



Innovations that work.™

ASX Quarterly Report

For the Quarter Ended 31 December 2020

SALES DURING THE QUARTER

	Sales 31 Dec 2020 A\$000's	Sales 31 Dec 2019 A\$000's	Sales % Change
EdenCrete®	459	306	50%
OptiBlend®	362	213	70%
Total	821	519	58%

COVID-19

During the quarter, Eden's workforce remained free of COVID-19 infection. Since then, one employee contracted the virus and has now recovered but no other employees were affected. During the quarter Eden remained focused on preparing for resumption of normal business when disruptions ease, with our production running at full capacity (approximately 14 hours a day with shift work separation to prevent COVID 19 cases internally).

COVID 19 continues to delay sales, trials and projects that were underway or planned in various markets in USA and other countries.

President Biden – US Infrastructure

With President Biden now in office, based upon his pre-election undertakings in relation to increasing US infrastructure spending, Eden is hopeful that a significant increase in Federal funding for US infrastructure projects will deliver more infrastructure projects in which EdenCrete® products are used over the next four years.

Global Market Overview

Notwithstanding the ongoing impact of the COVID-19 pandemic across the world, sales of each of EdenCrete® products and OptiBlend® products continued to grow, with aggregate sales for the quarter being 58% higher than in the corresponding quarter of 2019 (i.e., before the start of the current pandemic). Further, the number of customers and geographic footprint for both product ranges have also continued to grow.

SUMMARY

EdenCrete®

US EdenCrete® Market Summary

- **Silent Partner International (SPI)**
 - SPI advised that preliminary steps for the first project in West Virginia completed.
 - Design work underway and site work scheduled to commence in May 2021.
- **Georgia market continuing to expand**
 - **GDOT/ FHWA Projects**
 - Currently 7 GDOT highway repair projects underway or are pending (including 2 jointly funded with FHWA).
 - The largest of these current projects, the third GDOT/FHWA jointly funded project using EdenCrete on Interstate I-75/SR 401, has commenced and should use in excess of US\$250,000 of EdenCrete® over next 6 months.
 - GDOT is planning a number of major highway upgrade projects
 - GSOT introduces more stringent mainline concrete paving specifications that incorporate performance specifications based around the performance achieved using EdenCrete®
 - **GPA Repair Projects**
 - Highly successful field trials with GPA in early 2020 led to EdenCrete® been included by GPA in the specifications for two projects and used by a contractor in a third small repair contracts at the Port of Savannah.
 - Successful development of EdenCrete® enhanced concrete mix designs for use in a range of port, marine and coastal applications.
 - **Port of Savannah Expansion**
 - EdenCrete® pre-approved by GPA for use in first project currently being tendered under US\$2.5 billion doubling of capacity of the Port of Savannah.
 - If EdenCrete® is used, it would require approx. US\$625,000 of EdenCrete®.
 - Bids close in early February 2021.
- **Colorado market continuing to expand**
 - Colorado Department of Transportation (CDOT) shotcrete project I-25 in Colorado Springs.
 - City of Denver Department of Transportation and Infrastructure completed positive review of long-term trial, resulting in EdenCrete® being included as an additional admixture in the specifications for specific new roadway paving and pavement repairs.
 - Concrete supplied for projects for both the City of Breckinridge and the City of Silverthorne.
 - Two new ready-mix customers added.
 - First volumetric concrete projects successfully completed.
 - CDOT I-70- Vail Pass EdenCrete® trial contract awarded; preliminary testing starts in Spring.
- **Kansas – first project in Wichita**
 - EdenCrete® successfully used in Wichita- a large commercial project in a new US state, in a new application, and for a new contractor.
 - Trials in process with three new ready-mix customers in Wichita market.

- **Utah – two new shotcrete projects**
 - Two projects completed in Salt Lake City being at a large mixed use commercial/ residential development and at a public All-Abilities Water Park that is also suitable for mentally and physically disabled customers.
- **Missouri, Arizona, Nevada, Montana**
 - Trials scheduled over next six months in Kansas City, MO, Phoenix, AZ, Las Vegas, NV, and Helena, MO.

