



ACN 109 200 900

ASX Quarterly Report

For the Quarter Ended 30 June 2016

HIGHLIGHTS

EdenCrete™

- First commercial EdenCrete™ order received for an infrastructure project - for use at a new MARTA bus garage in Atlanta, Georgia.
- Commercial order received for use of EdenCrete™ in replacing a high strength concrete slab subject to extreme wear and abrasion, following a successful field trial (October 2015).
- GDOT I-20 field trial (Augusta, August 2015) update - EdenCrete™ section is showing no visible cracking or significant signs of wear after 11 months of highway wear, whereas the control section is already showing a significant crack developing.
- Discussions continued with GDOT in relation to specifications for the use of 24-Hour Accelerated Concrete/ Class B Concrete.
- The GDOT field trial of EdenCrete™ in Class 1 concrete has been included in a new section of highway that is being tendered.
- A number of US companies in various states are evaluating test results and/ or undertaking further testing using EdenCrete™.
- Eden engaged the first four members of its US EdenCrete™ sales team.
- Work commenced on developing variants of EdenCrete™ for specific concrete applications with pre-cast concrete being the first. Third party trials in September quarter are planned.
- Trials of EdenCrete™ with modest dosage rates of EdenCrete™ showed material improvement in all performance characteristics of concrete that were tested, including:
 - a 46% reduction (improvement) in the rate of abrasion using ½ US gallon of EdenCrete™ / yard³ of concrete, which would have added only approx. 3.5% - 4% to the installed cost of the concrete paid by GDOT on the I-20 field trial.
- 180 day ASTM C494 S test results with EdenCrete™ produced:
 - Freeze / thaw resistance increased by 9.5% (from 88 to 96.4) (ASTM C666) and
 - Compressive strength increased by 38% (ASTM C39).
- The expansion of Eden's Colorado based production capability of EdenCrete™, from its present level of ~108,000 gallons per year to a targeted maximum of 2-2.4 million gallons per year continued and is on schedule to be operational by early in 2017.
- Eden secured a financial assistance and incentives package worth in aggregate US\$24.76 million from Georgia Economic Development Authority and Augusta Economic Development Authority.

- Eden finalised its agreement with Deakin University to proceed with a collaborative Australian Research Council (“ARC”) Linkage Grant research project into ultra-high strength carbon nanotube enriched concrete requiring little or even no reinforcing steel.

CNT Enriched Polymers and Plastics- EdenPlast™

- The 2014 collaborative research project between Eden and the University of Queensland (funded by the Australian Research Council to the extent of A\$255,000), into carbon nanotubes in plastics, achieved very encouraging preliminary results.

Optiblend™ Dual Fuel

- One order received in India during the quarter for one unit valued at approx. USD \$27,000. Encouraging increase in significant enquiries in India.

Corporate

- Eden raised A\$10.35 million additional capital through the placement to two US investment funds of 45 million fully paid ordinary shares at an issue price of A\$0.23 per share together with 22.5 million free options.

DETAILS

EDENCRETE™ (Eden 100%)

First commercial EdenCrete™ order for an infrastructure project in Georgia

EdenCrete™’s first commercial infrastructure order was received for a section of a concrete hard stand area that was installed using EdenCrete™ enriched concrete at a new state of the art facility being constructed in Atlanta by the Metropolitan Atlanta Rapid Transit Authority (“MARTA”) (see **Figure 1**). It will house the administrative functions, operations, and maintenance facilities for a fleet of up to 200 Mobility vehicles, comprises an area of approximately 7,250 m² (78,200 ft.²) on a 4.45ha (11 acre) site and is estimated to cost approximately US\$38 million.



Figure 1. Brady Mobility Facility with EdenCrete™ slab site being prepared (shown in upper left)

The final concrete area that was selected for the EdenCrete™ project was larger than originally advised and in consequence, using all the available EdenCrete™ admixture that had been supplied by Eden, 17 truck loads of concrete, with EdenCrete™ added at a dosage rate of approximately 3 gallons per cubic yard of concrete, were used to construct the section of the Brady facility (see **Figure 2**).



Figure 2. EdenCrete™ enriched slab being installed

At this lower dosage rate than had originally been planned due to the increased volume of concrete required, based on the results achieved, the EdenCrete™ is still anticipated to at least double the service life of the concrete by enhancing the concrete's resistance to abrasive wear, increasing its flexural strength and also its durability due to reduced permeability.

