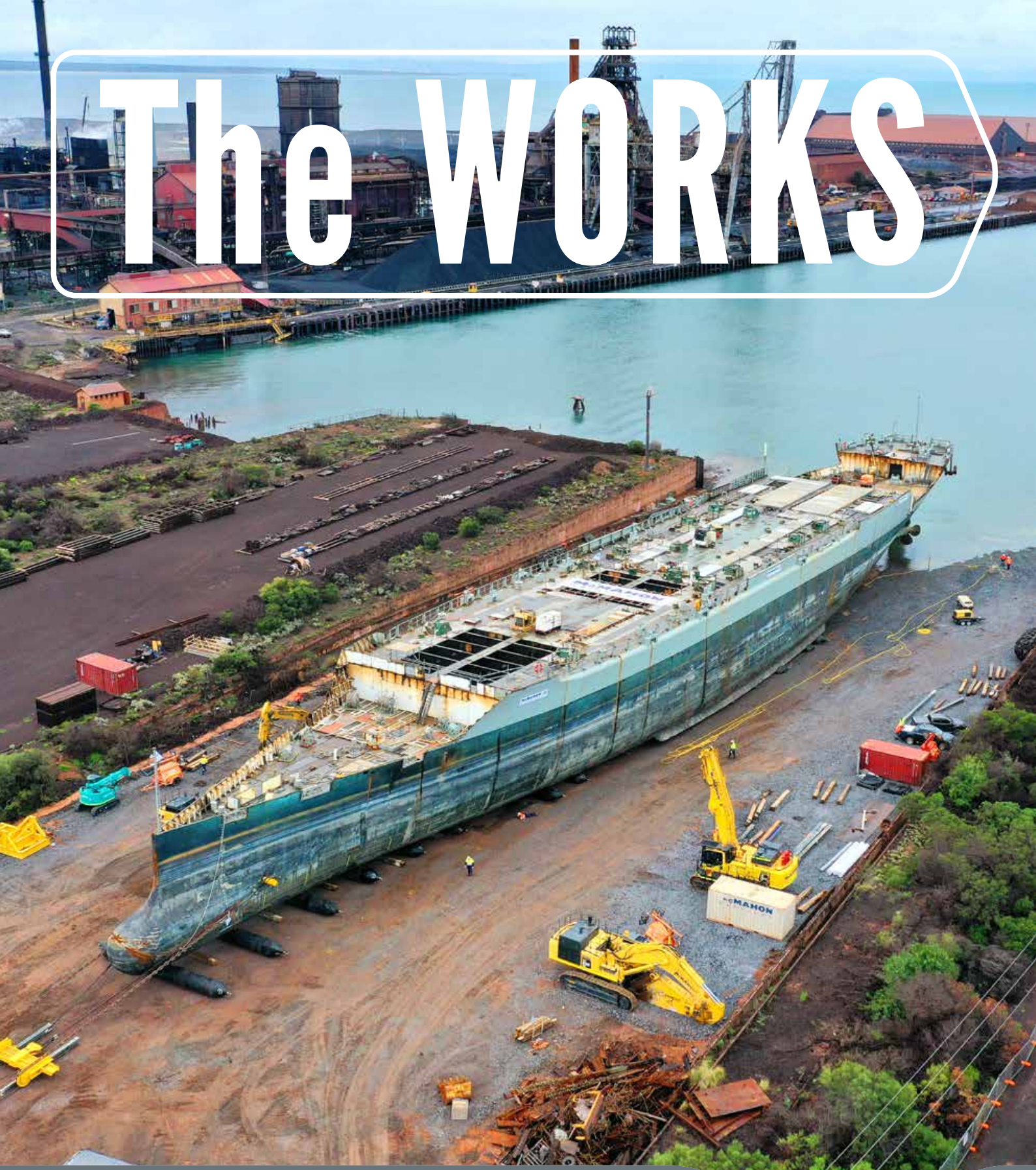
The WORKS



Summer Edition 2020 - 2021

PEOPLE • INTEGRITY • TRADITION
30 YEARS
1990 - 2020

McMAHON SERVICES

CONTENTS

Director's MESSAGE

Above: Managing Director, David McMahon and Director, Andrew McMahon

People remain at the centre of the success of our business. We are a people focused company and this core value has been the central driver for the way we conduct ourselves every day, and over our 30-year journey.

Our motto, introduced in March 2020, is **"Delivering Certainty"**. Delivering Certainty starts with the McMahon Services' management and its workforce delivering safety certainty for our people, contractors, suppliers, subcontractors, and the greater public with unwavering commitment.

In keeping with this commitment, we are excited to introduce the next phase of our health and safety platform, proudly named **"Safety Certainty 2.0"**.

The Safety Certainty 2.0 Program is primarily a new way of thinking in safety management. The program builds an environment that enables positive communication and empowers critical thinking through harnessing and investing in the skills and knowledge of our people.

The key focus areas include;

- **Engaged Leadership** – instil safety culture and a positive environment
- **Serious Injury Fatality Risk** – maintaining an unwavering focus on serious risk
- **Management of Change** – flexible systems which support our people to make effective change in the field
- **People** – focus on training, personal development, learning, recognition and embedding behavioural consistency.

Through Safety Certainty, we are able plan our services with confidence and deliver our projects with absolute certainty.

From the beginning, 2020 proved to be a year of upheaval. The 2019 - 20 Australian bushfire season was a period of destruction and devastation, resulting in the loss of livelihood for many families and businesses across Australia. Millions of hectares of land, thousands of houses and dozens of lives were lost.

McMahon Services responded to the devastating Kangaroo Island bushfires in South Australia by mobilising an extensive range of our heavy plant and equipment to lend a helping hand on the frontline to those in need, and assisted the Country Fire Services to build firebreaks to slow the spread of destruction.

Later, when the fires were brought under control the extent of the damage caused by the flames and intense heat became evident with many properties damaged beyond repair. We worked closely with Kangaroo Island Council, Green Industries SA, SeaLink, Southern Ocean Lodge and various property owners aiding where we could in the aftermath of recovery.

It seemed that as soon as the bushfires were behind us, the global Coronavirus COVID-19 pandemic threatened the world. We responded with work from home initiatives and a boost to our IT systems to ensure it was 'business as usual' across our organisation. We were at the forefront of pandemic management planning, working with our clients, subcontractors and suppliers across Australia to ensure safe work and social distancing practices were implemented on all sites and in all offices, and that our essential service offerings remained intact and delivering certainty during these challenging times. While the COVID-19 crisis is still with us at the time of printing, we are fortunate that none of the locations at which we are working have suffered an exposure event.

Despite these challenges, the year also brought many positives, and proved to be one of our best in the Defence sector. We continued to deliver multiple ongoing maintenance contracts at various bases and barracks across the country, designed and constructed various building and civil works, and have returned to some type of projects we do best; naval ship decommissioning works, with the dismantling and disposal of Ex-HMAS Success.

After a service history of nearly one million nautical miles, McMahon Services' high-risk demolition and cranage crews dismantled the former naval refuelling vessel in two stages at Port Pirie and Whyalla, respectively.

On the demolition front, works being undertaken at Lot Fourteen are proving to be the largest program of demolition works we have ever undertaken. With the completion of Stage 1, and the near completion of Stages 2b and 3a, we have worked collaboratively with client, Renewal SA, for many years now, carefully deconstructing various former hospital buildings under high-risk conditions.

The Lot Fourteen works brought additional benefits to our industry, as we kick-started our demolition pre-employment program. We developed the program in partnership with Renewal SA Work's Program ultimately leading to Demolition Certificates III and IV training being available for the first time in South Australia. It has been exciting and humbling to be part of this iconic project and assist in the creation of transforming the site into a global innovation neighbourhood of entrepreneurship, research collaboration and cultural activity, whilst creating real employment outcomes for the State.

Our civil division achieved many milestones this year, key amongst which is recognition by the Department of Infrastructure and Transport (DIT) with the award of R4 prequalification for road construction and R3 for bridge construction under the Austroads National Prequalification System. Being awarded these puts us in prime position to tender for road and bridge construction projects. DIT also recognised McMahon Services strong financial position, awarding us a financial rating of F100.

Intract Australia had another exceptional year, particularly in civil construction delivery. Intract recently delivered 13.2km of unsealed roads capable of accommodating armoured fighting

On site at Lot Fourteen with Premier Steven Marshall MP.

vehicles in the remote Cultana Training Area. The project faced many challenges from rain and storm events, unexploded ordinance clearance, complex pavement and subgrade works, and the construction of drainage infrastructure to avoid future washouts of the new roadway.

Further boosting our roofing and cladding capabilities, we acquired Asurco Contracting, a well-established Adelaide based company which has been operating for over 50 years. They design, manufacture and install glass-fibre reinforced cement (GRC) and other cladding products, Australia wide. The current services of roofing and cladding provided by McMahon Services will continue, but will now trade under the name of Asurco Roofing and Cladding.

Ballestrin Construction Services' capabilities in complex concrete construction continue to strengthen in capability and size of project delivery, and now employees over 80 concrete construction specialists. Ballestrin operates across all states and territories of Australia and delivers complex structural concrete works for transport, building, Defence, water, industrial, resources and marine sector clients.

As always, our success each year is only made possible by our loyal and hard-working staff, whom we thank for their dedication. We challenge every day what McMahon Services can achieve, and our teams work through projects to completion and strive for continuous improvement and client satisfaction.

We thank our clients for their support and trust in our organisation to deliver their projects, particularly during this COVID-19 affected world we find ourselves in. Despite the challenges this new pandemic brings, we look forward to strengthening our relations and continuing to find new and better ways to achieve exceptional outcomes in the future.

ENVIRONMENTAL CONSTRUCTION IS THE FUTURE

TOPCOAT LONSDALE ASPHALT PLANT

Topcoat, a proud and local South Australian company, is part of the largest asphalt group in the world - Colas. In 2019 they commenced on an expansion of their operations in South Australia through the establishment of a new asphalt plant in the Adelaide suburb of Lonsdale, positioning their operations to better service customers in the south of Adelaide.