International EdenCrete® Market Summary

- **Australia**
 - First significant Australian sale
 - After quarter, NICNAS approval received to import EdenCrete® into Australia for sale and use.
- **Europe**
 - Large European construction company that started trialing EdenCrete® in July 2019 resumes its long term trials after a 10 months' COVID-19 shutdown.
- **India**
 - First Indian EdenCrete® sale to significant Indian construction company following highly successful trials in February 2020 and subsequent long COVID-19 shutdown.
 - After quarter, second large Indian construction company re-commenced EdenCrete® trials following similar successful trials in early 2020 and a long COVID-19 shutdown.
- **Israel**
 - First significant Israeli sale following highly successful trials
- **South Korea**
 - Ongoing trials continuing with major company (but significantly impacted by COVID-19 restrictions)

OptiBlend®

- During the quarter Eden dramatically increased its OptiBlend® sales to approximately A\$362,000, mainly as a result of a huge percentage increase in sales in India.

EdenPlast®

- During the quarter Eden supplied a Japanese plastics manufacturer a master batch of carbon nanotube (CNT) enriched polymer that Eden had made using plain polymer supplied to it by the Japanese company, and blending 38% by weight of CNT into the polymer. The Japanese company, although impacted by COVID-19 has commenced trialing the EdenPlast® master batch.

Hydrogen

- During the quarter Eden received preliminary enquiries from a number of companies related to possible collaboration with Eden in relation to its various hydrogen technologies and capabilities.
- Eden is open to such a collaboration provided that it does not impact adversely on Eden's other products and business activities and will continue to explore any opportunities that may arise.

Details

Silent Partner International Inc.

Silent Partner International (SPI) has advised that:

- the general contractor has been engaged for the first data centre in West Virginia;
- design work for this project will continue during the first few months of 2021; and
- site work is scheduled to commence in May 2021.

As announced in the last quarterly report, Eden entered into a long-term contract to supply a total of up to US\$48million worth of EdenCrete® products over an 8-year period, representing a major milestone in global rollout of EdenCrete® products.

Georgia

During the quarter sales of US\$130,000 were recorded.

Georgia Department of Transportation (GDOT)/ Federal Highway Administration (FHWA) Projects

Currently 7 GDOT highway repair projects in Georgia are underway or are pending (including 2 jointly funded with FHWA) in which Eden anticipates that EdenCrete will be required. The largest of these current projects, the third GDOT/FHWA jointly funded project using EdenCrete®, involving the replacement of badly worn sections of concrete pavement along Interstate I-75/SR 401, has commenced. This project is projected to require in excess of US\$250,000 worth of EdenCrete® over the next 6 months. The first two GDOT/ FHWA repair projects completed in 2019 and 2020 respectively, each ended being approximately 30-40% larger than originally estimated, as additional repair work was added.

Additionally, GDOT is planning a number of major highway upgrade projects in Georgia, including constructing additional lanes for trucks along major highways to relieve congestion. Some of these projects are proposed to be funded using Public Private Partnerships (PPP) between GDOT and commercial partners, where the commercial partner will take on extended maintenance obligations, often for more than 40 years. Eden is hopeful that EdenCrete® will be included in the concrete required for at least some of these major projects.

New GDOT Mainline Paving Specifications

During the quarter, GDOT introduced more stringent mainline concrete paving specifications that will apply to future mainline paving projects, and that incorporate higher performance specifications based upon the performance achieved using EdenCrete® in trials conducted by GDOT. These new specifications are considered likely to increase the number of future mainline concrete paving projects in which EdenCrete® is added.

Georgia Port Authority (GPA) Projects

Over the past several months, and following the highly successful field trials that took place with GPA in early 2020 (see Eden ASX announcement dated 7 February 2020), EdenCrete® has in recent months been included in three GPA small concrete repair projects, including being added by GPA to the specifications for two of these contracts and being included by a contractor in a third, in areas of the port that are exposed to harsh operating conditions and heavy wear.

Eden has also completed the development with a number of companies, of various EdenCrete® enhanced concrete mix designs for use in a range of port, marine and coastal applications.

Port of Savannah Expansion

EdenCrete® has now been expressly pre-approved by GPA for use in first project that is currently being tendered as the first project being undertaken in the 8-year, US\$2.5 billion expansion project that will double the capacity of the Port of Savannah. Eden is currently engaging with all regional ready-mix suppliers and contractors to ensure they are aware of the earlier success of EdenCrete®. Based on the dosage rate used in the EdenCrete® trials, if EdenCrete® is used by the successful tenderer, the project would require approximately US\$625,000 of EdenCrete®. Bids are scheduled to close in early February 2021. The first project is the re-alignment of Berth 1 to allow docking for more 14,000 TEU vessels on the downriver end of the terminal (see Figure 1.).