The EdenCrete™ section will be subjected to extreme rolling frictional forces due to the constant wear of large vehicle tyres when turning on the slab from day to day, and will be evaluated over time relative to the rest of the concrete not containing EdenCrete™. The targeted extension of concrete service life is intended to ultimately reduce the in-service cost for the project by significantly deferring disruptive and costly repair projects due to excessive cracking and/or abrasion over time.

The EdenCrete™ concrete that was used in the trial was also comprehensively tested against the same concrete mix but containing no EdenCrete™, in an approved, independent laboratory in Atlanta. Results from two separate independent laboratories showed the following improvements after 28 days:

First Laboratory	Second Laboratory
Compressive Strength Increase - 25%	Compressive Strength Increase - 38%
	Split Tensile Strength Increase - 59%
	Modulus of Elasticity Increase - 24%
	Abrasion Resistance Increase - 47%
	Shrinkage Reduction (Improvement) - 9%

Following receipt of these test results, discussions with MARTA commenced in relation to possible further projects for EdenCrete™ in various specific applications at some, as yet undecided, time in the future.

MARTA, which has served the Atlanta metropolitan area for more than 35 years, operates a number of sustainability programs that are applied to many areas within the organization including its fleet of

compressed natural gas (CNG) buses. For instance, 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, if as is anticipated, the performance of the EdenCrete™ section of the concrete slab produces similar positive results to those achieved in both the laboratory tests and also in earlier field and laboratory tests focusing on similar performance characteristics, it will be 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.

Commercial Order for a Heavy Wear and Highly Abrasive Application Completed

During the quarter received a commercial order for and Eden completed the replacement of a high strength concrete slab that is subject to extreme, heavy duty wear and abrasion. The EdenCrete™ replacement slab replaced only the upper 70% of the original cracked concrete slab, greatly reducing costs. The project took place at a major regional maintenance facility in Georgia for a large national U.S. company where very heavy steel components from a national transport fleet are brought for repairs and maintenance (see Figure 3).



Figure 3. View of site showing very high loading of heavy replacement parts

Following a six months' field trial of EdenCrete™, when no cracking or visible wear was evident, when in the same period in the control slab there was significant cracking and visible wear (see Figure 4) EdenCrete™ was then selected for use in a subsequent commercial replacement program at the site.



Figure 4. Control Slab Showing Cracking After 6 Months (the EdenCrete™ Slab Showed No Cracking After 6 Months)

The replacement EdenCrete™ slab:

- delivered a total project cost saving of 45% compared with an alternative ultra high strength slab design,
- was 50% thinner than the ultra high strength slab design,
- used only fiberglass fibres and carbon nanotube reinforcement in lieu of traditional steel mesh or rebar,
- required almost no sub-base preparation, and
- is intended to provide at least a comparable 5-year service life.

This project used the same concrete mix that was approved by GDOT in November 2015 for 24-hour maintenance and B Class concrete, but without any set accelerator. It involved replacing three concrete slabs using EdenCrete™, the first and third of which were adjacent to one another in an area over which loaded trucks, fork lifts and front-end loaders frequently travel to access the section of the yard where the replacement parts are stored (**see Figure 4**). These sections were excavated as closely to 150mm (6 inches) as possible, but there were sections as deep as 225mm (9 inches) but there was no preparation of the sub-base before the new concrete was poured (**see Figures 5 and 6**).



Figure 5. Partially poured first slab showing minimal sub-base preparation



Figure 6. Completed first slab

To manage the variable depth, which normally requires a flat, compacted sub-base to be installed, more EdenCrete™ enriched concrete was simply used to fill the deeper sections of the hole instead of spending time and money on sub-base preparation. As a result it was not necessary to order aggregate or compaction equipment to prepare the sub-base, and only a little extra concrete was required.

The outcome was a 45% reduction in the total costs compared with the budgeted cost of replacing the slab with a new ultra-high strength mix design that would have involved a 12 inches (300mm) thick concrete slab incorporating half inch (12.5mm) diameter steel rebar, supported by a six inches (150mm) thick compacted crushed aggregate sub-base, that had been planned to try and achieve a five year service life for the concrete.

