



# Annual Review

—  
2017



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# Welcome

2017 has been a transformative year for SMEC, one that has seen us enhance our position as a global player in the consultancy world, develop key partnerships and record strong financial results with substantial work in hand.

I am very proud to have been appointed CEO SMEC and CEO International Surbana Jurong Group, and look forward to providing leadership and guidance during this time of growth and opportunity.

In August 2017, we celebrated one year of our successful partnership with Surbana Jurong Group, a significant milestone which has seen the Company grow and diversify, strengthening our capabilities, expertise and geographic reach. Surbana Jurong Group is a global leader in urban, industrial and infrastructure consulting, based in Singapore. As well as bolstering SMEC's international presence, the strengths of our new partnership lie in our combined infrastructure and urban renewal offering and access to additional capital, resources and expertise.

In March 2017, we strengthened our presence in northern Australia through the acquisition of PDR Engineers (PDR), a professional consultancy firm based in Cairns, Queensland. Established in 1999, PDR has a reputation for delivering technically challenging projects and has broad experience across a range of industry sectors.

In November 2017, our parent company Surbana Jurong Group acquired Brisbane based Robert Bird Group (RBG), recognised as one of the top structural, civil and construction engineering firms in Australia, and internationally. We are excited about the opportunities this new partnership provides, as working alongside our sister-company RBG and parent-company Surbana Jurong, we can now offer specialist urban development expertise to our clients.

Throughout the year we continued to build on our successful partnership with Oriental Consultants Global Co. Ltd in South Asia and Asia Pacific by signing a Memorandum of Understanding to extend our partnership into the South American region. This supports our strategic growth in South America and aligns with our broader strategy of developing partnerships to provide clients with enhanced project management benefits and global consultancy services.

Our strategic growth has also provided new and exciting opportunities for our people, and we continue to invest in our people and their development. Our employees enjoy a consistent flow of significant projects, end-to-end responsibilities and are motivated by meaningful work. Nurturing talent and encouraging personal and professional development is critical to our future success. Every employee plays a key role in shaping our business and we are committed to providing platforms to enable our people to drive innovation, deliver value to clients and develop their careers through hands on experience.

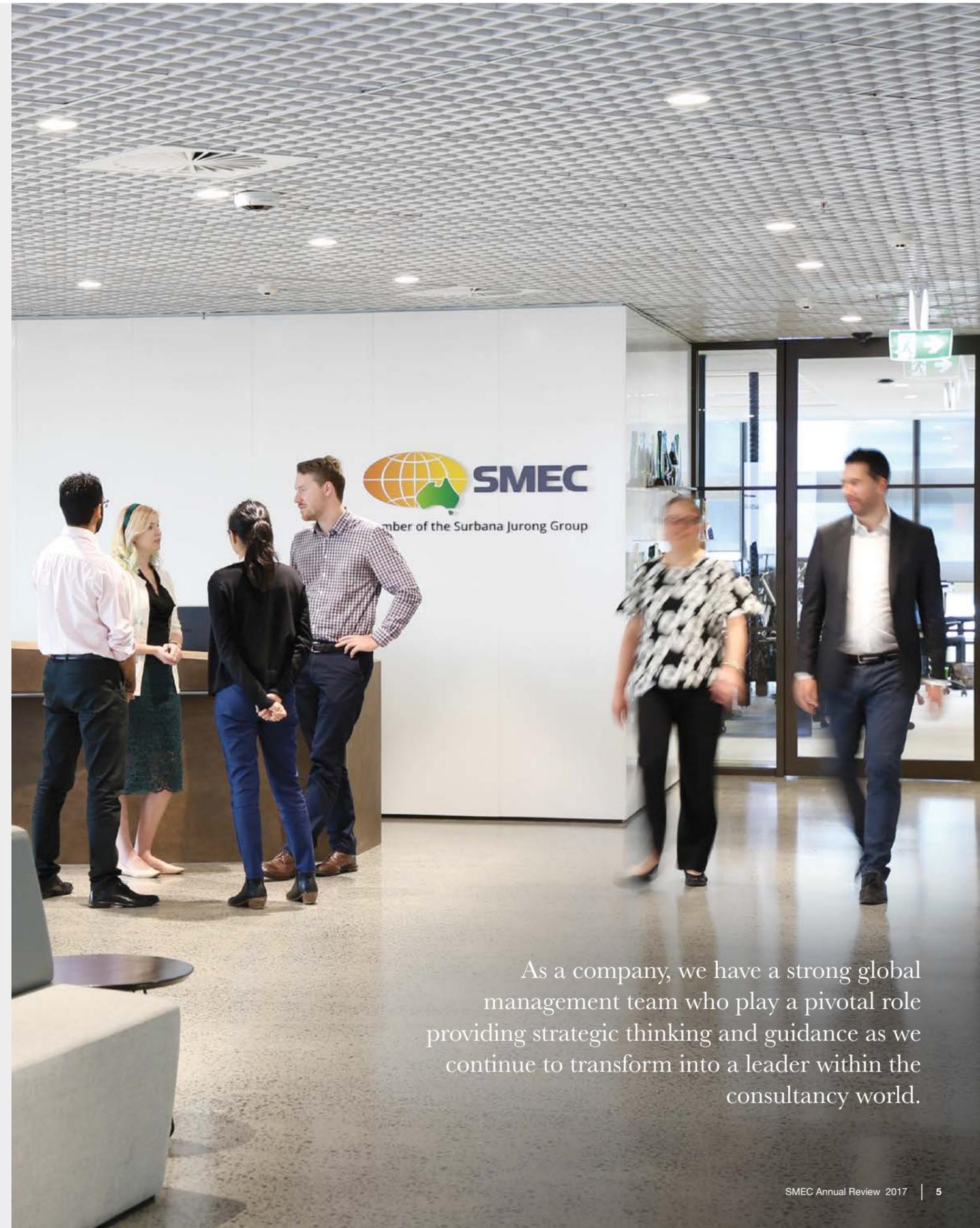
Diversity remains a key business priority, and driving change in this area is something that I am particularly passionate about. Having a pool of different skills, talents and ways of thinking, enhances our innovative culture and allow us to adapt and better meet our client's needs. As a company, we continue to implement a broad range of diversity and inclusion initiatives across the organisation, and have a Diversity and Inclusion Committee in place to drive progress across all business groups and functions.

In Australia, we continue our commitment to create opportunities for Australia's indigenous population. In January 2017, SMEC's Reconciliation Action Plan was endorsed by Reconciliation Australia, an independent, not-for-profit organisation that partners with workplaces to promote indigenous reconciliation. As part of our commitment to create opportunities for Aboriginal and Torres Strait Islander peoples, we selected three Aboriginal and Torres Strait Islander charities to receive funding for 2017. Globally, we restructured our CSR program to focus on localised funding to ensure effectiveness and alignment with local communities and partners. Our Divisional CSR Committees are integral in ensuring that projects are appropriately selected and delivered in accordance with SMEC's business integrity policies. Throughout the year, small-scale grant support was provided for sustainable community development, emergency relief, health and education projects worldwide. In addition, SMEC employees participated in many inspiring activities around the world, underpinning our commitment to community development.

Our journey of transformation is now well underway. SMEC's traditional design capabilities have been complemented by an increase of planning and development opportunities made possible by the expertise of Surbana Jurong; and with our growing portfolio of partners, we look forward to delivering more advanced and innovative solutions for our clients and communities. As CEO, I will work closely with SMEC's global management team, providing strong guidance to drive our business forward and achieve further success for our clients, our organisation and our people.