Figure 1. Garden City Terminal

GPA announced in late 2019 a US\$2.5 billion plan to double the annual capacity of the Port of Savannah. The volume of container traffic that the port (which is currently the third busiest US container port) can handle, is planned to be increased over the next 8-10 years from approximately 5.5 million TEU (Twenty Foot Equivalent Units) movements per year to 11 million TEU movements. This plan involves:

- a major increase in the number of berths, cranes and the required areas of hardstand storage, together with a significant upgrade to the port's rail and road networks to handle the increased volume of container traffic; and
- expansion of the current 1,200-acre footprint at Garden City Terminal and the establishment of a new container port on Hutchinson Island, across the Savannah River channel.

By 2027, the additional cranes, revamped dock space and a new Hutchinson Island terminal are planned to allow the Port of Savannah to significantly increase big ship capacity of the port. In 2020 the terminal was scheduled to receive six additional Ship to Shore (STS) cranes (see Figure 2), and bring its fleet to 36, more than any other terminal in North America.



Figure 2. Some of the ship-to-shore cranes operating at Port of Savannah

Colorado

Colorado Department of Transportation (CDOT) shotcrete project on I-25

This new project is being undertaken for CDOT on Interstate Highway I-25 near Colorado Springs, involves the use of 1000 cubic yards (760 cubic metres) of shotcrete to build a long retaining wall as well being used in the expansion of two bridges including their wing walls, and will require approximately 330 gallons of EdenCrete®.

Importantly, the contractor on this project, Utah based Summit GeoStructures that also operates in Colorado and regularly uses EdenCrete® products, obtained approval from CDOT to use their EdenCrete® enhanced shotcrete.

This approval by CDOT followed successful laboratory trials of the proposed shotcrete mix, supplied by a ready-mix operator with which Eden has not previously worked, but which is a subsidiary of a large global cement and concrete company.

Denver Department of Transportation and Infrastructure (DOTI) Adds EdenCrete® to Concrete Specifications for Some New Roadways and Repairs

Following a detailed, positive review in November 2020 by senior engineers from DDOTI of the performance of two long term trials of EdenCrete® concrete, EdenCrete® has been being included as an additional admixture in the specifications for specific new roadway paving and pavement repairs.

DOTI delivered a very positive evaluation of 3-year long trial of EdenCrete® in concrete road when exposed to heavy vehicle traffic and heavy and often repeated dosages of de-icing salts.

The evaluation was reported to Eden in a letter dated 24 November 2020 from DDOTI that included the following:

"The purpose of this letter is to provide a summary of our experience with EdenCrete. In 2017 several panels of Speer Boulevard were replaced with concrete that had two different doses of EdenCrete. Control panels were also placed on Speer Boulevard. The test section was on the southbound outside lane, south of 6th Avenue. Representatives from EdenCrete were onsite during construction to assist the contractor which ensured a successful project. I would like to thank EdenCrete for the support and help with this project.

During the inspection, I noted that the EdenCrete concrete had performed exceptionally well over the last three years. This was particularly remarkable given the very high volume of vehicle use and associated surface abrasion coupled with the heavy and often repeated magnesium chloride applications. The test sections looked great. I observed no scaling or cracking in the EdenCrete sections, while the reference sections, with no EdenCrete, were exhibiting load and plastic shrinkage cracking and scaling.

OAM1 has included EdenCrete through statement in the specifications that admixtures not listed may be used with approval of the product manager. We will continue to use the product in areas where a high level of reliability is required. We are extremely pleased with the EdenCrete product and look forward to continuing our evaluation of the product."

1 - Office of Asset Management

This long-term assessment by a government department after a 3-year field trial, conducted under very tough conditions, is of major importance to the future marketing of EdenCrete® across all parts of the US, as well as in any other countries, that are subject to snow and freezing winter conditions and where de-icing salts and road chemicals are commonly used.

Projects in the City of Breckinridge and the City of Silverthorne.

During the quarter, EdenCrete® was included in projects in both Breckinridge and Silverthorne, both of which cities are located in the Rocky Mountains.

New Ready-Mix Customers

Two new ready-mix customers added in Colorado during the quarter.

First Volumetric Truck Batching

EdenCrete® was used for the first time in a volumetric truck batching and pumping project that commenced in November 2020 with On Demand Concrete, at Loveland, in Colorado (see Figure 3).



Figure 3. Volumetric truck mixing at the Loveland project site

This first EdenCrete® volumetric mixing project involved a two phase, large private residential floor with radiant coil heat tubes and went very well. The total slab thickness is 6" (150mm) however only 2" (50mm) of concrete covered the coils.

Whilst not a large project, it was important because volumetric truck batching has a growing market share in the residential, and small order markets and, importantly for DOT projects across the US.