The first section was opened and driven on by loaders accessing the storage yard the next morning, less than 24-hours after the last slab was poured. The second slab is to be used as foundation for a large filtration system used in the adjacent fabrication shop where the parts replaced. No excavation at all was conducted, and the formwork was built abutting the pre-fabricated metal wall of the fabrication shop.

Additionally, a sidewalk running under it in the middle of the area was left in-situ and the slab simply poured over the top (see **Figures 7 and 8 below**). Heavy trucks will be regularly driven onto this slab.



Figure 7. Formwork and minimal sub-base preparation for second slab



Figure 8. Completed second slab

GDOT I-20 Field Trial Update

A recent visual examination was undertaken of the current state of repair of the EdenCrete™ enriched section of concrete laid on 26 August 2015 as a field trial of EdenCrete™ on a troublesome section of the Interstate Highway I-20 in Augusta, Georgia for the Georgia Department of Transportation (“GDOT”) (see Eden ASX Announcement ASX: EDE 27 August 2015) is showing no visible cracking or significant signs of wear after 11 months of highway wear (see Figure 9 below).

The control section, laid on 27 August 2015 on the adjoining section of the same lane on I-20, and using the same concrete mix but containing no EdenCrete™, is however, already showing a significant crack developing (see Figure 10 below), 11 months later. The trial section of the I-20 has high water content in the sub-surface beneath the road surface, which often results in a relatively short service life of the concrete roadway surface.



Figure 9. EdenCrete™ - No Visible Cracking



Figure 10. Control - Visible Crack Developing

GDOT – Specifications for 24-Hour Accelerated Concrete and Class B Concrete

During the quarter Eden continued preparing draft specifications with GDOT to cover the use by GDOT of EdenCrete™ in its Class 24-Hour accelerated concrete mix applications and also its Class B concrete application. There are a number of alternative approaches being considered.

Following the I-20 field trial update, discussions with GDOT commenced in relation to how it may be possible to accelerate the process to enable the future use by GDOT of EdenCrete™ in suitable GDOT highway repair projects.

GDOT –Field Trial for Class 1 Concrete- Progress

During the quarter, the Georgia Department of Transportation (GDOT) put out for tender the new highway construction contract which will include the EdenCrete™ field trial for GDOT’s Class 1 concrete. However, due to the long lead time for the completion of the design, engineering and preliminary earthworks for the project, which involves replacement of several miles of highway, the EdenCrete™ field trial, at this stage, is not expected to occur until possibly some time in 2018. Eden is looking for ways to try to accelerate this field trial.

Establishment of Specialist US EdenCrete™ Sales Force

Eden also commenced building a specialist US EdenCrete™ sales force. This sales team will comprise a team of people who each have at least 10 years' experience in successfully selling concrete admixtures in the US with top admixture suppliers. A considerable number of applications for positions were received and the first four appointments have been made.

Western Region Sales

Eden engaged its western region sales manager, who is based in California where he has commenced marketing and selling EdenCrete™ to potential customers. Having 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, he has been appointed by Eden as the western region sales manager. Two western region sales people have also been appointed, and will commence work over the next 6 weeks. Further possible appointments are being discussed.

Eastern Region Sales

The sales manager for the eastern region of the US, a highly experienced person based in New Jersey has also been appointed and commences work in August. Further possible appointments are being discussed.

Longer Term Plans

The intention is to progressively build the sales team to a total of approximately 8-10 sales people whose collective task will be to cover the 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 get trials arranged with potential customers.

In the longer term, it is intended to further expand the sales team both in the US and also into the global arena as the market expands to absorb the production increases that are planned to result from the 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.

EdenCrete™ Marketing and New Product Development

Eden commenced a marketing study to assist Eden in the preparation of a comprehensive EdenCrete™ marketing plan. However after careful consideration it was decided to curtail this study for the time being.

Ongoing product development of EdenCrete™ is currently being undertaken to develop specialty variations of EdenCrete™ for specific specialist concrete applications.

Work on the first specialty application, for use in pre-cast concrete applications, has commenced and has achieving encouraging preliminary results. The first third-party trials of this new specialty version of EdenCrete™ are anticipated to occur during the September quarter.

EdenCrete™ – Other U.S. Trials

During the quarter, a number of companies commenced trials of EdenCrete™. Because of the differences in chemistry between cement produced in different locations from different source materials, it is usual practice in the concrete industry for each location that uses a different cement to undertake its own tests, even if other branches of the same company have previously carried out tests.