**Hari Poologasundram**  
– CEO SMEC &  
CEO International Surbana Jurong



As a company, we have a strong global management team who play a pivotal role providing strategic thinking and guidance as we continue to transform into a leader within the consultancy world.

# The Board

The SMEC Board is responsible for formulating SMEC's strategic direction and maintaining corporate governance.

Following the acquisition of SMEC by Surbana Jurong, we welcomed four members of the Surbana Jurong Group to the SMEC Board: Mr Wong Heang Fine, Mr Teo Eng Cheong, Mr Loh Yan Hui and Mr Daniel Teo. The coming together of senior leadership from both organisations brings a diverse range of experience and expertise to the SMEC Board and will help to guide SMEC's strategic direction as we move forward on our journey of growth.

## ↓ Chairman

**Max Findlay**  
*BEC, FAICD*



Max was appointed Chairman of SMEC in 2016, after serving as Deputy Chairman since 2014, and Non-Executive Director since 2010. Max serves on the Boards of several organisations including the Royal Children's Hospital and listed company Skilled Group Ltd. Max holds a Bachelor of Economics (Politics) from Monash University and a Postgraduate Qualification in Accounting from Swinburne University. Max is a Fellow of the Australian Institute of Company Directors.



**Hari Poologasundram**  
– CEO SMEC &  
CEO International Surbana Jurong  
*MSc (Civil Eng), BSc(Civil)*

Hari was appointed Chief Executive Officer of SMEC in 2018, after serving as CEO of SMEC's Australian and New Zealand (ANZ) operations since 2017. Prior to this Hari held the role of Chief Operating Officer, ANZ, and under his astute guidance and leadership, has driven the performance and strategic growth of SMEC's ANZ operations. Hari has 30 years' experience in the planning, design and management of infrastructure projects and 15 years' operational management experience.



**Daniel Teo Thiam Guan**  
– Group Chief Financial Officer  
*BSc(Accounting), MBA*

Daniel is Group Chief Financial Officer of Surbana Jurong Private Limited. He was appointed to the SMEC Board following the acquisition of SMEC by Surbana Jurong in 2016. Daniel is a commercially focused Finance Executive with 25 years' experience in operational management, reporting, controls, treasury, pricing, mergers, restructuring of operations, tax & transfer pricing, and negotiations at country, regional and global levels.



**Wong Heang Fine**  
– Group CEO of Surbana Jurong Private Limited  
*BSc(Eng Mech), MSc(Eng)*

Mr WONG Heang Fine is Group CEO of Surbana Jurong Private Limited and was appointed to the SMEC Board in 2016 following the acquisition of SMEC by Surbana Jurong. He is also Chairman of Sino-Sun Architects & Engineers, as well as Director of AETOS Holdings Pte Ltd. Heang Fine has held many key leadership positions across a number of industries over the last 35 years. Most recently, he was the CEO of CapitalLand Singapore Limited (Residential) and CapitalLand GCC Holdings.



**LOH Yan Hui**  
– Deputy CEO, Infrastructure  
*MSc(Civil)*

Yan Hui was appointed to the SMEC Board in 2016 following the acquisition of SMEC by Surbana Jurong. Yan Hui has more than 36 years' experience in the infrastructure industry. He currently serves as a Department Consultative Committee Member of National University of Singapore's Department of Civil & Environmental Engineering.



**TEO Eng Cheong**  
– CEO International  
*BSc(Economics), MSc(Economics)*

Eng Cheong was appointed to the SMEC Board in 2016 following the acquisition of SMEC by Surbana Jurong. Before joining the private sector, Eng Cheong was a senior government official with the Singapore Administrative Service, and has previously held several leadership positions in the Singapore Government.

## The Executive Committee



**Hari Poologasundram**  
– CEO SMEC & CEO International Surbana Jurong

Hari was appointed CEO SMEC and CEO International Surbana Jurong in 2018 after serving as CEO of SMEC's Australian and New Zealand operations since 2017. Prior to this Hari held the role of Chief Operating Officer since 2012. Hari has 30 years' experience in the planning, design and management of infrastructure projects and 15 years' operational management experience.



**Angus Macpherson**  
– Director of Operations

Angus joined SMEC in 1993 and was appointed Director of Operations in 2017 after serving as Director of Corporate Affairs since 2010. Angus is also a member of the SMEC Foundation Board and has over 20 years' experience in the management of large multidisciplinary projects.



**Tom Marshall**  
– COO Africa

Tom joined SMEC in 2012 as Chief Operating Officer Africa and has over 30 years' experience in civil engineering design, construction supervision and management of multidisciplinary engineering teams throughout Southern Africa. Tom joined SMEC's Executive Committee in 2012 with the addition of Vela VKE to the SMEC Group.



**Dr Uma Maheswaran**  
– COO South Asia Middle East

Dr Uma was appointed Chief Operating Officer South Asia Middle East in 2016, having previously held the role of CEO and Managing Director, India for the Surbana Jurong Group. Dr Uma has over 10 years' management experience across large scale organisations.



**George Lasek**  
– COO Americas

George joined SMEC in 2011, and was appointed Chief Operating Officer Americas in 2017 after serving as COO South Asia Middle East since 2015. George has over 30 years' experience in both the private and public sectors and has proven ability to operate at operational and strategic levels within complex business environments.



**Allan Teo**  
– COO South East Asia

Allan was appointed as Chief Operating Officer for the Southeast Asia Division in 2018. Allan has close to 30 years of experience in both domestic and international architectural / engineering consultancy business. His area of expertise is in the design and execution of large-scale multidisciplinary complex projects.



**Thomas Hynes**  
– COO Asset Management

Thomas joined SMEC in February 2010 and was appointed Chief Operating Officer Asset Management (Global) in 2017. Tom has over 25 years' experience leading and managing consulting businesses for the delivery of Asset Management services.



**Andy Atkin**  
– Financial Controller Surbana Jurong Group

Andy joined SMEC in 2007 as General Manager Finance for the SMEC Group. In February 2017 Andy relocated to Singapore to become the Global Group Financial Controller of SMEC's parent company, the Surbana Jurong Group.



“SMEC has embarked on a path of strategic growth in recent years and we have cemented our reputation in market. We are consistently recognised for project delivery, technical excellence and design innovation by the world's leading engineering bodies and are proud to be listed among the world's top design firms.

Through our innovation hubs we continue to enhance our digital engineering capabilities and bring emerging technologies into the engineering space, while remaining a major player and trusted partner on large complex projects.

Collaborating with frontier technology companies we apply smart thinking and new technologies to deliver better solutions to our clients and partners.”

TOM MARSHALL  
COO Africa

## Our Company

From origins on the Snowy Mountains Scheme, SMEC has grown into a company with a worldwide presence, combining global experience with local expertise to deliver engineering excellence and design innovation to our clients.

SMEC continues to transform into a leader within the consultancy world. Our traditional design expertise has been complemented by an increased focus on planning and development opportunities made possible by the capabilities of our parent company Surbana Jurong Group, a global leader in urban, industrial and infrastructure consulting. Drawing on the capabilities from across the Surbana Jurong Group of companies, we provide specialist expertise either independently or as combined entities.