These projects requiring volumetric truck batching services are often in rural or more remote locations that may not be easily supplied by ready-mix trucks supplied from plant batched concrete production. Truck based, volumetric concrete batching is a growing market sector and its importance is reflected by number of ready-mix suppliers that are also suppliers of volumetric mixed concrete, and it is considered to be a likely growth market for EdenCrete® in many parts of the US.

CDOT - trial of EdenCrete® on I-70 Interstate Highway at Vail Pass

During the quarter, the contract for this trial project (See Eden ASX announcement 15 August 2019) at Vail in the Rocky Mountains that had been scheduled for the third quarter of 2020 was awarded and preliminary testing has commenced.

Kansas

First project - in Wichita

A new and significant construction project that includes EdenCrete® enhanced concrete in a \$51 million expansion project that includes a new 505-bay carpark and 10-story tower which changes the skyline of Wichita, Kansas is underway. The two-phase project, RISE: A Beacon of Progress, began with the construction of the new five-story private carpark building (that is now complete), including 17,000 square feet of street-level retail space (see Figure 4-6).

Phase two will be the construction of The Tower, a 10-story building with 135,000 square feet (12,542 square metres) of floor space, including a large rooftop green space featuring grass and trees, on the site of the original parking deck. Upon completion the new carpark will be connected to The Tower by a two-story walkway.

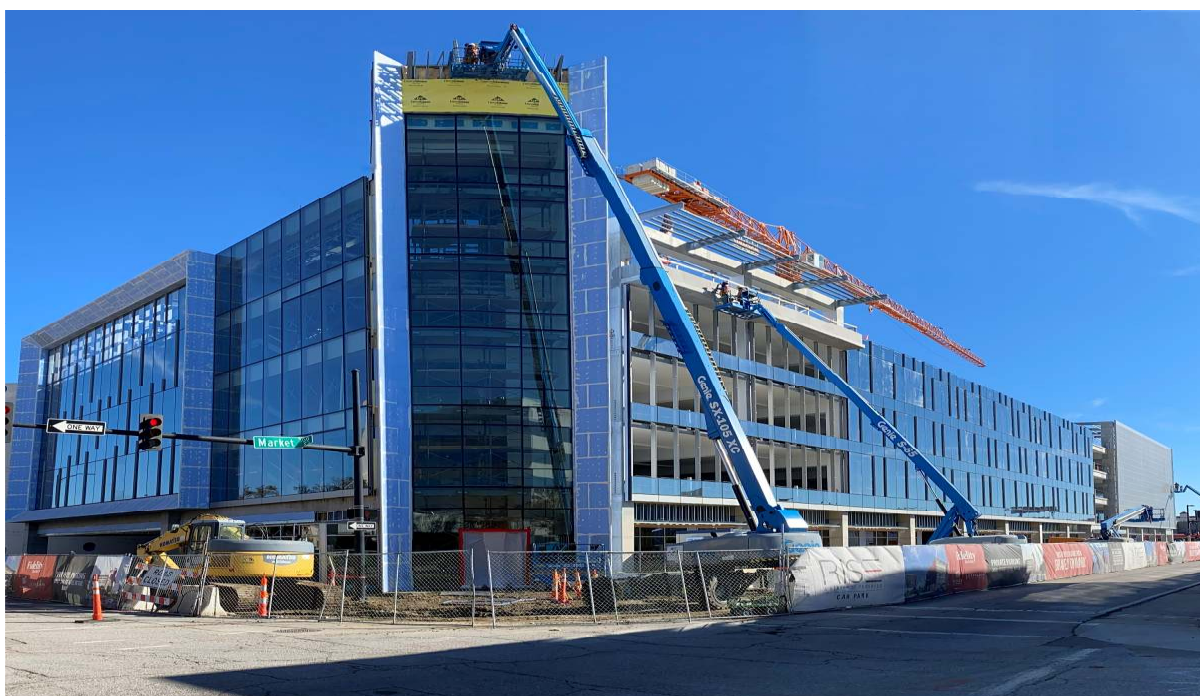


Figure 4 - Rise project in Wichita, Kansas.

Andale Ready Mix was the concrete supplier for the project and approved and specified the use of EdenCrete® in the concrete to be installed in the decks, ramps, sidewalks and entryways of the new carpark, to deliver improved crack reduction, abrasion and scaling resistance and better pumpability. A total of 2,700 cubic yards (2,064 m³) of concrete was estimated to be required for this phase of construction that included more than US\$30,000 worth of EdenCrete®. Laying the carpark decks and ramps, in which the EdenCrete® infused concrete was applied in a 4 inch (100mm) thick concrete overlay, commenced on 19 November 2020 and delivered a very successful outcome. The first 200 cubic yards of EdenCrete® concrete was pumped via a boom pump to the fourth-floor deck level, a vertical distance of approximately 15 metres, pumped through approximately 30 metres of 100mm diameter hose.