The trials often take at least 3-6 months or longer to arrange and complete and the results must then be reviewed before any decision to use EdenCrete™ could be taken, resulting in a relatively long lead-time for the conversion of enquiries into orders.

Performance Improvements Achieved with Modest Dosages of EdenCrete™

Eden received the initial results of an extensive, ongoing trial being undertaken with its EdenCrete™ concrete admixture to determine its performance over a range of dosage rates. Material levels of improvement have been achieved with the addition of only modest dosage rates of EdenCrete™ that could add perhaps as little as US\$10 to the sale price of a cubic yard (0.765 cubic metres) of concrete.

The 56 day abrasion resistance results (ASTM C779 Procedure C) showed the following improvements:

- ½ gallon (1.9 litres) / cubic yard – a 46% reduction (improvement) in depth of wear, and
 - 1 gallon (3.8 litres) / cubic yard – a 55% reduction (improvement) in depth of wear,
- as detailed in **Figures 10 and 11** below.

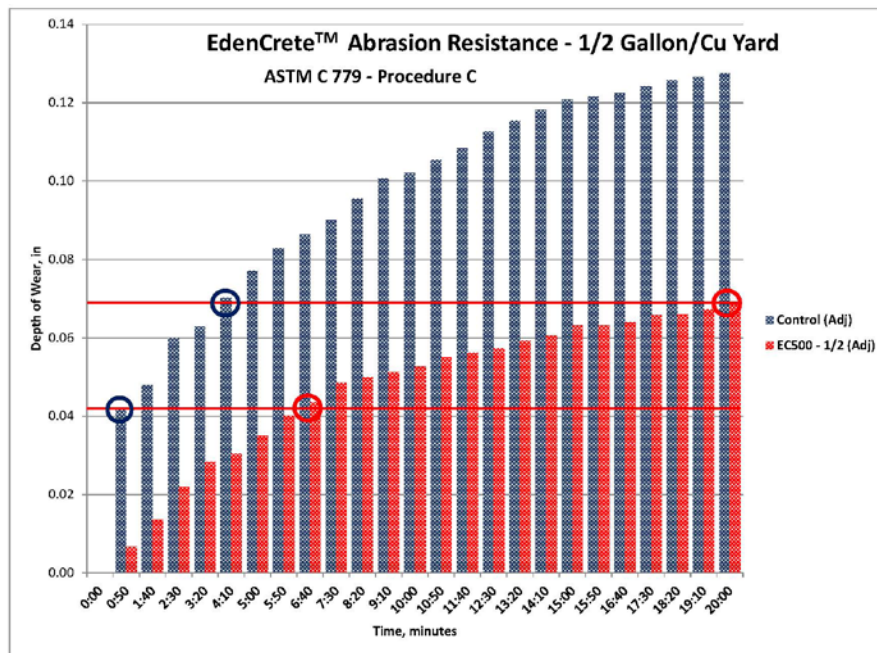


Figure 10. EdenCrete™ – ½ Gallon/ Cu. Yard of Concrete

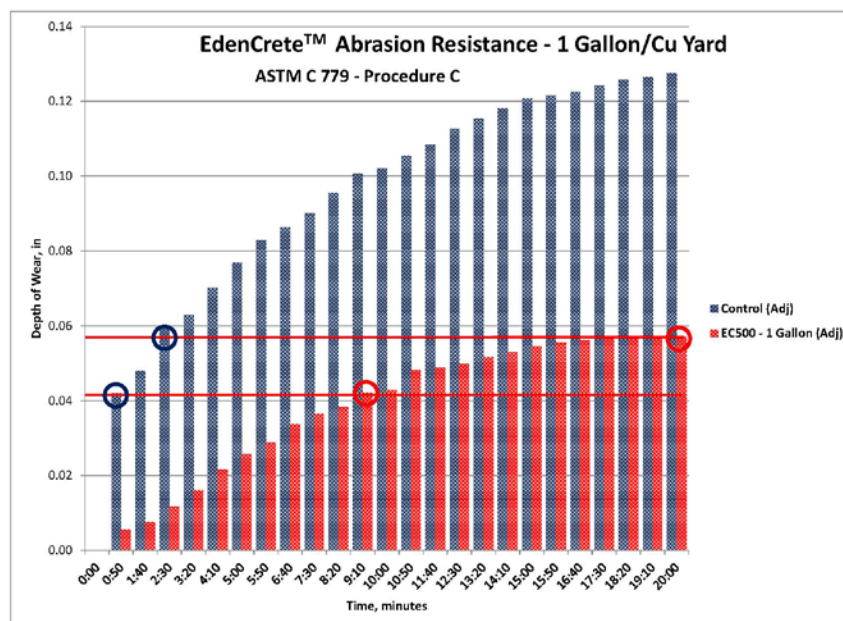


Figure 11. EdenCrete™ – 1 Gallon/ Cu. Yard of Concrete

GDOT advised that an installed cost per cubic yard of concrete of US\$375 was incurred during the I-20 Interstate Highway field trial of EdenCrete™ in Augusta, Georgia in August 2015. At the dosage rate of EdenCrete™ of 4 gallons/cu. yard of concrete that was used, this added a cost at present prices of US\$100/cu. yard or approx. 27% to the installed cost/ cubic yard (excluding any contractor's margin). At 56 days, this produced a 56% reduction (improvement) in the depth of abrasive wear.

If these new lower dosages had been used in the I-20 field, the following is an extrapolation of the possible comparative costs and benefits to GDOT (based on the same basis of costing) that may perhaps have been able to have been achieved:

- ½ gallon (1.9 litres)/ cubic yard of concrete
 - a 46% reduction (improvement) in the depth of abrasive wear at 56 days
 - cost US\$12.50/ cu. yard or approx. 3.5% of the installed cost/ cubic yard (excluding any contractor's margin), and
- 1 gallon (3.8 litres) / cubic yard of concrete
 - a 55% reduction (improvement) in the depth of abrasive wear at 56 days
 - cost US\$25/ cu. yard or approx. 7% of the installed cost/ cubic yard (excluding any contractor's margin).