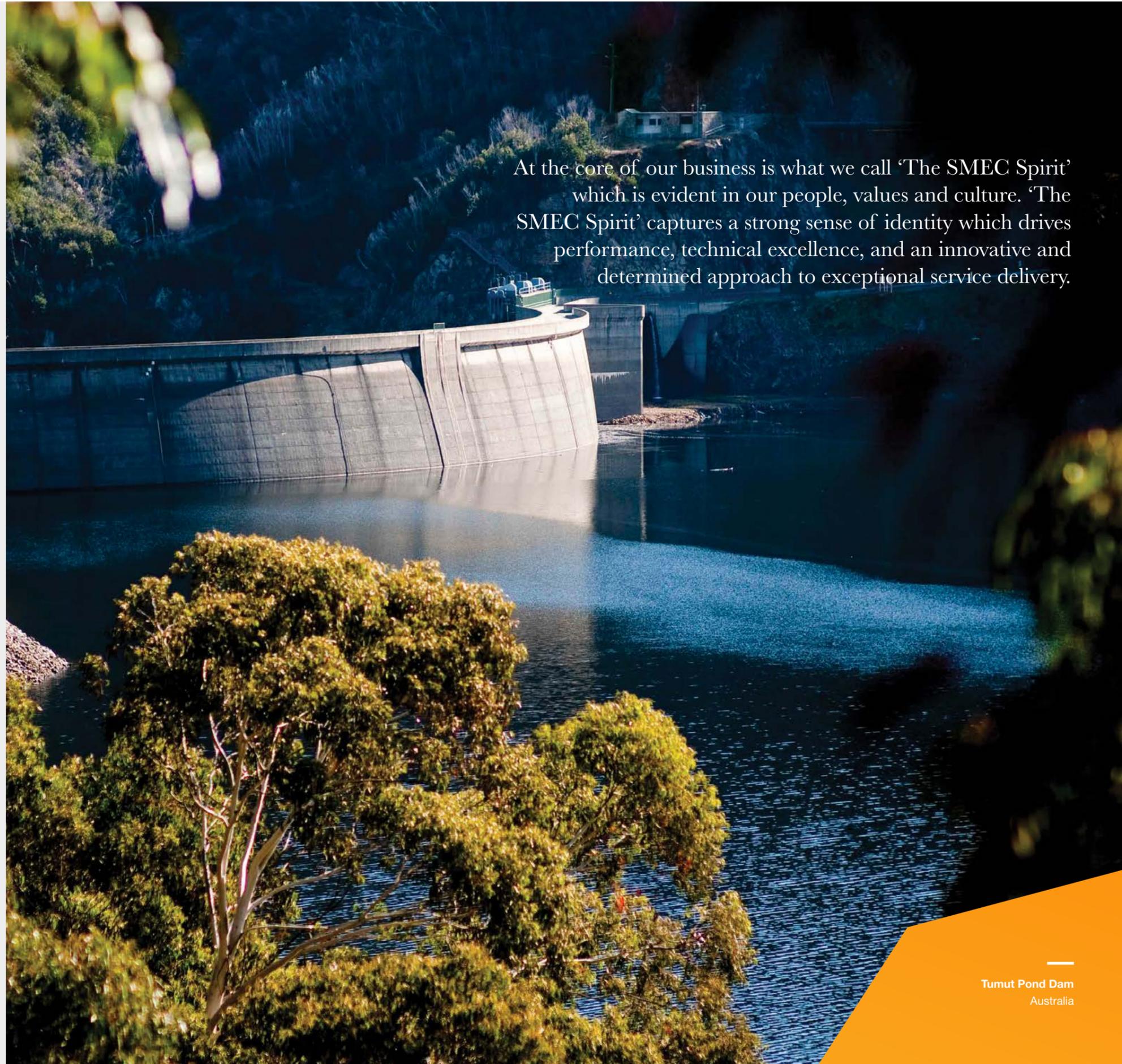
As part of the Surbana Jurong Group, SMEC has a global work force of over 13,500 people across more than 40 countries. With natural synergies across our organisations, we have developed a workplace culture that focuses on the development of our people and the provision of enhanced growth opportunities.

As growth remains a key focus for SMEC, we have redefined our traditional service offering and embraced emerging technologies to provide a complete value chain of services cross the fields of urban development, infrastructure and management services. From masterplanning, architectural design and construction engineering through to security, asset management and smart city solutions, we continue to strengthen our capabilities to deliver sustainable solutions to our clients.

Aligning global expertise with local knowledge, we deliver sustainable and holistic solutions and add value to projects around the world. Our integrated services contribute to national development in some of the world's fastest growing economies, and since our formation, we have delivered thousands of projects in over 100 countries.

SMEC's journey of growth is only beginning, and we look forward to developing further opportunities to better support our clients and cementing our reputation as a leading global consultancy.

At the core of our business is what we call 'The SMEC Spirit' which is evident in our people, values and culture. 'The SMEC Spirit' captures a strong sense of identity which drives performance, technical excellence, and an innovative and determined approach to exceptional service delivery.



Tumut Pond Dam  
Australia

In August 2017, we celebrated one year of our successful partnership with Surbana Jurong Group.

Signaling a new era for SMEC, this partnership has not only benefitted our clients, but has provided enhanced growth opportunities for our employees and our partners.

We have combined our expertise to promote stronger capabilities and explore business opportunities across new sectors and geographies. We have delivered a number of joint opportunities around the world, helping our clients to solve complex challenges in rapidly changing markets.

In November 2017, Surbana Jurong Group acquired Robert Bird Group (RBG), one of the top structural, civil and construction

engineering firms in Australia, and internationally. Established in 1982, RBG has niche capabilities in the high-end urban development sector. We look forward to realising synergies across all three companies and can now offer specialist urban development expertise either independently or as a combined entity.

SMEC and Surbana Jurong are on a path to accelerated growth, and we will work together as we continue to enter new markets, broaden our service portfolio, and offer more effective solutions across urban and infrastructure developments worldwide.

## ↓ Building the framework for strategic growth



To help develop Townsville, Queensland, Australia into a vibrant, smart and connected hub, Surbana Jurong has signed a Memorandum of Cooperation (MOC) with the City of Townsville. Under the MOC, Surbana Jurong will collaborate with the City of Townsville on economic, community and social innovation focused initiatives, including providing consultancy on the digitisation of Townsville and growing aviation links to Singapore, in an effort to boost regional growth.



Surbana Jurong signed a partnership with Safdie Architects forming Safdie Surbana Jurong (SSJ), to jointly pursue major design projects within Asia Pacific. Safdie Architects is world-renowned for their cutting-edge designs that embrace an inclusive and humane design philosophy. Through this collaboration, Surbana Jurong will be able to provide world-class design and expert project delivery to a broad array of clients in Asia.

## ↓ Recent Projects



### Innovation and Knowledge City, Benin

The Government of Benin is planning to develop an Innovation and Knowledge City on approximately 140 hectares in the Municipality of Seme-Podji, a strategic location at the junction between Cotonou, Porto Novo and the road to Nigeria. The City will host three main functions: higher education and professional training; research and development; and incubators. Supporting facilities, such as residential and public facilities will also be provided to ensure the development will have a “Work-Live-Play-Learn” environment. SMEC and Surbana Jurong combined their specialist expertise to develop the Master Plan and Implementation Plan.