The new plant is situated adjacent to Tyrecycle, a subsidiary company of ResourceCo, who are Australia's largest collector and processor of end of life tyres and conveyor belts. Tyrecycle's Lonsdale crushing facility produces crumbed rubber, designed for use in asphalt producing a 20% recycled product. Topcoat and Tyrecycle entered into a partnership to not only utilise recycled crumbed rubber into asphalt produced in the new plant, but to also access a variety of waste streams to produce unconventional hot mixes demanded by the market.

The plant was designed to produce 250,000t of asphalt and to accommodate 10,000 truck movements each year, with the design of the plant allowing for 24/7 operation and is capable of small batches of specialist hot mix products - a capability not present in most asphalt batching plants in Australia.

This project was of strategic importance to Topcoat as asphalt companies continue to embrace recycling technology and promote sustainable solutions. Topcoat is committed to reusing crumbed rubber, produced by shredding car tyres, blended into bitumen, as well as incorporating RAP (Reclaimed Asphalt Pavement). These environmental savings when producing asphalt are impressive, however by positioning themselves near the supply source, the environmental savings are heightened, due to removing the truck delivery emissions and fuel burn.

McMahon Services got on board early with the sustainable approach and worked collaboratively with Topcoat's designers to construct civil, concrete and building works for the new plant, including the innovative process to fully construct the site pavements from recycled rubble, with up to 500mm being used under the tower and asphalt plant to ensure the design load rating was achieved.

McMahon Services sister company Ballestrin Construction Services constructed over 1800m^2 of concrete including bunker footings, slabs and 3m high push walls, a 2m high bitumen tank retention bund, pad and the asphalt plant support slab.

Increased safety and efficiency in materials handling

Most asphalt plants incorporate ramps for loaders to deposit asphalt materials into the hopper. This site was designed with a retaining wall structure producing a split-level, with this innovation elevating loaders above the hopper, producing dual benefits. Loader operators now have greater visibility of the hopper and the flat loading profile eliminates the risk of overturning the loader on a steep hill, and wastage during the offloading into the hopper is also significantly improved, reducing long-term material wastage costs.

Storage bunker buildings were constructed to 10m heights to allow for semi tippers to operate inside without risk of damaging the roof or building structure.

Site compaction to future-proof plant requirements

Ground compaction was to 350kPa surface pressure, 50% more than required for current operations and achieved in part with a 500mm bridging layer of recycled ResourceCo products. This ensured that if the plant was expanded in the future, further ground compaction works were not required.

This project is an excellent example of the multi-faceted delivery offered by McMahon Services and has resulted in an excellent outcome for ResourceCo, TyreCycle and Topcoat, all of whom have proud South Australian heritage and share very important strategic relationships – now and into the future.

ANOTHER *SUCCESS*-FUL PROJECT
THE DEMOLITION OF HMAS SUCCESS

HMAS Success was a French designed Durance-class auxiliary oiler replenishment vessel. Decommissioned in June 2019, after 33 years of service, the vessel was the largest ship ever to be built in Sydney Harbour at Cockatoo Island Dockyard. The vessel was laid down on the 8th August 1980, launched on the 3rd March 1984 and commissioned on the 23rd April 1986.

The modified Durance-class oiler was 157.2m in length, with a beam of 21.2m, and a draught of 8.6m, with a full load displacement of 18,221t. HMAS Success had a total capacity of 10,200t of cargo, 8707t of diesel fuel, 975t of aviation fuel, 250t of munitions including guided missiles and torpedoes, 116t of potable water, 6100t of ballast water, 95t of components and naval stores, and 57t of food and other consumables.

HMAS Success was decommissioned in Sydney on 29th June 2019, after completing 1,848,000km (997,854 nautical miles) over the course of ship's operations including contributions to the 1991 Gulf War and deployment to East Timor in response to the incidents that occurred there in 1999 and 2006.

The destruction, dismantling and recycling of the ex-HMAS Success was completed by McMahon Services in two stages at two different locations – Port Pirie and Whyalla, respectively.

Stage 1 was conducted alongside Flinders Ports' Wharf 5 at Port Pirie. These works included hazardous material removal and superstructure reduction to decrease the vessel displacement, allowing for the vessel to access the second stage at the Whyalla Slipway during a suitable high tide, while managing the trim and stability. The vessels previous use for bulk fuel distribution and its complex design introduced additional risk due to the presence of remnant fuel and sludge in the tanks and other flammable materials in confined areas.

To reduce the draft, the superstructure was removed to deck level 2, and interiors below that level were also stripped back. A towing trunnion was positioned through the bow hull in preparation for the tow to Whyalla, where the remainder of the hull destruction works were undertaken.

After a seven-month deconstructive planning process – stage 2 destruction was conducted at the former Whyalla Ship Yard Slipway which is located within the Whyalla Steelwork, operated by SIMEC Mining and Liberty Primary Steel. The hull of the vessel was pulled 165m up the re-profiled slipway by using two in-house, re-engineered 113t hydraulic winches.

During the pull up the slipway, the vessel was supported by 28 air roller bags (17m and 10m long and 1.2m in diameter) to a point where the stern of the hull was above the high tide. At this point the hull was lowered by deflating the air bags and securing the vessel on steel support beams.

After the air roller bags were removed, the hull was cut into sections of approximately 20t each using oxy-propane cutting torches and lowered to the ground by a 200t hydraulic crane and 250t crawler crane. Hydraulic shears mounted on two 85t excavators then cut the vessel into sizes appropriate for export sale.

Recycled steel was used in the Whyalla Steelworks as well as transported back to Port Pirie, for shipping to international metal recycling companies. In total 5900t of ferrous and 430t of non-ferrous steel was recycled during the course of the works.

Project Challenges

Enabling Works on the Whyalla Slipway

The project team were required to complete enabling works to clear the accumulated material and vegetation from the old slipway and to adjust the slipway profile to enable the ex-HMAS Success to enter the slipway. The slipway had not been used since 1978 and was designed to launch ships, not retrieve them.

The project team transformed the slope of the existing slipway and resurfaced the tidal zone. This involved removing the existing damaged concrete surface and replacing it with new precast concrete panels and poured in-situ concrete, some of which was achieved under water. During the works, the remains of an old concrete crane footing, concrete pile caps and a disused dolphin, located in the alignment of the tow, were removed with the assistance of a dive team and an excavator.

Works to complete the in-situ concrete steel fixing occurred during low tide periods, where the steel mesh reinforcing mats were prepared on land then placed in the water as opposed to the riskier task of tying them underwater.

The project team constructed a large winch foundation and anchor wall and worked with engineering design firm WGA to ensure the design was capable of pulling the now 4000t vessel to shore. The winch anchor wall was buried up to 6.0m below ground and the winches were able to safely pull the ex-HMAS Success from the water without incident over a 24-hour period.

IN TOTAL 5900T OF FERROUS AND 430T OF NON-FERROUS STEEL WAS RECYCLED DURING THE COURSE OF THE WORKS

OVER 80% OF THE WORK WAS SELF-PERFORMED BY McMAHON SERVICES PERSONNEL, PLANT AND EQUIPMENT


McMAHON
SERVICES
SME 3514
McMAHON
SERVICES


KOMATSU

FROM CHARRED REMAINS TO NEW BEGINNINGS; McMAHON SERVICES ASSIST IN THE FIGHT TO SAVE KANGAROO ISLAND

Between December 2019 and January 2020, bushfires took hold of Kangaroo Island for a period of three weeks, blackening more than 210,000ha of land – equating to just under half the island, killing two people, destroying homes, businesses, and causing the loss of millions of livestock and wildlife.

Kangaroo Island has always been an island close to the McMahon families. When news and the extremities of these fires hit, Company Directors, David and Andrew McMahon, both quickly relocated to the Island, to lend a helping hand on the frontline to those in need.

David and Andrew McMahon enlisted a team of 15 personnel, and coordinated over $2.7m in company plant and equipment to assist, and they worked with the Country Fire Services (CFS) to build firebreaks to slow the spread of destruction. Bulldozers, front end loaders, water trucks and excavators worked fast to clear lines in Stokes Bay, Little Sahara Desert and through various private properties and national parks.

Water trucks were on hand in various locations to wet down properties, saving them from the constant risk of spot fires caused by embers in the atmosphere.

Assistance also came in the form of spraying a bonding agent called 'stonewall' onto asbestos containing materials, present in 61 destroyed properties. This strategy mitigated the risk of friable asbestos particles dissipating across the island and contaminating the landscape.

The project teams visited each house and engaged with owners to ensure their needs were met during the demolition and remediation works for each property. Funding for the works was coordinated by the South Australian and Federal Governments working closely with insurance providers. Green Industries SA was the functional lead agency for coordinating the disaster waste management and the main client for these works.

Other works included the removal of 50 badly burnt trees in the Hanson Bay Wildlife Sanctuary which presented toppling risks if left unattended.

Due to the difficulty accessing various locations on the island, the machines were often transported around the island on floats.

After the fires were brought under control, David and Andrew met with many Island residents affected by the fires offering assistance where they could. Demolition crews assisted the local pony club in clearing debris caused by the fires, while a McMahon Services truck transported soil to a community garden managed by the reGrowth Gardening Recovery project, soil they would not have otherwise been able to source.

For over a month, everyone worked tirelessly, through the days and the nights often under blood red skies caused by the thick smoke and flames. David and Andy extend their thanks to everyone involved and their efforts in going above and beyond in these trying times for Kangaroo Island.

Our hearts and thoughts are still with those people who have lost so much across the country.