These new results make an even more compelling economic case for the future widespread use of EdenCrete™ to achieve significantly longer lasting concrete for highly abrasive applications such as for highways, bridge decks, warehouse floors, hard-stand areas and other surfaces that are subject to high abrasive wear.

180 day ASTM C494 Test Results

During the quarter Eden successfully completed the 180-day tests that are being conducted under its current ASTM C494, Type S Test program (the umbrella standard to compare the performance of specialty admixtures) of EdenCrete™.

Significantly, the following results were achieved:

- Freeze/Thaw resistance (or Durability Factor) enhanced by 9.5% over the reference (from 88% to 96.4%) by the addition of EdenCrete™ (ASTM C666). This is regarded as significant by industry professionals; and
- 180 Day Compressive Strength increased by 38% over the reference by the addition of EdenCrete™ (ASTM C39), continuing the trend of significantly increased compressive strength over the entire 180 day period.

The broad suite of ASTM C494, Type S results continues to show, across a wide range of performance characteristics, the considerable improvement in the performance of concrete when EdenCrete™ is added. The ASTM C494, Type S results that have been received to date are set out in **Figure 11** below.

EdenCrete™ ASTM C494 Results (Reported by Intelligent Concrete LLC)								
Test	% Increase of EdenCrete (4gal/yd. ³) over Reference							
	Age (Days)							
	1	3	7	28	56	90	180	365
Compressive Strength (ASTM C39)	25%	35%	39%	41%	41%	39%	38%	12/1/16
Flexural Strength (ASTM C78)		25%	19%	32%	Complete			
Split-tensile Strength (ASTM C496)				29%	22%	Complete		
Abrasion Resistance (ASTM C779 Proc C)					56%	59%	Complete	
Length Change (ASTM C157; Shrinkage)	61% reduction; Complete							
Time of Set (ASTM C403)	Reduced: Initial Set 3 min, Final Set 4 min; Complete							
Freeze/Thaw Resistance (ASTM C666)	Reference=88.0, EdenCrete=96.4. 9.5% enhancement; Complete							

Figure 11 - ASTM C494 S Test Results (including 180 day data)

With the exception of the 365 day Compressive Strength test that will be completed in December 2016, all the other required testing for the ASTM C494 test program is completed. The exceptional performance demonstrated by EdenCrete™ in these tests will be highly relevant in the future marketing of EdenCrete™.