### Kaloum Master Plan, Guinea

The Surbana Jurong Group has been awarded an urban redevelopment and design contract in Guinea, by the Singapore Cooperation Enterprise (SCE). SMEC and Surbana Jurong will assist the SCE to prepare a Master Plan for the government to redevelop Kaloum, the city centre of Conakry, Guinea's capital city. Conakry is the largest city in Guinea with an estimated population of approximately two million people. Scope of work includes positioning, visioning and programming, urban redevelopment planning, urban design and implementation planning.

### Vehicle Free Zone in Kigali, Rwanda

The Surbana Jurong Group is providing detailed design and construction supervision of a vehicle-free zone in the capital city of Rwanda. The 550 m long and 18 m wide pedestrian corridor is located on KN 4 Avenue, a key road in the city's Central Business District. Named Imbuga-City Walk, it is expected to transform the area into a vibrant open public space. Scope of work includes detailed design of infrastructure, architecture and landscape components, drafting bill of quantities and construction supervision of works.

### Changi Airport Terminal 5, Singapore

Terminal 5 is part of the larger Changi East development project that includes a three-runway system, as well as the development of cargo complexes and other supporting aviation and ground transport infrastructure. The project will provide Changi Airport with additional capacity of up to 50 million passenger movements per annum in its initial phase and 100 more aircraft stands. Surbana Jurong, with Arup and Mott MacDonald will undertake the engineering works, while DP Architects will provide design services for commercial spaces within the terminal.



Pacaltsdorp Pedestrian Bridge  
South Africa

“SMEC has been incredibly innovative utilising a frontier technology like ours. You’re bold to explore the development of this tool as both a client and a partner.”

ANN NOLAN

Snobal - Leader in Virtual Reality Tools for Design, Engineering & Construction

### Increased ENR Global Design Firm Rankings

SMEC, as part of the Surbana Jurong Group, has significantly increased its rankings in the Engineering News Record (ENR) Magazine’s 2017 annual design lists. The Group is ranked at number 35 in the ‘2017 Top 225 International Design Firms’ list, up 13 places and at number 45 in the ‘2017 Top 150 Global Design Firms’, an increase of 24 places.

### Oscars of South African Business

SMEC South Africa took home the prestigious Infrastructure Development Award at the 15th annual National Business Awards in November. Renowned as the Oscars of South African business, these awards showcase the achievements of those at the forefront of South Africa’s economy.

### Construction Industry Business Excellence Awards

For the second year in a row, SMEC South Africa received the Top Engineering Consultant Award in three categories: Civil Consulting Engineers; Structural Consulting Engineers; and Combined Civil & Structural Consulting Engineers.

### Institute of Civil Engineering (SAICE) Annual Awards

SMEC South Africa won the Technical Division: Structural Engineering Award for the Pacaltsdorp Pedestrian Bridge Project at the SAICE Annual Awards in Johannesburg. SMEC also received a commendation for the Senqu River Bridge Project in the category Most Outstanding Civil Engineering Achievement – Community Based Project.

### Excellence and Innovation in Concrete

SMEC South Africa took home two awards at the recent Fulton Awards which celebrate excellence and innovation in the design and use of concrete within the Urban Development. Mount Edgecombe Interchange was named the overall winner in the Infrastructure Category, while Pacaltsdorp Pedestrian Bridge was awarded a Commendation for Innovation in Concrete.

### Success at Consult Australia Awards

SMEC was awarded the 2017 Consult Australia Award for Project Team Collaboration for work on the M80 Ring Road Upgrade in Melbourne. This award recognises exemplary collaboration initiatives between a member firm and its client.

### Commitment to Australian Trade and Investment

Surbana Jurong was recently honoured with an Australia Business Alliance Award. The Australian Chamber of Commerce, Singapore (AustCham) presented Surbana Jurong with an award to recognise the Company’s significant commitment to Australian trade and investment.

### Singapore Institute of Planners Planning Awards

Surbana Jurong picked up five awards in four categories at the Singapore Institute of Planners Planning Awards. Surbana Jurong took top spot in three categories: Best Project for Resilient Planning, Best Planning Project and Best Urban Design Project.

# Corporate Social Responsibility

At SMEC, we drive a culture of sustainability and environmental awareness in all functional, operational and regional areas of the business and are committed to making a difference in the communities that we work.

Our Corporate Social Responsibility (CSR) framework has three key focus areas; People; Community; and Sustainability and Environment. Under this framework we aim to create an inclusive workplace for our people, support community and charitable programs, and eliminate or minimise any potential adverse impacts that our activities may have on the environment. We have introduced Divisional CSR Committees to provide a mechanism where employees at all levels can participate in delivering the company's CSR program, and see each Division administer program activities in their respective areas, providing a localised approach to all CSR initiatives.

The SMEC Foundation, a key component of our CSR Program, provides small-scale grant support to development projects, communities and charities around the world.

Our employees, working alongside the SMEC Foundation, are making a real impact in providing vital support to communities at grassroots level. Our guiding philosophy is that small amounts, spent wisely, can produce far-reaching social and economic impacts. This straightforward, homespun approach ensures that SMEC and our employees will continue to achieve results that really make a difference.

This year we continued to engage in development programs in communities where SMEC employees live and work.

## ↓ SMEC Foundation highlights

### Buguruni School for the Deaf, Tanzania

The SMEC Foundation partnered with Buguruni School for the Deaf in Tanzania to rehabilitate and improve basic facilities at the school, including rehabilitating the water supply system to ensure a clean and safe source of drinking water.

### Beit Cure Hospital, Zambia

The SMEC Foundation donated a blood bank refrigerator to Beit Cure Hospital in Lusaka, Zambia. Beit Cure Hospital is a paediatric teaching hospital specialising in the treatment and care of children living with physical disabilities.

### Emergency Relief, Sri Lanka

The SMEC Foundation in collaboration with SMEC's Divisional CSR Committee supported families affected by the recent flooding in Sri Lanka which left half a million people displaced. With the help of the Disaster Management Centre, SMEC chose to support Eheliyagoda Divisional Secretariat and provided donations to approximately 100 families affected by the disaster.

### Orangutan Rehabilitation Centre, Indonesia

The SMEC Foundation donated A\$25,000 for replanting six hectares of tropical rainforest that were lost at the Samboja Lestari orangutan rehabilitation centre during major forest fires in 2015. The Samboja Lestari sanctuary, one of Indonesia's most renowned orangutan rehabilitation and rescue centres, provides a safe haven for orangutans to learn essential survival skills prior to being released back into their natural environment.



“We have strengthened our processes around compliance to ensure that The SMEC Foundation and the agencies that we partner with adhere to the highest standards of integrity. Most importantly, this is to ensure that The SMEC Foundation funds go to the communities who need it most.”

ROGER BAYLISS  
Chairman, SMEC Foundation

a. Low Income Housing, Water & Education, Vietnam b. Welcome to Country Ceremony, Australia c. Buguruni School for the Deaf, Tanzania →



# Our People

SMEC is committed to making a positive difference in the communities that we work. This outlook encourages the involvement of our people, who throughout the year participated in many inspiring activities around the world, underpinning our commitment to personal, professional and community development.

## Recent activities

Inspired by a nine-year-old boy, who started shoe collecting initiative Sole2Sole, SMEC's Johannesburg office ran an eight-week shoe collection drive, collecting over 530 pairs of shoes for donation to those less fortunate. This contribution has taken Sole2Sole's shoe tally to over 10,000 pairs in just six months.