"There was no soil, suitable compost or food-grade intermediate bulk containers available – these had to be trucked and ferried over. The freight costs are huge, and the ferry was constantly booked out with trucks carrying other recovery materials being shipped over to the island. So I called the trucking companies that were already engaged in the bushfire clean-up, and McMahon Services generously backloaded a semitrailer tipper truck with what we needed for free"

SOPHIE THOMSON, REGROWTH GARDEN RECOVERY, GARDENING AUSTRALIA, JUNE 2020

APPROXIMATELY 200T OF MATERIALS WERE DEMOLISHED AND REMEDIATED FROM EACH PROPERTY

REBUILDING THE SOUTHERN OCEAN LODGE

As with the humblest of seaside shacks destroyed in the Kangaroo Island fires, the state's most prestigious tourism resort was reduced to twisted sheets of charred corrugated iron, in the devastating Kangaroo Island fires.

Located at Hanson Bay on Kangaroo Island's south west coast, the Southern Ocean Lodge featured 21 luxury suites, situated amongst scrub-covered cliffs bounded by the Southern Ocean.

In the aftermath of the disaster, the owners of the Southern Ocean Lodge committed to rebuilding the facility and taking an active role in revitalising the tourism industry on Kangaroo Island.

McMahon Services were engaged to undertake the demolition and site remediation works of the Southern Ocean Lodge.

While the exterior of the main building of the Southern Ocean Lodge remained relatively intact, its interior was gutted. Our specialist demolition team deconstructed the guest suits and all associated infrastructure, the main lodge, reception, lounge and restaurant area followed – a shell of the once buzzing luxury resort remaining. The project encompassed a mix of mechanical and manual demolition.

The limestone walls near the entry door and central fireplace were carefully deconstructed, cleaned and wrapped so they could be reincorporated back into the Lodge when rebuilt at a later date.

The site has been cleared in preparation for its next incarnation, 'SOL 2.0'! The owners are working with architect Max Pritchard who designed the original for the future design. There are still many hurdles to jump, and they are currently anticipating the new lodge will reopen in late 2022 or early 2023.

"I would like to thank McMahon Services for the strong commitment in assisting Baillie Lodges through the first phase of the Southern Ocean Lodge rebuild. Your management and project team have performed with strong integrity, dedication and pride. From John's and my perspective there is no constructive feedback to put forward, we would simply say 'keep doing what you are doing"

JOEL WALKER, PROJECT MANAGER, BAILLIE LODGES

ASURCO
ROOFING & CLADDING

McMAHON SERVICES ACQUIRES CLADDING SPECIALIST ASURCO

McMahon Services has acquired long-standing glass reinforced concrete and cladding specialist Asurco Contracting Pty Ltd (Asurco).

Founded in 1969, Asurco is a well-established Adelaide based company who designs, manufactures and installs Glass-Fibre Reinforced Concrete (GRC) and other cladding products. They have a proud history and are known for their quality of work, offering their broad range of cladding products and services to clients across Australia and South-East Asia, for over 50 years. They have also been recognised repeatedly by the Master Builders Association (South Australia) for outstanding cladding works.

The result of this acquisition is that the brand, specialist services and expertise of Asurco will live on as a division of McMahon Services called Asurco Roofing and Cladding. We saw this as a great opportunity for us to provide our existing clients with added quality services, and also expand on our current roofing services client base.

The Royal Park company had faced the very real prospect of permanent closure after a challenging 12-month period significantly worsened by the onset of COVID-19. Thirty-six of Asurco's staff have been retained by McMahon Services and Managing Director David McMahon said that the acquisition of Asurco is good news for the construction and development sector, adding strategic value to their extensive range of services.

"We have a long-standing relationship with Asurco and are delighted that its market-leading products, as well as specialist expertise garnered over more than 50 years, will be preserved as a division of McMahon Services.

We have offered roofing services for many years, and with the added expertise acquired through Asurco in construction cladding, we see significant commercial opportunity for the combined business." explained David.

Des Pawelski

Dan Pawelski

Jason Capogreco

Anthony Pawelski

Glass reinforced concrete (GRC) is a unique cladding product which is produced through a process of blending glass fibres into cement, which unlike steel reinforcing, creates a rust-proof product that can be moulded into thin but exceptionally strong panels of all shapes and sizes.

"GRC is extremely versatile and has applications in cladding solutions as well as in interior design features," added David McMahon.

Asurco founder Des Pawelski, who was retained to work for Asurco Roofing and Cladding, said of the acquisition,

"This is the best possible outcome for Asurco and our clients across Australia and SE Asia are very happy that our products and services will remain accessible," explained Mr. Pawelski.

"Operating as a division of McMahon Services remedies all of the cost-related pressures that pushed Asurco to the edge and actually primes us for new growth," added Mr. Pawelski.

On top of their cladding services, Asurco is also the only SA manufacturer of toilet and shower partitions for all kinds of commercial and public buildings, treating every project as a custom job and providing excellent partition systems using laminates, fibre cement and polymer plastics.

David McMahon stated, "We were attracted to Asurco due to its reputation in the market and more particularly as it is a true South Australian manufacturing business, something we see as important to preserve for the future of the South Australian construction industry and the State in general."

We look forward to expanding on our local capacity and expertise with this acquisition.

McMAHON SERVICES LOUDLY, AND PROUDLY, CELEBRATES 30 YEARS OF OPERATIONS!

On the 9th February 2020, we celebrated! And what better way to celebrate 30 years of our family business heritage, with a free family fun day, held in Bonython Park.

It was an event not to be missed, with employees encouraged to bring their whole family and share in the fun, and we mean everyone – kids, grandkids, nieces, nephews, aunties, uncles… we even had a pet or two!

The sun was shining, the excitement was flowing, and it was an event that would put the Adelaide Sky Show to shame! There were amusement rides for all ages – we even hired a Ferris Wheel! A DJ, bouncy castles, food trucks, coffee vans, roving entertainers, face painters – and our own PC 130 Excavator for exploring and photo opportunities.

It was a humbling event to be a part of, and when you stopped to take in the surroundings, you were able to see the incredible company culture that has been built over the last 30 years. From just 12 people in 1990, McMahon Services has grown to employ over 750 people with 13 offices in most Australian States and Territories, together with an office in New Zealand.

Our values stem from our beginnings as a small family business and have remained the same over the years, irrespective of our growth. We respect where we have come from and we respect all of the people who have been involved in our ongoing journey, from clients to partners, sub-contractors, suppliers and our staff.

The key strength of the business and the reason for the success of the company is the quality and dedication of our people, as well as the great culture and attitude fostered in our personnel and teams. We are proud to say that many of our staff are second generation McMahon Services employees.

We have our people to thank for our success, and McMahon Services would not be where it is today if it wasn't for the hard work and dedication of our national team.

We look forward to the next 30 years building the strength of our company together with our staff and valued clients.

"I just wanted to say a heartfelt thank you for the family fun day, we had such a wonderful time. Everything was thought of and we felt very grateful to be invited.

My father Allan Park, brothers Bradley and Callum, step brother Luke and brother in-law Dean (working in New Zealand) all work for McMahon Services and my husband until recently worked for you too for 14 years.

McMahon Services has always been such a great place to work and I wanted to express my gratitude for the company you have built and for giving my family the opportunities they have had over the years.

Here's to the next 30 years, Congratulations and thank you again!"

Alana Rosenzweig

2020 also marks a year for significant tenure milestones. We have several employees who have been with us since the conception of McMahon Services. We want to take this opportunity to thank the following employees for their years dedication to the company, your input and hard work does not go unnoticed!

30 Years

Phil Bubner
Steven Pluck
Kym Goldsmith
Kyle Goldsmith
Martin Griffiths
Shawn Griffiths

20 Years

Shaun Emery
Mehdi Javanmard
Jason Chancellor

We sat down with a couple of the employees and asked them a couple questions about their time with McMahon Services.

PHIL BUBNER
30 YEARS

Phil started with G.F McMahon Demolitions, before commencing with McMahon Services in 1990 as a National Operations Manager. His current role has evolved and diversified and he is now the Manger – Major Decommissioning Projects.

We asked Phil **"What you enjoy most about working at McMahon Services?"**

I suppose the thing that I enjoy the most is the autonomy that I have, the friends and acquaintances I have gained through working here, and the feeling of being a part of the family. When I first started with Glen McMahon (Company - G.F McMahon) David and Andy were still at school, so not only have I seen them grow but also their children so it is more like family than work.

MARTIN GRIFFITHS
30 YEARS

Martin commenced with G.F McMahon Demolitions in 1985, and then continued his employment with McMahon Services in 1990. He started as an Asbestos Removal Labourer, and is now a Project Manager - Asbestos Removal / Hazardous Waste.

"What you enjoy most about working at McMahon Services?"

I started working in what was a relatively small family business with members of my family and other families too, working hard together to build the business and our job security. You still, get that sense of family today even though the company now has grown. Many of those original guys are still here, that says a lot.

SHAWN GRIFFITHS
30 YEARS

Shawn, like his brother, commenced with G.F McMahon Demolitions in 1985, and then continued his employment with McMahon Services in 1990. He commenced as an Asbestos Removalist, and in his current role he is now Operations Manager – Asbestos Services.

"What you enjoy most about working at McMahon Services?"

I am very grateful for the opportunities I've been given over the years by both Andrew and David, I am very proud of the McMahon Services brand and what it represents.

I have always felt part of a team sharing a common goal whether its hands on or chasing the next job, it's very satisfying when you get the call that your proposal has been successful irrespective of the value.

PENOLA NORTHERN BYPASS

Located 388 km south east of Adelaide, Penola is in the heart of one of South Australia's most productive wine growing areas. The Penola Bypass is a major road project that formed part of a commitment to deliver a complete bypass of the Penola Township, and was a joint initiative of the Australian and South Australian Governments and the Wattle Range Council.

This important project formed part of the federal government's record $100 billion infrastructure plan, which is essential in boosting job growth and helping the economy bounce back in the recovery of the COVID-19 pandemic. The overall project supported approximately 47 full time equivalent jobs.

The Penola Bypass will deliver clear benefits to all road users in the region by significantly reducing travel times, reducing conflict between heavy vehicles, pedestrians and local traffic within Penola, creating improved access for heavy vehicles, and helping people reach their destinations sooner and safer.