The mix pumped well with no issues. Pump pressures were measured at low 100's bar (around 10 MPa). The pump operator said the required pumping pressure in a similar pumping application, without the added EdenCrete®, would usually be in the range of 200-225bar (20-22.5 MPa).

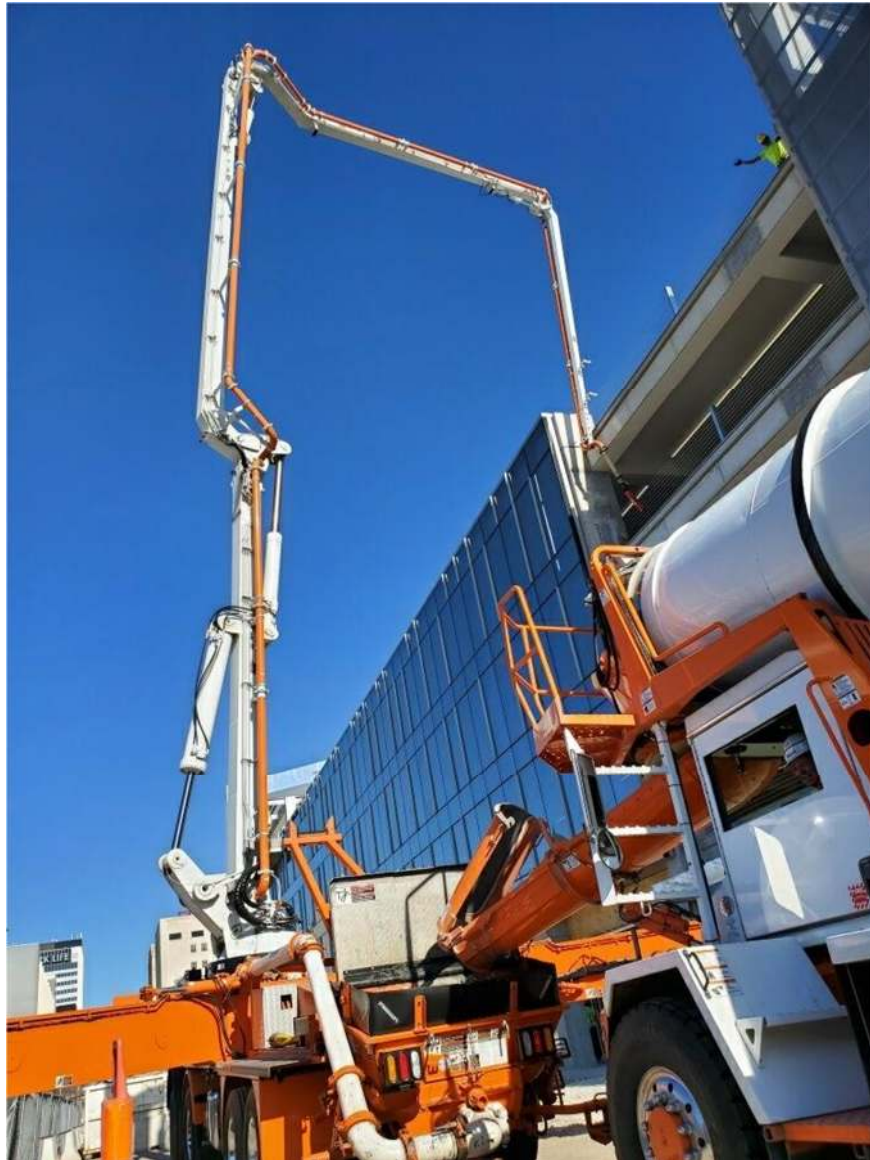


Figure 5. Pumping EdenCrete® concrete to fourth floor level of carpark

The project was completed shortly after the end of the quarter and all parties involved were extremely pleased with the performance improvements and other benefits that the EdenCrete® delivered and as a result three new ready-mix companies in the Wichita area are now trialing EdenCrete® in their concrete mixes.



Figure 6. Installing top deck of car park

Trials in process with three new ready-mix customers in Wichita market.

As a direct result of the performance delivered by the EdenCrete® enhanced concrete in the first project in Wichita, Kansas, trials with three new ready-mix suppliers are now underway in Wichita.