To celebrate International Womens Day 2018, SMEC employees participated in a Homes of Hope initiative led by Habitat for Humanity International. The SMEC team helped to brighten the lives of women and their families escaping long-term homelessness by building and refurbishing accommodation.

In Tanzania, over 50 SMEC employees and family members participated in Rotary Dar Marathon 2017. Rotary Dar Marathon helps to raise funds for the Comprehensive Community Based Rehabilitation in Tanzania, a health care organisation which works to prevent disability and provide affordable medical and rehabilitative services.

SMEC Johannesburg recently launched its Young Professionals Program. Designed by our young talent for our young talent, the Program gives SMEC's young professionals the opportunity to spend time with internal and external leaders and learn new skills in an environment that fosters innovation and high performance.

A number of our female engineers from SMEC's Sydney office participated in a Women in Engineering STEM careers workshop for high school girls held at Western Sydney University. The day provided a great opportunity to help encourage young females to learn more about the industry and consider a career in engineering.

In South Africa, SMEC hosted Grade 11 and 12 pupils as part of a job shadow initiative, giving pupils an insight into life as an engineer. The pupils had the opportunity to interact with various function groups and view the office's innovation room where they were shown 3-D models of infrastructure designs.

In Bangladehs, SMEC provided funding to Global One Bangladesh, a UK Charity organisation providing medical and relief operations for the Rohingya refugees. Over 200 families living in refugee camps located in Cox's Bazar in Bangladesh were provided with food items and blankets.

Employees from SMEC's Brisbane office participated in the inaugural 'DO A TREK for AUTISM' event in October. For over 11 hours, more than 30 trekkers from the Brisbane engineering community walked 42 km to help raise almost \$25,000 for the AEIOU Foundation for children with autism.

In the Philippines, SMEC employees generously volunteered their time to plant 400 seedlings of guayabano (soursop tree) at the La Mesa Watershed Reservation, a protected area and the primary source of potable drinking water for more than 12 million residents in Metro Manila.

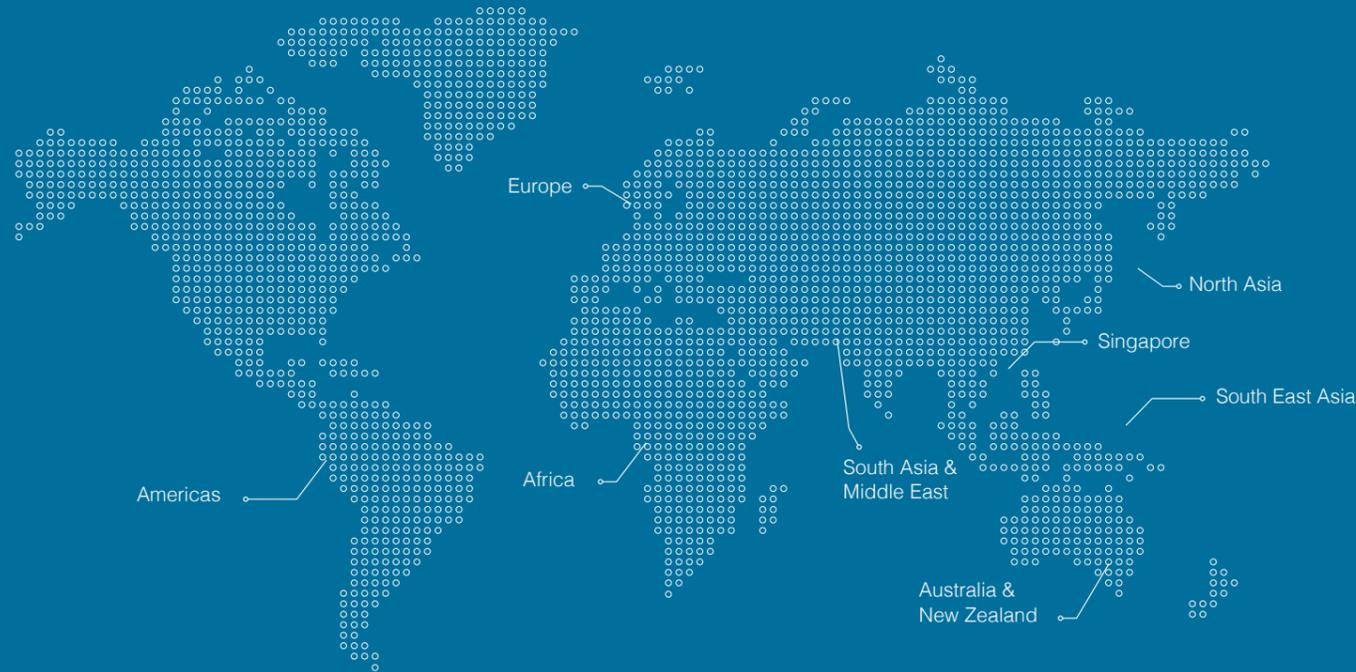
“So They Can’s connection with SMEC employees in Kenya has added so much extra value to the donations from the SMEC Foundation.

The involvement of SMEC employees has enabled us to tap into some excellent technical expertise when undertaking our development projects.

SMEC understands the needs of our community and it gives us great comfort to know that SMEC is a trustworthy partner we can call on for technical advice when needed.”

KERI CHITTENDEN  
Co-Founder and Director So They Can

# Where We Operate



“We are committed to meeting high standards of governance, safety and performance and have a zero-tolerance policy against fraud and corruption.

We are continually enhancing our governance and compliance systems and strengthening our compliance culture through ongoing training and development.”

ANGUS MACPHERSON  
Director of Operations

## Our Global Footprint

**40+** Countries  
**120+** Offices  
**13,500+** Employees

### Africa

Ethiopia  
Ghana  
Kenya  
Malawi  
Morocco  
Mozambique  
Namibia  
Nigeria  
Rwanda  
Sierra Leone  
South Africa  
South Sudan  
Swaziland  
Tanzania  
Uganda  
Zambia

### East Asia

China  
Hong Kong  
Mongolia

### West & Central Asia

Afghanistan  
Kazakhstan  
Kuwait  
Pakistan  
Qatar  
United Arab Emirates

### South & Southeast Asia

Bangladesh  
Brunei  
Cambodia  
India  
Indonesia  
Malaysia  
Myanmar  
Nepal  
The Philippines  
Singapore  
Vietnam

### Americas

Canada  
Chile  
Mexico  
United States

### Oceania

Australia  
New Zealand  
Papua New Guinea

### Europe

United Kingdom

# What We Do

We draw on the skills and experience from across the Surbana Jurong Group of companies to offer enhanced capabilities and reach, delivering a complete value chain of services across urban development, infrastructure and management services.

Aligning global expertise with local knowledge, we deliver sustainable and holistic solutions and add value to projects around the world.

## Urban Development

We have developed a fully integrated advisory services model to create, plan, deliver and manage urban development projects from concept to completion.

## Infrastructure

We are recognised for delivering service excellence across major infrastructure projects, with experience covering the fields of transport and logistics, water and environment and energy and resources.

## Management Services

We have developed a suite of management services which covers the fields of facilities, development, project and asset management; Building Information Modelling; security; smart city solutions; and social, governance and advisory services.



Photo credit: Jamie Thom

## Urban Development

In partnership with Surbana Jurong Group, we deliver a fully integrated advisory services model; creating, planning, delivering and managing urban development projects from concept to completion.