We were engaged to undertake the project which included the construction of approximately 2.2km of undivided sealed rural arterial road, including sealed shoulders and intersection upgrades within a new road reserve between Robe Road and Riddoch Highway, located to the west of the township.

Works were also undertaken to realign the current Riddoch Highway T-junction with the existing Penola Southern Bypass to the south of the Penola Township to make the completed bypass the through road. It completed a 4.7km bypass route for the Penola Township, providing an alternative route for heavy vehicles to avoid the town centre.

The works included the following;

- 53,800m^3 of earthworks including clear and grub of new alignment, stripping topsoil and stockpiling, bulk earthworks cut to fill, placing and compaction of imported fill, drainage swales, batter trimming and spreading of topsoil.
- Drainage works including trenching, preparing subgrade and blinding, installation of pipe and headwalls, then backfill with stormwater infrastructure of 450mm and 600mm reinforced concrete pipes and 1200mm by 300 reinforce concrete box culverts.

19,000
WORK HOURS

COMPLETED
4 WEEKS
AHEAD OF SCHEDULE

- 61,700m² of pavement works including the placement and compaction of various subbase and basecourse materials. Supply and installation of over 10,000t of asphaltic concrete including basecourse layers, levelling course and wearing course and the installation of over 400,000m² of crumbed rubber seal.

This project entailed detailed staging plans, extensive traffic management strategies and innovative cost saving solutions that also reduced the overall project schedule.

To further streamline and progress the program, the project team partnered with Topcoat Asphalt to establish a mobile asphalt batching plant onsite capable of achieving a production rate of 60t/h, reducing the haulage time of asphalt from Adelaide and significantly increasing the quality of the finished product.

"The Penola Northern Bypass is the largest road infrastructure project awarded to McMahon Services by a road authority, and it is humbling to be delivering this important project with the Department for Planning, Transport and Infrastructure.

Throughout our success of nearly 30 years' in business, we have been focused on employing locals and supporting the communities in which we work in. We will continue to deliver our projects safely and to the highest standard whilst leaving a positive legacy in the community."

DAVID McMAHON, MANAGING DIRECTOR, McMAHON SERVICES

ANOTHER PULVERIZING PERFORMANCE AT LOT FOURTEEN

THE PC1250 DEMOLISHED STRUCTURES AT A RATE OF 200T PER DAY AND THE PC850 AT 50T PER DAY

The redevelopment of Lot Fourteen, the former Royal Adelaide Hospital site, as a global innovation precinct, is a major economic development opportunity for South Australia. McMahon Services have been on site at Lot Fourteen since November 2017, completing stages One, 2b and currently 3a. Over the life of these stages to date we have completed over an impressive 411,202 man-hours!

Stage 2b of this iconic redevelopment incorporated high-risk demolition and remediation works on the 16m high Robert Gerard Building, 28m high NSI Link, 34m high Emergency Block, Outpatients Block including the Heli-pad, which is more than 50m in height, the Theatre Block, internal works to the heritage-listed Bice Building, and the single-story overhead linkway, which is three stories above ground level.

There were 2866 drums of predominately friable asbestos contaminated materials totalling approximately 230t that were sealed and removed from site during Stage 2b.

Mechanical demolition was undertaken by utilising our specialised deconstruction excavators with high reach booms and a variety of attachments including shears, pulverisers, rippers, hammers and grabs. These attachments allowed for the safe and efficient deconstruction and subsequent sorting of materials into separate waste streams to maximise recyclability.

The total volumes of demolished materials recycled offsite included 60,000t of bricks and concrete, of which at least 95% was recycled into new products through our sister company ResourceCo, and 2650t of steel.

We implemented an innovative technique which enabled us to save an extensive amount of work space - A dust fighter, dust suppression system that hooks directly into the local water mains network, reducing the need for water trucks at the point of demolition that would otherwise unnecessarily congest the worksite.

Stringent environmental and noise controls, community and stakeholder engagement, and traffic management strategies were applied for the project due to the site's close vicinity to commercial, Government, residential properties and the Adelaide Botanic Garden. Significant effort was invested in minimising the impact of our operations for site tenants, local stakeholders and members of the public.

Project Challenges

High-Risk Helipad Demolition

A key challenge on the Stage 2B project was creating a safe method of demolition for the top levels of the Outpatients Building. The building was 13 storeys tall, beyond the reach of the PC1250 demolition excavator with the ultra-long reach attachment. Instead, a top-down demolition methodology was developed to reduce the structure to the Level 9 slab.

The first step was demolition of the top level of the structure; the helipad. By using the additional reach allowed by the 250t crawler crane, a 13t excavator was placed onto the helipad to mechanically dismantle the heavy slab, leaving the steel frame to be cut

and removed by crane from the level below.

Another significant challenge we faced was the removal of the Eleanor Harrald Link, which was a linking corridor between the Theatre Block and the Eleanor Harrald Building. The structure was suspended three levels above ground and supported by two precast columns. The east-west section was 15m long and the north-south section 4.5m long. The east-west section was removed first, followed by the north-south section.

Demolition of the Theatre Block

Due to the challenges posed by the high-risk demolition of the Theatre Block, which was adjacent a public thoroughfare, a full height acoustic barrier and demolition scaffold was constructed to a height of 34m using the Layher scaffold protect system.

Mechanical demolition of the structure was completed using the PC1250 Longreach Excavator. The scaffold was progressively dismantled as each floor was demolished, remaining one level higher than the demolished structure at all times. This process allowed the Lot Fourteen precinct stakeholders to operate as usual with minimal disruption and allowed the project team to safely demolish the Theatre Block.

Community and Stakeholder Engagement

The stakeholder engagement team worked collaboratively with Renewal SA, the Stakeholder Engagement Lead and other project team members to facilitate and enable timely decision making and develop and distribute project communication materials.

The team also assisted Renewal SA with public viewings of the Robert Gerard Building demolition and heritage tours of the former hospital by Haunted Horizons.

Our approach has delivered Renewal SA's stakeholder requirements and resulted in a positive relationship with the project stakeholders. We are the only contractor currently on site that provides this level of community and stakeholder engagement support.

"Lot Fourteen will be a hub that will drive technological innovation and be the home of unique arts and cultural facilities that will enhance growth in South Australia's cultural and tourism economy."

STEVEN MARSHALL MP, PREMIER OF SOUTH AUSTRALIA

TRAINING AND DEVELOPMENT INITIATIVES CELEBRATING OUR ACHIEVEMENTS AND MILESTONE OUTCOMES

In 2019, we established the Pre-Employment Demolition Program, in association with Renewal SA's Works Program and the Department for Industry and Skills WorkReady Initiative. On Friday 7th August 2020, the successful program participants from this initiative were awarded their Certificate III in Demolition, after months of hard work and dedication.

We also developed and initiated a program for existing workers to undertake certified training, through a Certificate IV in Demolition. These 13 existing workers were also presented their certificates on the 7th August.

This training has upskilled our existing workforce, increased health and safety culture within our sites, and provided clear training pathways into leadership and supervisory roles, allowing them to continue to grow within the McMahon Services demolition division.

Further demonstrating our commitment to training and development within the construction industry.

In collaboration with the Renewal SA's Works Program, and as a result of securing the demolition contract at Lot Fourteen – Stage 3a, McMahon Services were again able to offer demolition traineeships for up to six successful applicants in 2020.

An information session was held, promoting the demolition industry to potential job seekers, and providing information on what career opportunities a Certificate III in Demolition could lead to.

Due to COVID-19 restrictions, potential job seekers were unfortunately limited to 30 attendees. However, 12 lucky candidates were then chosen to undertake work experience on a live demolition site, in an effort to better understand the role they would be undertaking and also the demolition industry itself.

Due to the high calibre of these candidates, we were happy to once again exceed expectations by offering eight of these candidate's full-time employment completing Certificate III in demolition traineeships over the following 12 months.

Our commitment to training and developing our team is strong, and we firmly believe in providing our new and existing employees with the opportunities and tools to enable career progression.

Due to the implementation of these programs, we now have one of the largest – if not, THE largest team of fully accredited demolition Labourers and Supervisors in South Australia!

"Another successful works program partnership, this time with SA's family-owned McMahon Services at lot fourteen, has yielded the next generation of demolition technicians while supporting government traineeship targets."

RENEWAL SA

LUCINDALE LOCALS MAKE A SPLASH

Lucindale is in the heart of South Australia's hidden treasure, the Limestone Coast, midway between Adelaide and Melbourne. It hosts abundant wildlife, with green landscapes, lush farm land, and a tight-knit community of approximately 600 locals.

The community spirit is strong, with the volunteers from the Lucindale Lions Club priding themselves on bringing the community together, and thinking of ways to fundraise for things that benefit the town and attract tourists.

Sadly, in 2015 the Lucindale Area School's popular community pool was too dilapidated to use. The replacement pool would cost $1.2 million, and a $200,000 shortfall in the Government funds committed to the project meant that the project was placed on indefinite hold until the funds could be obtained.

The Lucindale community banded together, and strengthened their campaign to be able to host the Triple J event, "One Night Stand". The locals had been campaigning since 2013 to be able to host the event in their town, and now more than ever, they needed the support! This time, luck was on their side and the "small town with the huge heart" was awarded the event for 2019.

It was attended by over 15,000 people, and drew headline acts such as Ocean Alley and Hilltop Hoods and was held on the town's football oval. The incredible community driven event raised an impressive total of $11,000.

With the Lions Club also donating $88,000 to put towards the replacement pool.

McMahon Services were awarded the project to design and construct the new three-lane pool, 25m in length, 6m wide, and included tiling, electric heating for all-year-round swimming, a disability swing, upgrade to include disability access, non-slip in-situ concrete paving, and stormwater drainage to pool area.

A new steel framed shed was built to accommodate pool plant and equipment and storage for pool chemicals. In addition, the adjacent change rooms and toilet block were internally refurbished for Disability Discrimination Act compliance.

This multi-disciplinary project hosted teams from our demolition, civil, concrete, roofing and cladding, and building divisions.