International EdenCrete® Market Summary

- As a result of having completed a number of successful trials with potential customers in Australia, India and Israel before the COVID-19 pandemic resulted in lockdowns in all of these markets, during the quarter, after extended delays in each case due to these lockdowns, Eden received its first significant order from Australia, and initial orders were received from both India and Israel.
- Further, since the end of the quarter, the large European construction company that had completed seven months of trials with EdenCrete® out of a planned 9-12 months programme, has advised that it has resumed its trial process and further EdenCrete® product is being supplied to it for these trials.
- Australia - NICNAS approval received by Parchem to import into Australia EdenCrete® products for sale and use.

AUSTRALIA

First Significant Sale of EdenCrete® Products

- First significant sale to Parchem Construction Supplies Pty Ltd during the quarter for US\$58,278 for a 20-foot container load of EdenCrete® products, comprising mostly EdenCrete® and a limited quantity of EdenCrete®Pz, that was supplied from Eden's plant in Littleton, Colorado, USA.
- This order was a very welcome development and follows significant interest in EdenCrete® products being shown by a range of companies in Australia and New Zealand, that in turn has resulted in a number of successful trials of EdenCrete® products being carried out by potential customers.
- After extensive communications over more than 12 months, NICNAS, the Australian Government body that assesses chemical products that are proposed to be manufactured in, or imported into, Australia completed the formal assessment of the EdenCrete® products that Parchem Industrial Products, the Australian and New Zealand distributor of EdenCrete®, applied to import, and subsequent to the end of the quarter NICNAS approved the importation for sale and use in Australia of the EdenCrete products.
- After a long wait, this finally open the way for Parchem to import EdenCrete® Products into Australia for sale.
- A number of successful trials by potential Australian customers have been carried out that are hoped will lead to early sales as the products become more available in Australia.

EUROPE

Trials of EdenCrete® Products

- Extensive trials of EdenCrete® by a large European construction company commenced in mid-2019 and were scheduled to be completed by April 2020.
- However due to COVID 19, the trials were shut down for almost 9 months.
- In October 2020 the construction company re-opened its research facilities and requested a trial be carried out at a pre-fabrication plant owned by one of its subsidiaries, which represents an exciting and very encouraging development after a long delay.
- Further product has been supplied to the pre-fabrication plant for these further trials.

INDIA

First EdenCrete® Commercial Order received

- Eden received its first purchase order from the construction division of Godrej & Boyce Manufacturing Co. Ltd ("Godrej"), to supply it with EdenCrete®Pz for use in its ready-mix concrete operation that is run by Godrej Construction, the construction division of Godrej. The product was delayed in transit but was received by Godrej towards the end of the quarter.
- Trials with a second Indian construction company that had achieved very good preliminary results in February 2020, but which closed its research operations due to COVID-19 for 10 months, were carried out early in 2021.

ISRAEL

First Sale of EdenCrete® Products

- Following earlier successful trials, during the previous quarter Eden received its first purchase order to supply Argil Group with both EdenCrete® and EdenCrete®Pz for use in a number of forthcoming commercial trials, initially focused on industrial flooring, shotcrete applications and construction concrete strength testing.
- During the quarter the product has been delivered to the customer in Israel.

SOUTH KOREA

Trials of EdenCrete® Products

- Trials of EdenCrete® by a number of large South Korean companies have taken place in spite of ongoing difficulties periodically arising due to COVID 19. Some of these trials are still ongoing. To date, whilst some of the results have been encouraging, no sales have yet been achieved.

OPTIBLEND®

OptiBlend® Sales for the Quarter

	SALES (A\$000s)
USA	45
INDIA	317
TOTAL	362

The quarterly OptiBlend® sales were 70% higher than in the corresponding quarter in 2019, in spite of COVID-19 difficulties and lockdowns in both USA and India. The Indian sales for the quarter (of the equivalent of A\$317,000) is by far the highest quarterly sales India has ever achieved, but this is anticipated to continue and perhaps to rise further during the next quarter if the current regulations are enforced.

In India during the quarter, on 8th of October 2020, the Environment Pollution (Prevention and Control) Authority (EPCA), a body mandated by the Indian Supreme Court, banned the use of diesel generator sets, with effect from 15 October 2020, in Delhi (the National Capital Territory), Noida, Ghaziabad, Faridabad and Gurugram, that collectively comprise the National Capital Region (NCR region).

The NCR region encompasses an area of 30,242 sq. km and has a total population of over 47 million people. Delhi alone, now has a population of over 20 million people.

