

This project offers Eden a great opportunity to collaborate in world-leading, high level research into how its EdenCrete™ carbon nanotube enriched concrete admixture affects concrete at a nano-scale in delivering increased flexural and compressive strength, increased abrasion resistance and reduced permeability, amongst other benefits.

This research could potentially lead to both the improvement of EdenCrete™ and the development of ultra-high strength concrete that requires little or no steel re-enforcing. Quite apart from the enormous environmental and financial implications, such an outcome would have major implications for the global construction industry. Eden has already made significant advances with EdenCrete™ towards achieving this goal, and this new project should assist in accelerating this progress.

EdenPlast™ / CNT Enriched Polymers and Plastics

Work has been continuing on the 2014 collaborative research project, partially funded by the Australian Research Council ("ARC") (to the extent of A$255,000), that Eden and the University of Queensland have been undertaking into carbon nanotubes in plastics. An application for further ARC grant funding has been lodged to enable the work to continue past the end of the current program.

The following conclusions from the preliminary result achieved to date with Eden's new product (EdenPlast™):

- Excellent combination of high modulus (stiffness) and outstanding ductility (elongation-at-break) achieved for Nylon containing <1% Eden's CNTs compared to commercial grades of nano Nylon 6.
- Superior ductility with comparable tensile strength (> 75 MPa, 50% Relative Humidity ("RH") conditions) compared to super-tough commercial Nylons containing higher levels (4wt%) of nanoclays.
- Higher tensile strength than comparable Nylon based materials with similar ductility.
- Excellent dispersion of the Eden's CNTs in EdenPlast™.
- Visual clarity and transparency suggests suitability for a super-tough-film grade.
- The relatively low-cost processing method of EdenPlast™ could potentially result in production of cost-effective, high-stiffness and/or high-toughness grades of nano Nylon 6.
- Possible suitable future markets for EdenPlast™, indicated by the results to date, are the automotive and packaging markets.
- Whilst fundamental studies (XRD, rheology, thermal and electrical analysis) and further standard characterization (ASTM, ISO) need to be carried out (impact, flexural, tensile, dynamical, fatigue) before possible commercialisation could be considered, these preliminary results from extruded filaments are considered very encouraging.

OPTIBLEND™ DUAL FUEL SYSTEM (EDEN 100%)

OptiBlend™ Progress

During the quarter, Eden Energy (India) Pvt Ltd ("Eden (India)"), Eden's wholly owned Indian subsidiary, received two orders for OptiBlend™ dual fuel systems worth approximately US$27,000. Eden Innovations, Eden's wholly owned U.S. subsidiary, receive four purchase orders for seven OptiBlend™ systems worth US$251,000.

In addition to this significant increase in the level of orders received (compared to prior quarters), Eden has also noted an encouraging increase in the level of interest in OptiBlend™ in both the USA and India. Although the global price of oil remains relatively low, which from market reports appears likely to continue for the foreseeable future, Eden is hopeful that the level of interest in dual fuel kits will increase further in due course.

Optiblend™ Background

Eden has developed an efficient dual fuel system that is capable of operating on diesel engines and displacing up to 70% of the diesel fuel with natural gas. If Hythane™ fuel (hydrogen enriched natural gas) is used in place of natural gas, the displacement of diesel fuel could be as high as 80%. The use of the natural gas will greatly reduce greenhouse gas emissions and, in places where natural gas is cheaper than diesel, will also reduce fuel costs. It has significant market potential particularly in the diesel-powered generator set ("genset") market.

Hythane™/ Hydrogen Fuel Projects

Hythane Projects

No progress was made during the quarter on any potential Hythane™ projects. Whilst it may be possible for such a project to ultimately proceed, particularly if in the longer term Eden can generate sufficient low cost hydrogen produced as a by-product from its pyrolysis project to produce carbon nanotubes, at present these projects are looking unlikely to occur. However, some interest is currently being shown by the Indian government on possible development of hydrogen fuelled, internal combustion engines, which may be relevant to Eden in the future, as Eden holds a US patent for such an engine.

Corporate

Successful A$15 million capital raising to accelerate expansion in Georgia

During the quarter Eden raised A$15 million additional capital through the placement to Australian institutional and sophisticated investors of 83.3 million fully paid ordinary shares at an issue price of A$0.18. 50 million shares were issued on 21 September 2016 as the first tranche of the placement, under the Directors' 15% placement capacity to raise an initial A$9 million. The balance of 33,333,333 shares (to raise a further A$6 million) will be issued as a second tranche subject to approval by shareholders at a general meeting scheduled to be held on 28 October 2016.

The Directors of Eden undertook this capital raising because it significantly de-risks the US EdenCrete™ project in that:

- The placement will enable Eden to fast track the initial development of the proposed large scale EdenCrete™ production facility in Georgia in 2017/ 2018 to meet the anticipated demand, regardless of possible major fluctuations and upheavals in the global financial markets; and
- It also ensures Eden has sufficient funds immediately available to continue expanding its newly formed team of highly successful and experienced sales people, a move anticipated to significantly increase the volume of EdenCrete™ sales over the next year.

Proposed Re-branding of "Eden Energy" to "Eden Innovations"

In order to reflect more accurately the ongoing focus of the Group as a clean technology innovator that proposes to develop and market a range of new, environmentally beneficial technologies, a resolution to change the name of the company from "Eden Energy Ltd" to "Eden Innovations Ltd" is to be voted upon at the company's Annual General Meeting on 28 October 2016.

Gregory H Solomon

Executive Chairman

For further information, please contact Greg Solomon (+61 8 9282 5889) or visit our website (www.edenenergy.com.au)