While the Department of Education also contributed funding, the project would not have happened without the work of the school's governing council and locals, as well as the 48 different clubs who contributed in different ways with financial support, goodwill, and helping with equipment to ensure the project didn't run into any more funding shortfalls. A true testament to the locals of Lucindale.

CONNECTION TO THE LAND AT WARDANG ISLAND

Wardang Island, sacred to the local Nharangga Aboriginal people and known as Waralti forms a natural breakwater against the south-westerlies which buffet the western coast of Yorke Peninsula, and provides a suitable anchorage for vessels of various size using Port Victoria. Situated 11.2km off the Yorke Peninsula Coast, Wardang Island covers an area of approximately 20km^2.

Long before Europeans settled in Australia, the Nharangga people regularly accessed the island and when the Europeans arrived, they took Wardang Island from the Nharangga people and used the land to farm sheep, as a quarry for lime sand and as a rabbit and rabbit disease research station.

Declared a Historic Reserve in 1973 by the State Government, the island was returned to its traditional owners with full ownership transferred to the Aboriginal Land Trust.

In 2014, additional protection measures were provided to the island with the Government further declaring the island as an Indigenous Protected Area. In 2019, the Federal Government endorsed a project to revitalise the island, requiring the demolition and replacement of old buildings, removal of asbestos containing materials and the construction of new facilities, including a boat landing facility.

In total 21 buildings and structures were systematically stripped of 40 tonnes of asbestos contaminated materials and either remediated or demolished producing a further 75 tonnes of demolition waste, of which 86% was diverted from landfill and into recycling streams.

With the existing boat landing facility inoperable, accessing the island was difficult. Shallow coastal conditions limited vessels to flat-bottomed shallow draught barges and inflatable tenders as well as McMahon Services' Ty Force, a rapid deployment landing craft.

Six of the ten site-based personnel were Aboriginal, of which five identified as Nharangga people, the traditional owners of Wardang Island.

Close Ties

During the construction phase, it was also determined that three employees connected to the project had either previously lived on, or stayed with families on Wardang Island at some stage in their lives.

Demolition Labourer Brenton Wanganeen lived on the island with his parents in the 1970s and remembers Wardang as a tourist destination. His father often conducted tours of the Island using a tractor drawn dray.

Asbestos Technician Robert Wilson regularly stayed on the island with his grandmother and lived there with his family between 1984 and 1985. His parents were island caretakers during his residency period.

National Administrator, Amanda Beare lived on Wardang Island with her parents and grandparents between 1983 and 1984 where her grandfather worked on the island as a rabbit trapper.

We are committed to ensuring that the land is treated respectfully and that the involvement of the local community is fundamental to our work.

OUR FIRST PROJECT IN SINGAPORE SECURES A WIN AT THE WORLD DEMOLITION SUMMIT

PSA Singapore is one of the world's largest and busiest port operators and operates 67 berths at its city container terminals in Tanjong Pagar, Keppel, Brani, and Pasir Panjang.

In 2019, we undertook the deconstruction and scrapping works for the Tanjong Pagar, Keppel and Brani terminals as part of the larger relocation project, to Tuas Port – which will make Tuas Port the world's single largest fully-automated terminal.

This was an exciting project to be a part of, not only for the complexity but also for the fact that this was the first ever project for McMahon Services Asia Pacific. The project required stringent deconstruction methodologies, and included the deconstruction and metal salvaging of 19 quay cranes, 26 rubber tyred gantry cranes and three rail mounted gantry cranes.

It achieved a delivery production rate of 21,000t of scrap dismantled and processed in a tight eleven-month period. McMahon Services' on average removed over 100t per day during lifting operations. The project hosted multiple work fronts, with over 200 major crane lifts being undertaken during the dismantling works.

Overall, the project deconstructed and recycled 19,600t of ferrous metal, with 37 shipping containers of non- ferrous materials being recycled and reused, including hydrocarbons such as grease and transmission fluids.

On the 13th November we were awarded at the World Demolition Summit in the Industrial Demolition category – taking out the win in this category, up against some of the world's best.

We are proud to be recognised as an industry leader internationally for complex demolition and decommissioning.

OVER 200 MAJOR CRANE LIFTS WERE UNDERTAKEN DURING THE DISMANTLING WORKS

THE PROJECT ACHIEVED A 99% RECYCLING RATE

106,000 WORK HOURS COMPLETED OVER 296 DAYS

BRIDGE TO RESTORATION

HISTORIC BIRKENHEAD BRIDGE DECK REPLACEMENT

Opening in 1940, the Birkenhead Bridge was impressively Australia's first double bascule bridge. It connects Port Adelaide's downtown with the suburb of Birkenhead, over the Port Adelaide River.

The bridge comprises of nine spans totalling approximately 260m in length, and an average carriageway width of 15.8m. It is on the State Heritage Register list as significant due to its central bascule span, which opens to allow the passage of vessels beneath.

In 2020, the Department of Infrastructure and Transport (DIT) identified that the timber running surface of the central bascule span had deteriorated and required replacement with materials light enough so as not to restrict the opening of the bascule. The works were required to improve safety for the users of the structure, extend the life of the bridge, reduce maintenance costs, provide ongoing safe access for vehicular transport, and respect the heritage status of the bridge.

The works involved the replacement of the existing timber roadway deck with a Fibre Reinforced Polymer deck, and the eastern timber footpath with an aluminium one. These essential works ensuring the bridge's long-term structural integrity and safety for all users.

Working over water is challenging and requires many risk assessments to be conducted, our in-house engineering and scaffolding team developed a temporary works design for an access scaffold platform allowing for safe working and to contain debris produced during the works, ensuring there was no adverse effects on the local marine environment. We used over 40t of Layher scaffold for the works.

Once the scaffolding was in place, work crews removed the existing timber bridge deck from the steel work from the centre of the bridge, working outwards, using traditional demolition methods and a 5t excavator, with hydro-blasting removing lead surfacing from the structural steel elements of the bridge.

Our encapsulated scaffolding ensured no debris escaped the work site and vac trucks collected water run-off ensuring no lead contamination to the Port River.

Weighing of all construction and demolition materials occurred throughout the delivery of the works. This was important for the commissioning of the bridge and re-balancing of the bascule. The weight difference between the existing and new deck totalled 11t, this resulted in 45t of loose steel bars to be removed from the counterweights by hand.

Birkenhead Bridge once completed and re-opened

Innovations

The new Composite Fibre Technology Decking System was selected for its light-weight properties and exceptional strength and durability, however there remained uncertainty between the detailed design and the material properties, including how to retrofit into the heritage-listed bridge.

We undertook detailed analysis to strengthen the engineering design of the decking system. Trial tests of the material ensured that the material could achieve practical installation and perform against design and load bearings requirements. Tests included modelling and shop trials of force to achieve the required camber. Each deck element was pre-drilled onsite to suit the 80-year-old steel work fastening requirements, with work crews drilling over 1400 holes to ensure a sound fit.

High-Risk Scaffolding over Water

Scaffolding crews constructed four 17.5m by 7.5m by 3m high modules on a hardstand next to the bridge. A crane then loaded each scaffold section onto a barge which transported it to the underneath of the Birkenhead Bridge.

Chain block lifting equipment installed to the under structure of the bridge then raised the scaffolding modules into place. An elevated working platform positioned on the barge then allowed for work crews to secure the scaffolding structure in place at a distance of approximately 2m below the bridge's road level. The crew repeated the process three more times to install the remaining three modules.

The bridge was re-opened to the public on the 2nd November.

Did you know:

During construction in 1839, a rudimentary diving bell was developed by chief engineer P.J. McMahon in an effort to keep the project's underwater work on schedule. Any relation?

BACK TO SCHOOL
FOR OUR ALICE SPRINGS TEAM

Ltyentye Apurte Catholic School, is located in the Ltyentye Apurte Community (also known as Santa Teresa), a remote Arrernte Aboriginal community approximately 80km south east of Alice Springs in the Northern Territory.

McMahon Services were engaged to undertake the new construction works of classrooms at the school, with the works being delivered by our Alice Springs team. The project required the demolition of an existing art room building, decommissioning of all electrical and water services, and preparing the site for the new building pad.

Construction was then required on the new 430m^2 building which included four classrooms, a breakout area and veranda. Works included base pad preparation, concrete footing and slab construction, structural works, roofing, windows and doors, electrical works, hydraulic works, mechanical works, ceilings and linings, joinery, painting, floor coverings, termite protection, landscaping and commissioning.

There were additional works that included the demolition of an existing perimeter fence and its replacement with a 2.1m high spear topped fence with gates.

All major work packages were self-performed by McMahon Services and where subcontractors were utilised, they were drawn from the local and surrounding communities.

Indigenous Participation

As a commitment to local development and Closing the Gap, McMahon Services engaged with Catholic Care Northern Territory, the local community development program provider, and the Principal of the St Joseph's Flexible Learning Centre to create opportunities for students to participate on the project. This was achieved through work experience, monitoring and training programs for four students who developed entry-level building construction experience on site.

The project also employed an Indigenous Class A electrician and an Indigenous electrical apprentice for the duration of the works, and assisted in the apprentice completing his Certificate III in Electrotechnology. Both electricians participated in training students on site, as did two additional Indigenous employees who delivered the roofing and cladding works.

THE PROJECT ACHIEVED 25% INDIGENOUS PARTICIPATION ACROSS ALL WORKS.

OLYMPIC PERFORMANCE FOR OUR DEMOLITION TEAM

Located 560km north of Adelaide, Olympic Dam is one of the world's most significant deposits of copper, gold, silver and uranium. The mine comprises both underground and surface operations and operates a fully integrated processing facility from ore to metal.

The underground mine is made up of more than 450km of underground roads and tunnels. Ore mined underground is hauled by an automated train system to crushing, storage and ore hoisting facilities.

The processing plant consists of two grinding circuits in which high-quality copper concentrate is extracted from sulphide ore through a flotation extraction process. Olympic Dam has a fully integrated metallurgical complex with a grinding and concentrating circuit, a hydrometallurgical plant incorporating solvent extraction circuits for copper and uranium, a copper smelter, a copper refinery and a recovery circuit for precious metals.