The ban applies throughout the NCR region to non-essential diesel-powered generator sets during the winter period. This ban supports similar policies to reduce the air pollution that were earlier detailed in the National Clean Air Programme (NCAP), which, to date, State governments in Haryana, Maharashtra and Tamil Nadu have already adopted and which are considered likely to be adopted in further States.

Importantly, NCAP expressly approved the retrofitting of diesel-powered generator sets for partial Natural Gas usage (using a fuel mixture of diesel and Natural Gas) as a cost-effective way to convert the huge number of existing diesel generator sets across India to a Natural Gas operation, opening this major market opportunity for the OptiBlend® dual fuel system. The three States of Haryana, Maharashtra and Tamil Nadu, together with the NCR region are where piped Natural Gas is currently available (in Tamil Nadu it is only currently available on a limited basis) and is being promoted as a clean fuel alternative for power generation through the conversion of diesel generator sets to a wholly or partial Natural Gas operation.

The total population of the NCR region, Haryana, Maharashtra and Tamil Nadu alone is approximately 276 million people, representing an estimated 20% of the Indian population. Consequently, Eden has been approached by a number of groups interested in helping to sell OptiBlend kits and some have been appointed as commission- only sales representatives which has assisted in greatly increasing our market coverage over this very significantly populated area.

The Petroleum and Natural Gas Regulatory Board (PNGRB), a unit of the Government of India, is the national body responsible for promoting the establishment of a Natural Gas infrastructure and distribution network across India, including in many cities in these three States and the NCR region, as well as in cities in other States across the country.

In consequence, demand in India for OptiBlend® dual fuel systems have greatly increased. OptiBlend® sales by Eden India (Eden's wholly owned Indian subsidiary) for the quarter ended 31 December 2020, reached approximately A\$317,000, the highest quarterly total achieved to date, but which total is projected to continue to rise significantly over the coming quarters.

For larger generator sets which comprise a significant share of Eden India's target market, these quotations are usually in the range of at least A\$30,000 - A\$40,000 per generator set. To enable it to access this huge, emerging market opportunity, Eden India is at present establishing a network of commission-only, sales representatives in areas where piped Natural Gas is already available, commencing in the NCR region and the States of Maharashtra, Goa and Punjab.

Eden India has been selling OptiBlend® dual fuel systems in India (and in Nigeria, Bangladesh and Dubai) for over 10 years, for use on a wide range of makes and models of diesel generator sets from most of the leading global and Indian generator set manufacturers. Eden India's customers include many leading Indian and international companies that have run OptiBlend® dual fuel systems without any disruption, in some cases for over 10 years. Eden India manufactures in India all the OptiBlend® dual fuel systems that it supplies to the Indian, Asian, African and Middle Eastern markets.

These systems all comply with the Eden US design and performance standards and provide a very cost-effective solution that enables Eden India to compete in these highly price sensitive markets.

OPTIBLEND® BACKGROUND

OptiBlend designed and developed by Eden US more than 12 years ago, is 100% owned by Eden. It is a custom fitted hardware technology designed and produced by Eden in the US and India that allows conventional diesel engines to run on natural gas as its primary fuel without modifying the engine or the diesel fuel system.

Key features and statistics are that it:

- *Works by displacing up to 70% of diesel fuel with natural gas;*
- *Lowers fuel costs, lower emissions and increased runtime;*
- *Is a highly efficient, cost effective system that reduces fuel cost and emissions;*
- *Is used by Cummins on its oil/gas drilling power module using 3 Tier II gensets;*
- *Is suitable for most makes of diesel engines; installed on most major global brands;*
- *Has been marketed in US and India for over 10 years – highly reliable and durable, long proven in the market place;*
- *Over 200 systems sold and installed over the past 10 years across USA and India and in a number of Middle Eastern, African and East Asian countries; and*
- *Significant potential market emerging in India and in particular in Delhi where extreme air pollution has resulted in a proposed government ban on use of gensets during winter running solely on diesel fuel.*

EdenPlast®

JAPAN

- A Japanese plastics company expressed interesting in testing EdenPlast®, which resulted in a non-disclosure agreement to protect each party's intellectual property rights being executed. A concentrated master batch using the Japanese company's raw polypropylene in which 38% by weight of Eden's carbon nanotubes were dispersed of was then prepared in Australia and sent back to Japan for testing by the Japanese company.

ISRAEL

- Argil Group, the same company has purchased the initial EdenCrete® order in Israel, has also expressed interest EdenPlast® and discussions have commenced.