Freeze/Thaw Resistance

Freeze/ thaw resistance is of great importance in relation to the performance of concrete that is exposed to water in freezing conditions. Water permeates into the concrete and expands when it freezes, and the resulting stresses cause cracks to propagate and expand with exposure to repeated freeze/thaw events.

It is of great relevance to the service life of concrete roads, bridge decks and other concrete surfaces and structures in colder climates where the temperature regularly falls below the freezing point of water during winter. It is more important in circumstances where the concrete has steel reinforcement, and salt or other chemicals which dissolve in water and cause corrosion of the steel and a breakdown of the concrete, are present in the local environment (such as in marine and coastal situations) or are applied to the concrete (such as on roads) to retard the build-up of ice.

ASTM C494 is a standard specification that provides guidelines regarding which ASTM test methods are required for evaluating different performance characteristics of chemical admixtures. ASTM C666 is the test standard designated for measuring the durability of the concrete when submerged in water and exposed to the stresses associated with rapid and repeated freeze/thaw cycles. The procedure is assumed to have no significantly damaging effects on frost-resistant concrete (any concrete not critically saturated with water - i.e. not sufficiently saturated to be damaged by freezing and concrete made with frost-resistant aggregates and having an adequate air-void system that has achieved appropriate maturity and thus will prevent critical saturation by water under common conditions).

The procedure is not intended to provide a quantitative measure of the length of service that may be expected from a specific type of concrete. It is, however, intended for use in determining the effects of variations in the properties of concrete containing the admixture under review and its resistance to degradation over time, due to the freezing-and-thawing cycles specified in the procedure.

The results from freeze/thaw testing indicate EdenCrete™, by itself, enhances the Durability Factor (or resistance to freeze/thaw cycles) by 9.5% over the reference, which is considered to be a material improvement by industry professionals.

It should be noted that, in strict accordance with the ASTM C494 Specification, the water content was held constant for both the Reference and the EdenCrete mixtures, and no additional supplementary cementitious materials were used in the mixes. In the field, however, the workability of the mix may be slightly increased with the addition of EdenCrete™ that will allow for a slight reduction in water or the dosage rate of the high-range water-reducing admixture while achieving the same slump specification. This type of mix optimization may not only reduce the cost of the concrete, but could result in the concrete having an even higher resistance to the stresses associated with freeze/thaw cycles.

Further tests are planned to be conducted by Eden Innovations in Colorado, using an identical concrete mix as was used in the ASTM C494 tests, to determine the maximum level of Freeze/Thaw resistance that can be achieved when EdenCrete™ is incorporated into the mix.

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 almost 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 includes disposing of now 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.

The entire up-scaling is scheduled to be completed and operational by the early in 2017, and at present the project is progressing on-time but is approximately 20% above the initial 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.

Proposed Georgia based EdenCrete™ Production Facility

During the quarter Eden's wholly owned subsidiary, EdenCrete Industries Inc. ("ECI") 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 (see the conceptual plan in **Figure 12** below).

EdenCrete Industries, Inc

Industrial Land Tract

Conceptual Development for 10 Manufacturing Plants/Building, beginning with Plant 1.