The existing 1000t bin located at the Mine End of the Olympic Dam site, adjacent to a 500t bin, had reached the end of its serviceable life and the bin shell was starting to lose its shell integrity, posing a risk to personnel working in and around the bin.

We were engaged to undertake the works which required the demolition of the 1000t ore bin, 500t bin, the Whenan Shaft conveyor frame work over the haul road, and all footings associated with the bins and conveyor. Works were completed during a shutdown period and therefore required a 24-hour working schedule until completed.

We utilised our PC1250 Excavator with grab, hammer and shear attachments, PC850 Excavator with a long reach shear attachment, a PC450 Excavator with grab, shear and pulveriser attachments to undertake the mechanical demolition.

We undertook extensive pre-works before the shutdown, continuing on with the demolition of the bins and associated infrastructure.

The workforce peaked at 19 and we completed 5500 work hours.

"Olympic Dam is a world-class multi-generational resource that continues to make a significant contribution to the South Australian economy"

LAURA TYLER, OLYMPIC DAM ASSET PRESIDENT

The commemoration of the opening of the Port Pirie office, which opened in 1983.

NORTHERN REGION STILL GOING STRONG

For 30 years, McMahon Services has operated continuously in South Australia's north. Committed to the region and its communities - we consider ourselves a true local.

Back in 1990, our first major works were for the Nystar Port Pirie Smelter where we still deliver, to this day, 24/7 industrial services and labour hire for shutdown works, minor capital works, general maintenance services, asbestos removal, demolition projects and a host of other industry offerings showcasing our diverse capabilities.

In the same year, the ongoing nature of our Nyrstar contract allowed McMahon Services to establish our first regional office in Port Pirie, further concreting our commitment to the Upper Spencer Gulf.

In 2012 we opened our Whyalla office, and more recently we established an office in Woomera, expanding our service delivery capability across the region. Locally, we now employ over 100 people in both office and project-based roles, supported by over 60 major plant and equipment items. The vast majority of our staff are locals who live and work in the region.

In 2015 we commenced our then second largest ever project, the Augusta Power Station Decommissioning and Ash Dam Remediation works for Flinders Power. Completed over three years and at its peak employing over 120 people, the project cemented McMahon Services as the region's leading construction and services company and one of the largest local employers.

Today, with our commitment to the region at front of mind, we are investing back into the communities that have supported us for all these years.

Continuously searching for ways to positively impact local people through the delivery of high-quality infrastructure and job creation, McMahon Services have commenced on one of our bravest endeavours to realise our vision for the future of the region.

The recent demolition of the local Port Pirie Abattoir which closed its doors some years ago, has provided an exciting opportunity to create hundreds of jobs. Working with ADM, the world's largest grain commodity company, McMahon Services are looking to turn the area into a thriving and diverse industrial park.

Works have already commenced on a grain bunker facility for ADM and it is hoped that grain will soon be exported internationally from the local port. Additionally, in line with McMahon Services environmental commitment to resource recovery, works are underway to establish a state-of-the-art recycling business, again, providing many future employment opportunities.

It is hoped that other business will also be encouraged into the area by the availability of land close to a local port and established industrial park infrastructure, providing diverse employment requirements and stimulating the local economy.

We are proud of our history in the north and our three decades of delivery for local industry using the skills of local people and look forward to many more decades as a proud Northern South Australian business.

McMAHON SERVICES PROUDLY SUPPORTS AUSTRALIAN OWNED CONTRACTORS

McMahon Services recently became the first South Australian member of Australian Owned Contractors. (AOC) advocates for Australian owned construction companies to have more opportunities to deliver major public infrastructure projects across the country.

97% of Australia's largest public infrastructure projects are delivered by Tier One contractors and foreign owned companies deliver nearly 80% of this work, with Australian owned mid-tier companies such as McMahon Services delivering less than 3%.

Australian owned mid-tier contractors have the physical and technical capacity to play a significant role in building public infrastructure but procurement processes often reduce their involvement in this market sector.

AOC support the breaking up of public infrastructure projects into smaller packages providing the ability for members to bid for them, resulting in increased competition and supporting the growth, capability and sustainability of the local mid-tier construction sector.

To achieve this, AOC are working on "industry sustainability" criteria as part of the procurement process for all major public infrastructure projects. The "industry sustainability" criteria would encourage the participation of mid-tier contractors in head contracts, and would assess the nature and extent of mid-tier contractor involvement in the delivery consortium as part of the broader evaluation process, which would include design, construction and project management capability.

We are proud to support AOC and look forward to helping define the "industry sustainability" initiative to ensure that the maximum return on investment can remain in Australia, benefitting our staff and their families.

McMAHON SERVICES ACHIEVES MAJOR MILESTONE WITH UPGRADE OF PREQUALIFICATION STATUS FOR ROADS AND BRIDGES – R4 B3 F100

In February 2020, the Department of Infrastructure and Transport (DIT) awarded McMahon Services its new prequalification for road construction (R4) and bridge construction (B3) within the Austroads National Prequalification System.

These are some of the highest ratings and means our business can tender and deliver significantly more complex road and bridge infrastructure projects across Australia. McMahon Services financial strength was also recognised, with McMahon Services achieving an F100 financial rating which qualifies our company to deliver projects in excess of $100 million.

This recognition by State Government road authorities is testament to McMahon Services' continual investment, growing engineering and construction teams and successful track record in delivering major transport infrastructure projects for both Federal and State Governments around Australia.

Our success in road and bridge construction is demonstrated in recent projects including the Port Wakefield to Port Augusta Alliance, the Birkenhead Bridge Project, and various road construction works at Department of Defence facilities in the Cultana Training Area and Woomera Range Complex.

The prequalification allows McMahon Services to undertake highly complex transport projects across Australia and further diversify our service capabilities, positioning us as a top tier contractor in the Australian construction market.

DRIVING OPPORTUNITIES

PORT WAKEFIELD TO PORT AUGUSTA ALLIANCE

Port Wakefield Road typically carries 8800 vehicles per day; however, this can increase to around 16,000 during holiday peak periods. As a result of high holiday traffic volumes and conflicting traffic movements at the intersection with the Copper Coast Highway, lengthy queues have been experienced causing substantial delays. The Augusta Highway and Copper Coast Highway intersection north of Port Wakefield is one of the State's busiest regional road intersections being a national and regional link between Adelaide, Port Augusta and the Yorke Peninsula.

The project will improve traffic flow and reduce congestion for all road users, particularly during peak travel times and public holidays, and improve safety and freight productivity along the National Land Transport Network.

The Port Wakefield to Port Augusta Alliance (PW2PA), a consortium of CPB Contractors, Aurecon and GHD, in alliance with the Department for Infrastructure and Transport, will deliver the Joy Baluch AM Bridge Duplication in Port Augusta; the Port Wakefield Overpass and Highway Duplication; and the Augusta Highway Duplication Planning Study, between Port Augusta and Port Wakefield, with a combined project value of approximately $240 million.

McMahon Services are pleased to be a Sub-Alliance Partner undertaking the Port Wakefield Overpass and Northern section of the Port Wakefield Highway Duplication. This Sub-Alliance model is a unique and innovative method of integrating a local supply partner such as McMahon Services into the Alliance. It allows smaller contractors to self-deliver sections of the overall works while maintaining the full transparency and collaborative culture principles set out by the Alliance Delivery Model. The Sub-Alliance effectively functions as the self-performing component of the main Alliance.

The Sub-Alliance is achieving key successful outcomes including:

- Integrating the local and regional supply chain into the main Alliance
- Directly engaging with Aboriginal business to deliver key scope
- Achieving aboriginal employment and participation
- Providing skills and trainee development.

McMahon Services' personnel have been fully integrated into the team since the expression of interest phase and formed an integral part of the successful bid team. Our team have continued into construction planning including having key personnel seconded into the main Alliance while also developing our Sub-Alliance scope of work.

We are excited to move into full construction activities in late 2020 and are proud to be pioneering the Sub-Alliance model to ultimately provide greater opportunities for local South Australian businesses.

ARCHITECTURAL BUILDING DELIVERY

McMahon Services pride ourselves on delivering complex projects and successfully managing constructability challenges, and our Building Division is no different.

Expanding our service capability from Roofing and Cladding, our journey into Building commenced with the delivery of functional warehouses and utilitarian commercial facilities in the industrial, commercial and Defence sectors.

As our portfolio of successfully delivered projects grew, so too did the complexity of what we could achieve.

Today we build commercial, industrial and office buildings across most sectors ranging from hygiene-controlled food and beverage production centres, high-security Defence complexes, high voltage substations, school enhancement works, and durable buildings delivered in some of the remotest and toughest conditions found anywhere in Australia.

McMahon Services Building Division is now moving into the delivery of high-quality finish architectural projects where our clients' expectations on aesthetic outcomes are just as important as the structural and functional nature of their buildings. Our unique ability to self-perform the majority of the works helps us in achieving these high-quality objectives.

Showcasing our abilities in this area, was the extension and fit out works completed for Commercial & Legal's head office at 278 Flinders Street, Adelaide. This project required imported front facade glazing with internally integrated decorative timber, requiring millimetre accuracy for the supporting structural steel. Construction accuracy was essential with exceptionally low tolerances to ensure structural integrity and the interface between the existing and new building.