With expertise in civil, structural and building services engineering design, we provide solutions for residential, commercial, industrial, healthcare and hospitality building projects around the world. Our experience extends from low density urban land developments, through to high density high rise projects for government and private sector clients.

Our global team of planners, designers, architects, engineers and technical specialists, work collaboratively to provide a holistic design approach and facilitate a tailored solution for each project.

We are excited to partner with our sister company Robert Bird Group, recognised as one of the top structural, civil and construction engineering firms in Australia, and internationally, to supply high-end, complex urban development services and look forward to the opportunities this new partnership provides for our clients.

Looking ahead, we will continue to strengthen our already established capabilities and enhancing our services offering in the urban development space.

“We would like to compliment the full project team for their professionalism, commitment and effort in meeting and achieving the various project deliverables and milestones. The team has established a high benchmark in the quality of service delivered.”

CITY OF CAPE TOWN  
IRT Phase 2A West





Upon completion, Sibaya Coastal Precinct will become an urban space integrated with the natural environment, and will include hotels, offices, retail space, restaurants, educational institutions and residential developments.

## Sibaya Coastal Precinct

– KwaZulu-Natal South Africa

The new Sibaya Coastal Precinct is a mixed use development on the north coast of Durban occupying approximately 1,000 hectares of coastal landscape.

Anticipated to be a vibrant community that will enhance the area, a strong emphasis is placed on synergy with the environment with a coastal dune forest conservancy, wetland rehabilitation and 75 km of paths, boardwalks and trails planned within the development.

The existing Sibaya Casino sits within the site and the development will include seven nodes. These nodes will be undertaken in a phased manner. New bulk services are being constructed that will service both the new and existing development.

SMEC was appointed by Tongaat Hulett Developments to develop engineering designs of the bulk services to the development. The bulk services comprise a new 700 mm diameter steel bulk water main, two new trunk sewer mains (355 m and 600 m respectively) and the upgrade of the existing Sibaya Sewer Pump Station. To complete the task, SMEC conducted water modelling for the development, including the demands from future developments in the area.

In addition, SMEC is providing a preliminary engineering services report, in order to complete an Environmental Impact Assessment for Node 4 and Sibaya Forest Reserve within the Sibaya Coastal Precinct.

Node 4 will consist of residential, mixed use residential, commercial and education facilities. SMEC will provide engineering design for the civil services, including roads, stormwater, sewer and water reticulation.

Sibaya Forest Conservation area is a section of one of the largest pristine dune forests in South Africa. As part of the development, the Sibaya Coastal Forest Trust has been established. Visitors will enjoy the forest by accessing boardwalks and trails and passive recreational activities will be allowed. In addition, a visitor centre and commercial activities may be included to ensure the sustainability of the Trust. SMEC is providing engineering input into the civil services such as water, sewer, stormwater and access.



← The development will be confined by the uMdloti estuary to the north, Umdloti and the ocean to the east, the uMhlanga estuary to the south and the N2 to the west.



a. Bhubaneswar Town Centre Project, India b. Warrally Estate, Australia c. Kabale Industrial Park Master Plan, Uganda

## Bhubaneswar Town Centre Project, India

Surbana Jurong Group is providing design services for the Bhubaneswar Town Centre Project located in Odisha, a state in east India. This is the first smart building project in Bhubaneswar and the first transit-oriented development project in the country. The project comprises residential, retail and leisure developments and builds upon the opportunities presented by the expansion of the city's main railway station by promoting transit and pedestrian oriented development. Surbana Jurong's design will blend contemporary and traditional temple architecture for which the city is known for.

## Industrial Park Master Plan, Uganda

SMEC is developing a Master Plan study for an Oil and Gas Industrial Park in Kabale, western Uganda. The Industrial Park is intended to form part of a new industrial city encompassing: an oil and gas refinery; energy, petrochemical and other strategic industries; an international airport; commercial and administrative areas; health and education facilities; residential neighbourhoods; public spaces; and green areas. The Industrial Park is seen as a major element of the Government of Uganda's 'Vision 2040', to transform Uganda from a rural to a modern, technology driven society within 30 years.

## Dress Circle South at Brookwater, Australia

Dress Circle South is a residential precinct within Brookwater development, located approximately 35 km from Brisbane's Central Business District. It is part of a Greg Norman Designed Championship Golf and Residential Community. Upon completion, Dress Circle will contain approximately 600 detached dwellings and a number of medium and high-density apartments and townhouses. The site is located on significantly undulating land and adjoins Brookwater Golf Course. To address this, a bulk earthworks strategy had to be developed which deals with the steep nature of the land, whilst creating allotments that can be practically built upon. SMEC is providing preliminary and detailed design and contract administration services.

## Warrally Estate, Australia

Warrally is Geelong's first and largest master planned community in the Armstrong Creek Growth Corridor. Located 45 minutes from Melbourne, the vision for Warrally is to create a modern and liveable community within a sustainable environment. Once completed, Warrally will encompass a network of communities that will deliver approximately 4,000 new residential dwellings centred around the concept of community living, comprising sports and recreation facilities, community centres, schools, commercial shopping strips and dining precincts. SMEC, as civil engineering and surveying consultant, is providing engineering, surveying, planning and urban design services.

## Claymore Urban Renewal, Australia

Claymore Urban Renewal area is owned by the NSW Land and Housing Corporation and presently has affordable housing that was predominately constructed during the early 1980's. SMEC was engaged to develop a more efficient master plan incorporating current best practice design to achieve greater housing densities. This has allowed the NSW Government to bring more affordable housing to the market in line with their current housing strategy. Once complete, Claymore will be a fully integrated mixed community comprising housing, community parks and playgrounds.

## Offshore Supply Base Master Plan, Myanmar

Surbana Jurong Group is curating a master plan for a 400 acre Liquefied Natural Gas (LNG) Offshore Supply Base (OSB) in Mon State, Myanmar. The OSB will accommodate a 30 MW power plant, commercial port, ship repair and maintenance centre, ferry terminal and a 30 acre community village. In addition to the master plan, Surbana Jurong Group is providing infrastructure planning for OSB's waste and water management, a 6 km road connection and two bridges.

## Infrastructure

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SMEC has a long and proud history of delivering major infrastructure projects worldwide and is recognised for service excellence across the fields of transport and logistics, energy and resources, and water and environment.

We embrace emerging technologies and innovations including Virtual Reality for transport planning and design to deliver robust engineering services across the entire transport spectrum, comprising roads and highways, bridges and structures, rail and metro, and aviation and ports.

A global leader in the field of energy and resources, we provide specialist capabilities to hydroelectric schemes, renewable energy, dams, transmission and distribution networks, and thermal and geothermal projects, and deliver sustainable mining, oil and gas support services to our clients.

Our integrated water and environmental services have been applied to some of the largest water and environment projects around the world and include natural resource management, land use and coastal management, irrigation services and environmental planning and assessments.

We will continue to draw on the expertise of the Surbana Jurong Group of companies and invest in research, development and new technology to enhance our service offering and provide improved infrastructure developments to clients and communities worldwide.

“SMEC is a global leader in assessing large-scale infrastructure developments and have a track record stretching all the way back to the original Snowy Mountains Hydro-Electric Scheme.”