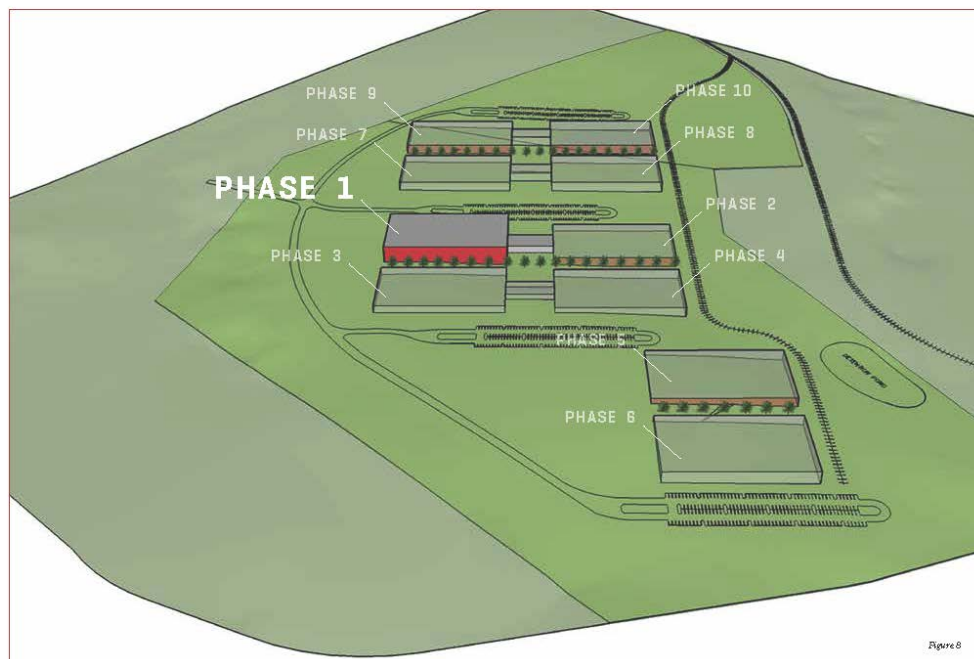


Figure 12. Schematic of Possible Site Layout of Future Georgia Production Facility

State of Georgia Incentive Package

The State of Georgia (through the Georgia Department of Economic Development (“GDEcD”)) and the Augusta Economic Development Authority (“AEDA”) have collectively agreed to provide a generous financial assistance and incentives package estimated to be worth up to US\$24.76 million over the next 20 years to assist ECI.

The incentives package, which is dependent on ECI establishing the first new building with four production lines and creating the new jobs, will deliver total cost savings and cost avoidance benefits of US \$24.76 million, with:

- US\$11.59 Million to be provided by State of Georgia
- US\$13.17 Million to be provided by AEDA

Incentive Package Details

THE details of the financial assistance and incentives package which is being provided against ECI’s commitment to build the plant, include the following:

- A grant of 45 hectares (112 acres) of industrial land in the Augusta Industrial Park (worth US\$2.8M) with an option over a further 12.75 ha (31.5 acres) for future expansion (see Figure 12 above);
- Financial assistance through the AEDA Industrial Revenue Bond programme that will deliver approximately US\$5.8M of savings in local property taxes over 20 years;
- AEDA will spend US\$2.5m establishing two lane road access to site, US\$100,000 towards site preparation costs and US\$400,000 towards securing rail access to the site;
- GDEcD will contribute US\$500,000 to the cost of establishing the road, training and hiring assistance;
- Augusta Utilities to spend US\$1.57M to install water and waste water lines to site; and
- Various other State and AEDA tax benefits will be provided including:
 - State Job Tax Credits
 - Various County tax exemptions from Property Tax, Inventory Tax, and Freeport Exemption; and
 - State Sales Tax and Use Tax exemptions.

Apart from evidencing the strong support that the Government of Georgia is prepared to provide to incoming industry, this generous assistance package will significantly reduce both the up-front capital costs and the operational set-up costs associated with establishing the large scale manufacturing operation, and also help significantly defray operating costs for up to 20 years.

It also provides a large tract of suitable industrial land with capacity for very large scale future expansion. The site has convenient road and rail access to the entire North American market, as well as easy access to shipping to the global market via the Port of Savannah. The site adjoins the railway system linking it to the entire North American rail network. It is also located within 12 kilometres of the interconnected US Interstate Highway network giving it very efficient road access across North America. The Port of Savannah, the third largest port (by volume) in the US for containerised freight, is 160 kilometres away by both road and rail, and provides efficient shipping access via the Atlantic to South America, Europe, Africa and the Middle East, and also via the Panama Canal to the Asia- Pacific region.

This incentive package will deliver a significant reduction in both the capital and operating costs, and greatly enhance the attractiveness of the project to future investors and lenders for fund raising purposes.

High strength CNT enriched concrete requiring little or no reinforcing steel

Eden finalised its agreement with Deakin University (“Deakin”) to proceed with a collaborative Australian Research Council (“ARC”) Linkage Grant research project into ultra-high strength carbon nanotube enriched

concrete requiring little or even no reinforcing steel. The ARC grant, funded by the Commonwealth of Australia, which was initially awarded to Eden and Monash University in Melbourne, will provide a total of A\$300,000 over the three year life of the research project.

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

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 has been undertaking into carbon nanotubes in plastics, has achieved very encouraging preliminary results.

The following conclusions, along with full details of the actual results achieved to date with Eden's new product (EdenPlast™), including comparisons with the published performance of other commercial Nylon 6 products, are shown in **Figure 13** below.