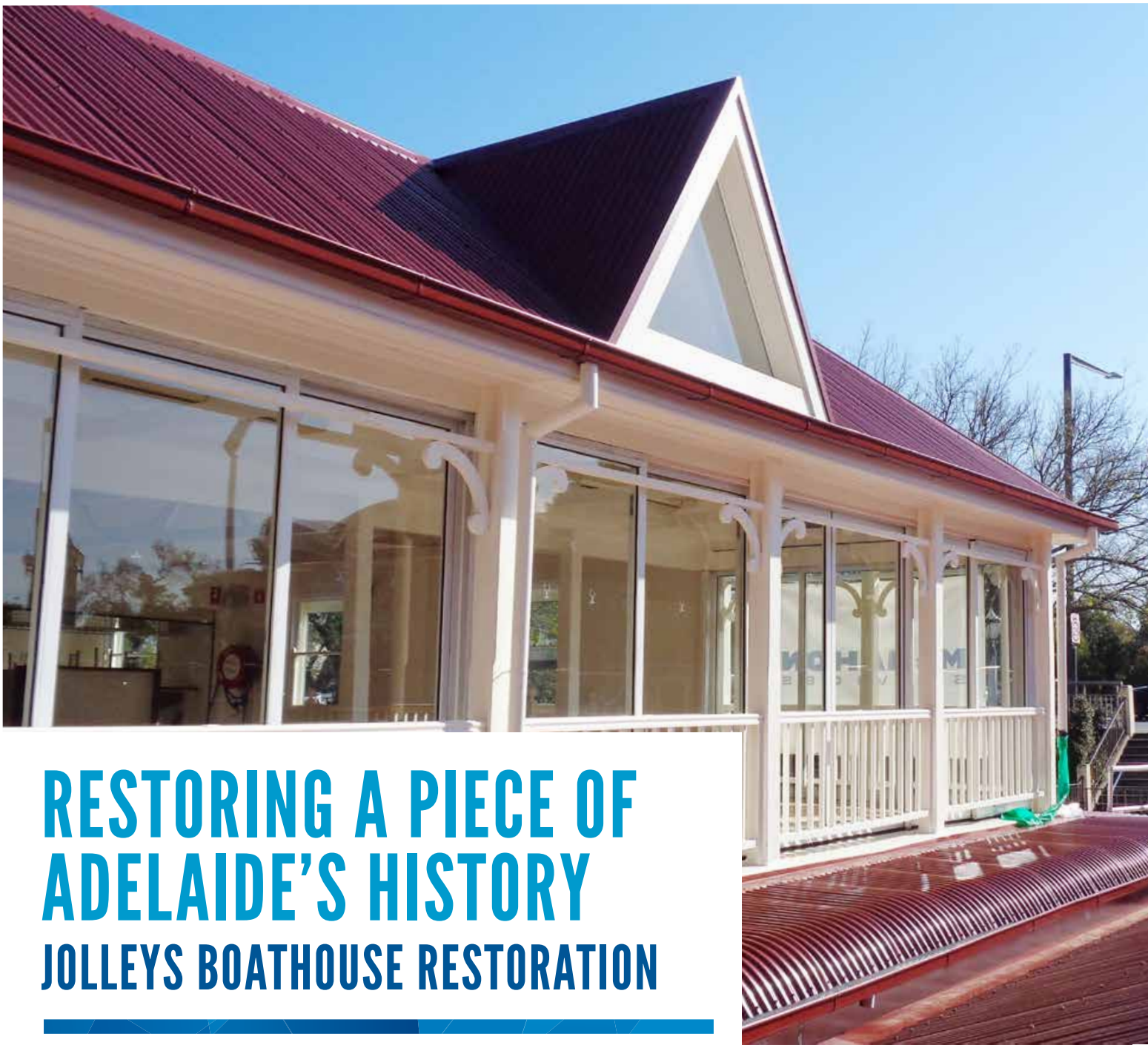
Further demonstrating our capabilities was also our successful completion of the Academy Fit-out Works at Hindmarsh Education Development Centre, and the New Sports Centre Gymnasium and Science Centre Refurbishment for Saint Mark's College in Port Pirie, each with their own set of unique challenges but still delivered to highest architectural and aesthetic standards.

The Woomera Area School STEM Room Upgrade with high-quality finishes faced challenges of a different kind resulting from its remote location in outback South Australia. Trades travelled 560km from Adelaide to complete specialist works and needed to be accommodated. Usually not much of an issue, but was especially difficult as the nearby Olympic Dam Mine was also conducting a major shutdown for maintenance works.

Building upon our successes in 2020, our capabilities and capacity continue to grow. We now work with clients in Early Contractor Engagement, Design and Construct delivery frameworks to assist in project delivery where scope and early risk management achieves the best outcomes in a collaborative environment.

Future building works underway include the modernisation of buildings at the Osborne Naval Shipyard, and reconstruction works of hospitality properties on bushfire ravaged Kangaroo Island.

We are proud of our portfolio of works and look forward to delivering many more complex architectural and aesthetically pleasing buildings for our many clients into the future.



RESTORING A PIECE OF ADELAIDE'S HISTORY

JOLLEYS BOATHOUSE RESTORATION

Originally built in 1910 as a boathouse, and later restored as the Jolleys Boathouse Restaurant in 1987, the building is idyllically situated on the banks of the River Torrens near the Adelaide Bridge. The restaurant has more of a story than most because its roots extend back into the very formative days of our current restaurant scene a decade earlier, when we didn't have many restaurants at all, and in 1968 Adelaide only hosted 22 licensed restaurants – and Jolleys was one of them!

Today it operates as one of Adelaide's premier restaurants and function rooms.

The temporary closure of entertainment venues forced by the COVID-19 pandemic prompted the kick start of various structural improvement works that had previously been delayed.

McMahon Services unique ability to provide all of the works required for the complete restoration of the building was a key factor in our selection as successful contractor with 95% of works being self-performed using our own in-house teams including our building, asbestos and hazardous waste, roofing and cladding, scaffolding and cranage divisions.

250m^2 of McMahon Services owned Layher scaffolding was installed whilst 225m^2 of asbestos containing cladding was replaced and painted. Use of the Layher system not only mitigated the risks of working at height but also enabled complete encapsulation for safe and efficient asbestos removal works. Roofing works required the removal and included installation of 520m^2 of roofing sheets and included installation of new guttering, piping and flashing.

Other works included refurbishment and fit-out of the first-floor male toilets, and the refurbishment of the upstairs bar area with new joinery and wooden panelling. Electrical works included the replacement of all internal light fittings in all refurbished areas. Mechanical works included the removal and reinstatement of air conditioning units.

Works were progressing well until structural elements previously thought to be in good repair were exposed during asbestos removal works

revealing significant damage caused by age and weather and threatening to cause significant delays.

Working with Adelaide City Council, who provided the services of an engineer able to fast track permits and approvals for any design variations required, significantly reduced the impact to program and minimised project delay with the project team handing over the project to meet the required October 2020 completion date.

The restaurant is now open, allowing for diners to relish in the newly updated restaurant, with the same beautiful backdrop.

INTRACT 2020 AT A GLANCE

86%
INDIGENOUS EMPLOYEMENT RATE

27%
FEMALE EMOPLYEMENT RATE

At Intract Australia, we have been the drivers behind positive change in the Australian economy, as one of the nation's leading integrated Indigenous Construction Service companies.

From housing maintenance works in remote Indigenous communities in the Northern Territory, to civil and building works for Defence in South Australia, we've made a difference and an ever-lasting impact in the Australia we see today.

Intract are the remote and regional specialists, capable of delivering small to large projects in any environment.

As a result, Intract has been creating social impact for Indigenous Australians since 2010. We think deeply about what we do and how it impacts our local communities and we look at every project as an opportunity to grow our people and increase Indigenous participation within the workforce.

COMMEMORATION OF A SPECIAL EMPLOYEE

In 2017, Intract lost an incredible employee, Des Nicholls, who passed away suddenly. Des joined Intract in early 2016 as a Supervisor and Trainer, quickly becoming a mentor and role model to the team. He was a highly valuable employee with a contagious smile and positive attitude.

Since Des' passing, Intract have created an award in Des' honour, the award to be bestowed upon an Intract employee who possesses the same passion, impressive work ethic and positivity that Des showed us all.

But John Briggs (Intract CEO) wanted to do more, and wanted to have something for Des' family to remember him by, and for others to enjoy. After months of planning and organising – we are proud to share that on Wednesday 7th October we unveiled a memorial plaque at the Northern Connector project site – a project site and team that Des was a valued member of. The unveiling was attended by Des' family and friends, including his wife and son, as well as Hon Dan van Holst Pellekaan MP, Minister for Energy and Mining, who also gave a heartfelt speech.

Des' contribution was immeasurable to our employees and community, and we hope that his family, friends, colleagues and visitors alike can enjoy this new commemorated space.

WIN-WIN SCENARIO
IN UTILITIES CO-ORDINATION

"A strong and prosperous Indigenous business sector is key to empowering Aboriginal and Torres Strait Islander Australians"

SENATOR THE HON. NIGEL SCULLION, MINISTER FOR INDIGENOUS AFFAIRS

It is estimated that Aboriginal businesses are around 100 times more likely to employ an Indigenous person than other businesses, and therefore the creation of a strong, vibrant and diverse Aboriginal Business Sector is the key to creating increased opportunities for Aboriginal employment.

The South Australian Government is committed to making this happen through the SA Aboriginal Economic Participation Strategy which leverages opportunities for Aboriginal employment and business enterprise from government procurement, enabling them to build their capability and capacity to become competitive in the open market.

Putting this commitment into practice, the Department of Infrastructure and Transport (DIT) responded to a market proposal from Intract Australia presented under the Aboriginal Economic Participation Strategy to undertake the utilities service identification and relocation for a proposed major infrastructure project.

The proposal offered significant benefits to the State Government not only through Aboriginal participation but also through Intract's unique ability to provide a multi-disciplinary turnkey solution to the complex issue of accurate and effective utilities service identification, modelling and relocation.

De-risking the Department's Major Infrastructure Projects

It's not unusual for six or more contractors to be involved in identification and relocation works for major infrastructure upgrades undertaken by the Department, sometimes resulting in difficulties co-ordinating the works and getting accurate data efficiently through the process.

Intract's integrated approach reduces this interface to a single point of contact for the Department. By scoping, identifying and modelling in-ground services to provide accurate engineering design information for new projects, we can provide significant cost savings.