PATRICIA O'CALLAGHAN  
CEO Townsville Enterprise Limited

‘It’s great to be working on such an iconic hydropower project with Snowy Hydro that reflects on our namesake and history. For SMEC this is an opportunity to bring back our local people with global experience to contribute to the legacy for the next generation.’

HARI POOLOGASUNDRAM,  
CEO SMEC & CEO International Surbana Jurong

## Snowy Hydro 2.0

– Australia

In May 2017, Snowy Hydro engaged SMEC to undertake the Feasibility Study of the Snowy Mountains Hydroelectric Scheme Expansion Project (Snowy 2.0).

This is the first major expansion of the Scheme since its completion in 1974. The proposed project includes adding new pumped hydro capability between Tantangara Reservoir and Talbingo Reservoir, located in Kosciuszko National Park in New South Wales.

The objective of the proposed expansion is to increase the capacity of the Scheme to address current power shortages and help to stabilise electricity supply in the future.

The Scheme currently has a generating capacity of 4,100 MW and produces on average 4,500 GWh of clean renewable energy each year. The proposed expansion aims to increase the output by approximately 50 percent, providing an additional 2,000 MW to the National Electricity Market, covering the States of Queensland, New South Wales, Victoria and South Australia.

The proposed Snowy 2.0 will store water which can be used as energy during times of increased energy demand. At full capacity, Snowy 2.0 could store approximately 350,000 megawatt hours of energy, enough to power three million homes for over a week.

SMEC assisted Snowy Hydro with the engineering, project design and construction aspects of the feasibility study. This included designing 50 km of tunnels, the production of a 1,500 page project report and the development of 280 design drawings to a very tight timeframe.

In December 2017, Snowy Hydro released the Snowy 2.0 feasibility study which found that the project is both technically and financially feasible. SMEC will support Snowy Hydro in developing Owner’s Requirements and a reference design for the tendering process.



↑ June 2017

Australian Prime Minister Malcolm Turnbull being briefed in the original SMEC head office in Cooma.



↑ August 2017

Drilling commenced for the Snowy 2.0 project at Tantangara Reservoir.



a. Streamlining Hoddle Street, Australia b. La Nicolière Reservoir, Mauritius c. Bakun Hydroelectric Power Plant, Malaysia

## Streamlining Hoddle Street, Australia

This is the first stage of the planned transformation of Hoddle Street, which aims to improve the journey along and across one of Melbourne's busiest arterial roads for all road users. SMEC is preparing Concept and Detailed Engineering Design which includes implementing principles of Australia's first Continuous Flow Intersection where vehicles attempt to turn across the opposing direction of traffic to improve traffic efficiency. Given the uniqueness of this design solution, SMEC instigated the development of a Virtual Reality (VR) model at the Punt Road and Swan Street intersection. Interaction with the VR model has proven a great success for the project, allowing stakeholders to better understand the final design solutions before it is implemented.

## Padma Rail Link, Bangladesh

SMEC, ACE Consultants Ltd (a SMEC subsidiary) and STRATEGI Consulting Company Ltd, are providing Construction Supervision Consultancy Services for the Padma Bridge Rail Link Project in Bangladesh. This project will connect Dhaka, the capital of Bangladesh with the south-west of the country. The 215 km rail link will provide a substantially shorter travel route and is envisioned as a vital rail corridor, contributing to the country's economy through increased freight traffic. Scope of work includes implementation of the resettlement plan, detail design review, construction supervision and preparation of a progress report.

## Salang Corridor, Afghanistan

SMEC is undertaking a feasibility study and detailed engineering design for the rehabilitation and upgrade of the Salang Corridor, a major highway which connects the capital Kabul with north Afghanistan. The project aims to find an alternate route to the existing 2.7 km Salang Tunnel, the core of the corridor. Upon completion, the upgraded Salang Corridor will reduce travel costs as well as improve travel time and reliability for users. Chief Executive of Afghanistan, Dr. Abdullah Abdullah said "The rehabilitation of Salang will play a remarkable role in transport, regional transit, and connectivity of South Asia and Central Asia."

## La Nicolière Reservoir, Mauritius

SMEC is providing Consultancy Engineering Services for the expansion of La Nicolière Reservoir in Mauritius. Constructed in 1929, La Nicolière Reservoir is a very important storage water facility and one of the main sources of water supply to the northern districts of Mauritius. Water from the reservoir is used for domestic, industrial and irrigation purposes. SMEC is assessing options for raising La Nicolière Dam, which will necessitate upgrading of the feeder canal system, through a detailed technical and financial analysis.

## Solid Waste Management Study, Nigeria

The Kaduna State Water Board is trialling a Pilot Scheme to determine the viability of a broader Solid Waste Management Program in Zaria, Nigeria. SMEC has been engaged to ensure efficient design and management of solid waste management facilities, and appropriate processing and sanitary disposal of solid waste within the Pilot Scheme area. SMEC is providing an analysis of existing waste management services, a strategic framework design and community and stakeholder engagement. The objective of the Pilot Scheme is to ensure 100% success rate of solid waste management processes prior to an expanded rollout across Zaria.

## Bakun Hydroelectric Power Plant, Malaysia

SMEC is undertaking a prefeasibility study for Bakun Hydroelectric Power Plant located in central Sarawak, Malaysia. The aim of the study is to explore the possibilities of increasing the capacity of the existing 2,400 MW power plant, helping develop Sarawak's hydropower potential to deliver clean, safe and renewable energy. The scope of work includes reviewing current operations, assessing enhancements to the plant's capacity, evaluating the construction of an additional 300 MW power station, undertaking a risk assessment and cost estimation. This project is a continuation of SMEC's contribution towards the Sarawak Corridor of Renewable Energy initiative to develop the state's hydropower potential. SMEC previously provided consultancy services for the management and engineering audit of Bakun Hydropower Plant.

## Management Services

By drawing on the skills and expertise of the wider Surbana Jurong Group, we offer a portfolio of integrated management services to address the diverse needs of our clients.

### Asset Management

Our Asset Management services can be developed and incorporated at one or every stage of an asset's or project's life cycle, providing end-to-end asset management solutions.

### Building Information Modelling

By utilising Building Information Modelling (BIM) on our projects we can help reduce risk and re-work to provide better value to our clients.

### Project Management

We provide tailored project management solutions to address our client needs on all projects, regardless of complexity.

### Development Management

Our end-to-end development management services cover a range of industries, from education and healthcare, through to industrial, logistics and commercial.

### Facilities Management

We identify our client's objectives and create customised solutions to provide the best conditions for building owners and users.

### Security

We draw on the skills of AETOS Holdings Pte Ltd, part of the Surbana Jurong Group, to provide an integrated suite of safety and security capabilities.

### Smart City Solutions

In partnership with Surbana Jurong Group, we provide smart city solutions from the planning stage of a project right through to its implementation and management.

### Social, Governance and Advisory Services

These services generate economic wealth, contribute to national development and improve the quality of life within local communities.

“The SMEC team have consistently been professional, reliable and passionate towards the success of our projects.”

KEVIN FOSTER

Mainstream Renewable Power, South Africa





### Confidential client

– South America

One of the world's largest mining operators undertook a company-wide business transformation to establish common, efficient core processes across more than 100 operating assets.

This initiative included a copper mine in northern Chile, one of the world's largest producers of copper concentrate and cathodes.

SMEC was engaged to complete an assessment of several maintenance contracts, and identified improvements to deliver savings of more than two hundred million dollars over a period of eight years.