- 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.

	EdenPlast High Toughness ¥	UNITIKA M1030DH (Ref#1)	ARDLON NE2740M5 (Ref#2)	Hybrid Plastics MS0825 (Ref#3)	Cresset NE2740, 4 wt% nanoclay (Ref#4)	Cresset NE6040-ST, 4 wt% nanoclay, Super tough grade (Ref#4)
Tensile Modulus (DAM*), MPa	5090 ± 638	4300				
Tensile Modulus (50 % RH), MPa	1463 ± 289	2600				
Flexural Modulus (DAM*), MPa			4070		4500	
Flexural Modulus (50 % RH), MPa			3600		3700	
Tensile Strength (DAM*), MPa	82 ± 6	95	78	61	103	47
Tensile Strength (50 %RH), MPa	75 ± 5	63	74		96	45
Yield Stress (DAM*), MPa	76 ± 8			45	103	
Yield Stress (50 %RH), MPa	40 ± 2				96	
Elongation-at-break (DAM*), %	184 ± 43	3.4	3.5	230	1.4	71
Elongation-at-break (50 %RH), %	205 ± 18	4.0	4.0		2.4	182

*DAM: Dried as moulded

¥ EdenPlast™. Conditioned at 55-60 % Relative Humidity (RH) values instead at 50%RH, and mechanical characterization of extruded composite filaments of 1.5-2.0 mm in diameter at 25 mm/min, instead of ASTM D638.

Ref#1 - <https://www.unitika.co.jp/plastics/e/nylon/nano-nylon6/index.html>

Ref#2 - http://www.nylon.com.tw/detail_b6.html

Ref#3 - <http://3q5kmr43xsziufhq2afw9w1.wpengine.netdna-cdn.com/wp-content/uploads/sites/57/2015/04/ms0825nylon.pdf>

Ref#4 - <http://www.matweb.com/search/GetMatIsByManufacturer.aspx?navletter=C&manID=482&manname=Cresset>

Figure 13. Comparative EdenPlast™ Test Performance Results vs Other Published Performance Results

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 an order for one OptiBlend™ dual fuel system worth approximately US\$27,000. Eden Innovations (formerly Hythane Company), Eden's wholly owned U.S. subsidiary, did not receive any purchase orders for OptiBlend™ systems. The global market for dual fuel systems has been at a virtual standstill for the past 2 years as a result of the steep drop in world oil prices, the consequential drastic slowdown in oil and gas exploration in and the greatly reduced difference in price between diesel fuel and natural gas. Although the

global price of oil remains 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 in due course.

In particular, there has been an encouraging increase in the level of interest in OptiBlend™ in India for various projects some of which have the potential to generate significant sales of OptiBlend™ systems, particularly for back-up power applications, due to a need for uninterrupted power, a drop in natural gas prices, an increase in diesel prices and growing concern at the level of air pollution in Indian cities.

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

Indian Hythane Bus Demonstration Projects

No progress was made during the quarter on any potential Indian Hythane™ projects. Whilst it may be possible for one such 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.

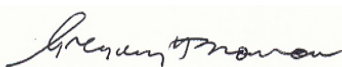
Corporate

Successful A\$10.35 million capital raising to fund expansion in Colorado and Georgia

During the quarter Eden raised A\$10.35 million additional capital through the placement to two US investment funds of 45 million fully paid ordinary shares at an issue price of A\$0.23 per share together with 22.5 million free options, exercisable at A\$0.31 at any time before 11.59pm on 19 May 2019.

The funds raised are broadly intended to be used as follows:

- Approximately US\$2million – \$2.5 million to fund the completion, by early 2017, of the expansion of the current EdenCrete™ (Eden's proprietary carbon nanotube enriched concrete admixture) production facility at Eden Innovations' plant in Colorado, to a targeted annual output of approximately 2-2.4 million gallons of EdenCrete™;
- Approximately US\$2.5 million - \$3 million to fund the Eden Group's ongoing working capital requirements, and
- The balance will be applied towards the initial expenses for site works, design and engineering for the first stage of the proposed large scale EdenCrete™ production facility to be built in Augusta, Georgia and which is scheduled to be in production early in 2019 with a targeted initial annual output from its first production line of approximately 12.5 million gallons of EdenCrete™.



Gregory H Solomon

Executive Chairman

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