NEW EDENPLAST® RESEARCH GRANT

Eden and University of Queensland awarded Fifth Consecutive Collaborative Research Grant by the Australian Research Council

During the quarter the Australian Research Council ("ARC") awarded Eden and the University of Queensland ("UQ") a fifth consecutive ARC Linkage Research Grant worth A\$376,518, payable over three years, to help fund the development on a new production method of carbon nanotube ("CNT") enriched thermoplastic composites.

Both Eden and UQ will also contribute to the total cost of the project. These ARC linkage research grants are highly sought after and the process is extremely competitive.

The new project aims to develop a method to produce novel drawn polymer fibres incorporating aligned carbon nanotubes within the polymer. Such polymer fibres will show significant directional strength and stiffness and can themselves be used for reinforcing thermoplastics to make high performance, “smart”, composites. There will specifically be focus on recyclability of the CNT reinforced fibres.

This development could have significant commercial and environmental benefits as existing thermosetting composites are not readily recyclable and require high levels (>30%) of reinforcing fibres.

The targeted outcomes of this project, if successful, will be a novel technology for making high strength and stiffness polymer fibres reinforced with Eden’s CNTs, expanding their potential use in thermoplastic composites. These new polymer fibres could also enable down-sizing of high-volume products that may well be suitable for use in high value automotive or aerospace products.

HYDROGEN

During the quarter Eden was approached by a several companies relating to possible collaborations involving Eden’s hydrogen capabilities. Preliminary talks have occurred but to date none have been progressed. However, Eden remains open to considering such a collaboration, provided that it will not compromise Eden’s existing technologies or other operations in any way.

Eden’s Hydrogen Background

Whilst focusing heavily on hydrogen related activities between 2004 and 2012, Eden built, and still retains, a strong hydrogen technology base (comprising significant know how, techniques, designs and eight relevant patents).

This includes Eden’s patented pyrolysis process for production of hydrogen and carbon nanotubes/carbon nanofibres from natural gas (without producing carbon dioxide as a by-product), a patented blender for blending hydrogen and natural gas to create a highly efficient, low emission blend called Hythane® which Eden promoted for a number of years, particularly in India, and a patented hydrogen fuelled, internal combustion engine.

During this period, Eden built a hydrogen electrolyser and an operating Hythane® station for Indian Oil near the Delhi airport (and which was still operating until 2018), and developed Hythane® bus engines with Ashok Leyland, the largest Indian bus manufacturer. Eden was also at that time working on joint ventures with various Indian natural gas suppliers to establish a number of Hythane® bus trials in various parts of India, but interest in hydrogen as a fuel started to wane after 2008, when US policy moved away from hydrogen as a vehicle fuel to electric vehicles. As a result, none of these early developments in India progressed beyond the development and planning stages.

Over the past couple of years however, around the world there has been a growing increase in the level of interest in hydrogen as a fuel, in large part being driven by concern about climate change, which in turn has resulted in increased interest in Eden’s hydrogen technologies. Additionally, in India, extreme air pollution in Delhi and other cities is causing great concern, which has resulted in the Indian Supreme Court

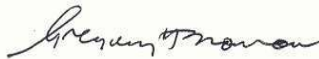
having mandated that the 10,000 strong, natural gas fuelled bus fleet in Delhi, be converted to run on a hydrogen-based fuel, that in the short term is focusing on converting these buses to operate on Hythane®.

This has again resulted in enquiries being received in relation to Eden's various hydrogen capabilities. Similarly, in Australia, the Federal Government in 2018 allocated funds for research into the production of "clean hydrogen", opening a further area of possible interest for Eden for its now commercialised, pyrolysis process that produces, with a very low Greenhouse Gas footprint, both relatively low-cost hydrogen and high value carbon nanotubes or carbon nanofibres.

CORPORATE

Additional finance arranged

- During the quarter, Eden successfully completed a placement raising A\$5 million before costs through the issue of ordinary shares at A\$0.026 with one free attaching placement option exercisable at 5 cents on or before 11 December 2022.
- Additionally, Eden entered into a backstop financing facility ("the backstop facility") for up to an additional A\$7.2 million and received shareholder approval of the backstop facility at Eden's annual general meeting that was held in November 2020.



Gregory H Solomon

Executive Chairman

This report was authorised by the above signatory.

For further information please contact Aaron Gates on +61 8 9282 5889.

Description of Payments to related parties of the entity and their associates (LR 5.3.5)

Payments to related parties during the quarter related to:

1. Directors Fees
2. Management Fees, as per agreement, were paid during the quarter to a company of which Mr GH Solomon and Mr DH Solomon are directors; and
3. Legal Fees and disbursements were paid during the quarter to a firm of which Mr GH Solomon and Mr DH Solomon are partners.