The assessment involved the review of 15 Maintenance and Repair Contracts (MARC) for the maintenance services and spares of key mobile equipment to detect opportunities and reduce cost expenditure.

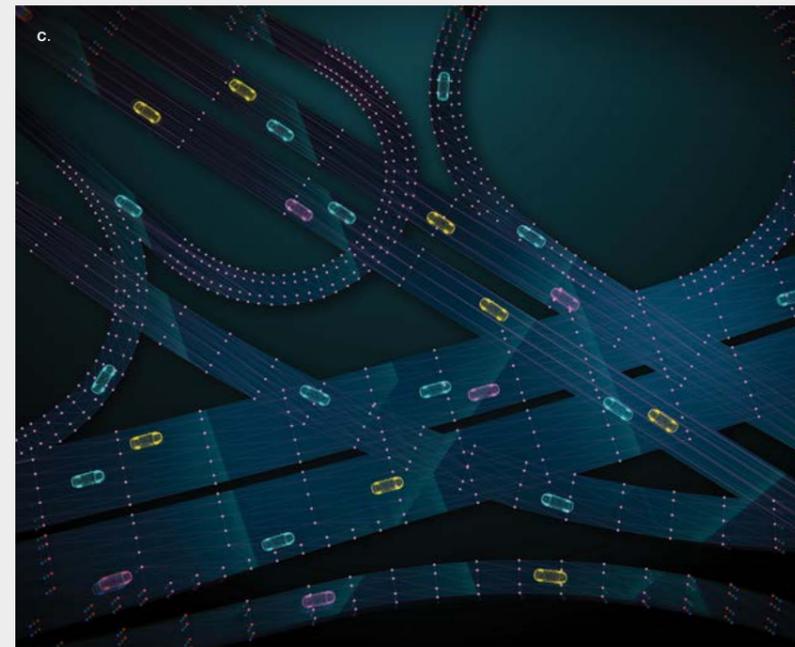
The outsourced MARC contracts comprised of maintenance work planning through to execution, supply of spare parts and the overhaul of components for off-road trucks, shovels, drills and front loaders at three of the client's mine sites. At the time, the client's total annual MARCs expenditure was estimated at US\$500 million.

As part of the scope of works, SMEC conducted a historical cost analysis, future baseline construction, improvement opportunities identification and savings estimate calculations.

This was followed by an assessment of potential opportunities and converting these prospects into cost savings. A road map was then developed for each mine site to migrate and support the required changes.

To date, the shovel maintenance contract for one site has seen a significant reduction of 12% or US\$5.5 million per annum. These cost saving results were delivered through client collaboration, improved efficiencies, reduction of unnecessary expenditure, and the alignment of costs to current market conditions.

SMEC identified improvements to deliver savings of more than two hundred million dollars over a period of eight years.



a. Maintenance Optimisation Review, Australia b. Integrated Estate Management System, Singapore  
c. Driverless Vehicle Technology Research Study, Australia

## Driverless Vehicle Technology Research Study, Australia

SMEC has been engaged in a research partnership to study the future effects of introducing driverless vehicle technology into regional cities. Working closely with the Department of Transport and Main Roads and modelling company PTV Group, SMEC will investigate the potential impacts of mobility-as-a-service in combination with autonomous vehicles and demand-responsive transport. The six-month study will deliver evidence-based planning advice and investigate future mobility under a range of travel options and road infrastructure across regional centres in North Queensland.

## e-Inspection Mobility Solutions, Singapore

The aim of this project was to improve facilities management operations at Changi Airport using e-Inspection mobility solutions, replacing the existing manual paper and pen method. Facilities management officers can now plan for routine maintenance works and track the building components due for cyclical replacement or servicing. The system also triggers automatic reminders and escalations for these scheduled tasks. Surbana Jurong developed the customised central system, e-Inspection mobility solutions, to consolidate user feedback and route to the correct officer for action.

## Integrated Estate Management System, Singapore

This project comprised the development of an Integrated Estate Management System (IEMS) to combine the essential operations of estate management into a single platform, allowing Singapore Town Councils and their respective estates to operate more efficiently. The implementation of IEMS gives Town Councils real-time data on building functions and they can now plan routine estate inspections, issue job sheets, track lift performance and monitor contractors through daily, weekly and monthly reports.

## Maintenance Optimisation Review, Australia

SMEC undertook a maintenance optimisation review of all container cranes and floating plant assets for a major Australian port operator at one of its ports. As part of a continuous improvement process, the client required an evidence based set of work instructions for use as a baseline for all ongoing maintenance and inspection activities of their assets. Through minimised duplication and simplified processes and systems, the client maximised its maintenance personnel time and ensured maximum plant availability, reliability and safety.

## Mining Resettlement Survey, Papua New Guinea

Porgera mine is a combined open pit-underground gold and silver mine, located in Enga Province, one of the most remote regions in the country. Owned by Porgera Joint Venture (PJV) and operated by Barrick (Niugini) Limited, the mine operates under a shared occupancy arrangement with both the mine and local population using mining lease areas. A combination of factors, including mine expansion and in-migration has resulted in a significant increase in the local population, leading to overcrowding and difficult living conditions. SMEC is conducting a household survey for PJV's pilot resettlement project to provide an accurate record of socio-demographic household profiles, household inventory and community infrastructure.

## Zimbabwe Poverty Alleviation Program, South Africa

The Zimbabwe Poverty Alleviation Program provides sustainable work opportunities to under privileged families in the municipality of eThekweni, South Africa. SMEC, in joint venture with Naidu Consulting, is undertaking the management, administration and support of the Program. The eThekweni Zimbabwe Monitoring Joint Venture will provide cost-effective, labour-intensive methods for the routine maintenance of the municipality's rural road network. There are currently 6,500 beneficiaries from predominately female-headed households in the most impoverished areas of the community. SMEC previously managed the Program from 2011 to 2014.

Combining the skills and experience from across the Surbana Jurong Group of companies, we have expanded our capabilities and reach, providing specialist expertise to complex projects worldwide, either independently or as combined entities.



Headquartered in Singapore, Surbana Jurong Private Limited provides complete consultancy solutions across the entire value chain of urban, industrial and infrastructure domains.



SMC Holdings Limited is a progressive global company, delivering engineering excellence and design innovation on major physical and social infrastructure projects.



Robert Bird Group is a global structural, civil and construction engineering consultancy renowned for delivering iconic complex structural and development projects.



KTP Consultants Pte Limited is a leading multidisciplinary engineering firm with more than 40 years track record in engineering and project management.



Sino-Sun Architects & Engineers Co. Limited is an award-winning multidisciplinary design institute specialising in architectural, planning, landscape and interior design.



AETOS Holdings Pte Limited is a leading safety and security solutions company, providing infrastructure protection, training and consultancy and security management.

‘Working in a very competitive and challenging environment means we must remain flexible to respond to the needs of our clients and are always looking at ways to make what we do more effective, efficient and valuable.’

Harnessing the strengths and experience from across the Surbana Jurong Group means we can now deliver a full life cycle of infrastructure and urban development services to our clients, while investing in new technologies including BIM and virtual reality, has helped us to improve efficiencies, transform design and enrich stakeholder engagement.’

DR UMA MAHESWARAN  
COO South Asia Middle East



Baoshan Housing Project  
China

**local people**  
**global experience**