Real Outcomes for Aboriginal People and Enterprises

Service identification and modelling has proven to be an excellent entry point for Aboriginal trainees and apprentices to learn real skills on multi-disciplinary sites. Through the delivery of successful outcomes and the award of additional works for a number of upcoming infrastructure projects, we have been providing continuous service identification works for over 12 months, allowing employees longer term training and employment opportunities. **A key outcome of the program to date is a 55% Aboriginal participation rate, far exceeding Department targets.**

In addition, Intract can demonstrate the capacity to successfully deliver this complex multi-disciplinary service capability, proven to provide significant time and cost saving to major infrastructure project delivery, strengthening the Aboriginal business sector.

Intract has worked with the Government to improve several major intersections across metropolitan Adelaide including Goodwood, Springbank and Daws Roads, Portrush and Magill Roads, Main North, McIntyre and Kings Roads, and Grand Junction and Hampstead Roads.

We look forward to completing many more works under the same model, providing real benefits for Aboriginal people on real projects.

ALIGNING CULTURAL NECESSITIES LEADS TO SUCCESS

AT MANINGRIDA AND GUNBALANYA

The Department of Local Government, Housing and Community Development ("Territory Housing") manages and maintains public housing dwellings in remote communities under the National Partnership for Remote Housing Northern Territory. This agreement aims to "improve housing conditions and reduce overcrowding in remote communities in the Northern Territory". Better housing aims to make families healthier, strengthen communities and enable economic growth through job and training opportunities.

In 2013 and 2014, Intract Australia (Intract) secured two contracts with the Department for Tenancy Management and Housing Maintenance Coordination Services, each covering the remote Arnhem Land communities of Maningrida and Gunbalanya.

Due to the success of the contracts to date, in 2020 the client again extended Intract's term for a third time by one year to June 2021.

Culturally Flexible Employment Model

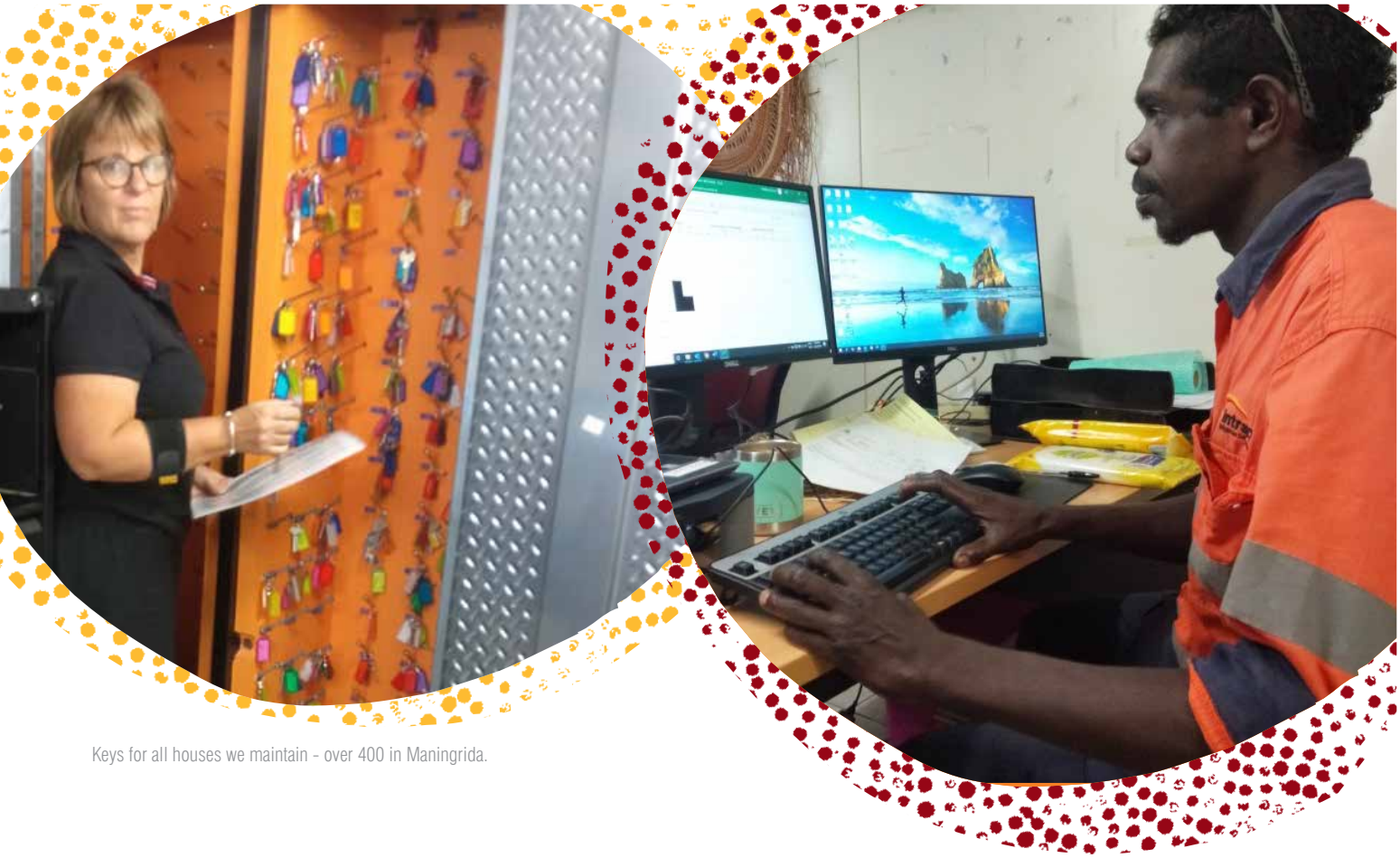
A key success factor for the contract is Intract's flexible approach to salaried employment, designed to better meet the cultural needs of the local Aboriginal employees delivering the works.

Salaries bring many benefits including the security of a regular income, leave entitlements, improved credit ratings, positive mental health and wellbeing. For Maningrida and Gunbalanya employees, financial stability allows for regular and consistent support to family and kin, with the benefits of employment extending beyond individuals and nuclear families and through to local communities.

Some past tenancy and maintenance contracts resulted in management issues that stemmed from conflicts between Government policy and legislation based on Western cultural values, and Indigenous cultural values, belief systems and behaviours. Aboriginal staff sometimes need to leave work unexpectedly to fulfil cultural expectations such as sorry business, and complex kinship systems and traditions can often dictate who an individual can speak to or not.

A key benefit Intract brought to the Tenancy Management and Housing Maintenance Coordination Services contract was the implementation of systems and processes that cohesively balanced contractual requirement with cultural necessities, ensuring a smooth delivery of the works. These have included:

- Monthly contract governance meetings that address upcoming cultural events and their implications for service delivery;
- Flexible leave arrangements so employees can take time out for cultural obligations and expectations;
- Flexibility in work hours such as out of hours and weekend works;
- Multi-skilling of the workforce allowing employees to step in and take over the workloads of employees when they are unavailable because of cultural obligations;
- Bicultural training and support in understanding and communicating both Indigenous and western cultural values, belief systems and behaviours, such as educating Territory Housing staff on the importance of being able to lock a door to protect oneself from black magic, or aiding tenants in understanding Government legislative and policy drivers.



Keys for all houses we maintain - over 400 in Maningrida.

Community and Stakeholder Engagement under a Cultural Framework

Creating a shared understanding of cultures and their differences has been integral to the contract's success. Local staff aided in this integration through the practical application of their intricate knowledge of local kinship systems and languages.

An example of how this approach benefited the contract was our employees' ability to negotiate accommodation in remote communities where there already existed a housing shortage, achieved by building strong relationships with community stakeholders over the duration of the contract.

Local staff have overcome the challenge presented by the many languages spoken at the two communities. In Maningrida, residents can speak up to twelve different languages and dialects, which in the past have caused communication breakdowns. Multilingual local employees have removed the barriers that would have otherwise hindered the delivery of works.

Another challenge the contract faced in 2020 was the emergence of the COVID-19 coronavirus pandemic. Intract implemented a contract-specific COVID-19 Response Plan that addressed both Local and State Government requirements and cultural appropriateness.

COVID-19 resulted in economic uncertainty in many remote communities including Maningrida and Gunbalanya that led to anti-social behaviour, increases in job seeker payments and early superannuation access. Intract responded to these challenges by:

- Attending community meetings to share and discuss changing Governmental support offerings and community requirements in managing pandemic responses
- Working with organisations such as the Arnhem Land Progress Aboriginal (ALPA) corporation — one of the largest employers of Aboriginal people in Australia — to support community members wishing to gain skills through the Department of the Prime Minister and Cabinet's Work for the Dole scheme
- Working with the Department of Education, Skills and Employment's Community Development Program to create pathways of employment for local people
- Advocating and promoting community health and wellbeing projects such as a men's shed in Gunbalanya and Maningrida
- Working with Mala'la Aged Care and Community Services to provide aged and disability services to applicable tenants during maintenance works.

We believe that the development and implementation of culturally safe frameworks applied to uniquely supported training programs and opportunities for our staff is fundamental.

TODAY THE PROJECT EMPLOYS 11 PERSONNEL, TEN OF WHICH ARE LOCAL ABORIGINAL PEOPLE

FYANSFORD SILO DEMOLITION AND LAND REMEDIATION

Internationally recognised street artist, Rone, returned to his home town of Geelong in 2017, turning three unused silos from an 'eyesore' into artwork that celebrates the city. He painted three large stylised images of local faces on the side of the silos – Corrina Eccles, a descendent of the queen of the Wadawurrung and traditional owner, Cor Horsten, who has had a 35-year career at the Geelong Cement Works, and Kelly Cartwright, a dual Paralympic gold medal-winner.

The concrete silos, which have been out of commission since 2001, sat within the former Geelong Cement Works industrial site, next to a large residential development under construction.

In 2020, the owner of the site, Adelaide Brighton Cement, deemed the site unsuitable for restoration and that it was potentially unsafe if left standing over the long-term.

The silo demolition works comprised civil works, asbestos and hazardous materials abatement and mechanical demolition of multiple structures including 27 reinforced concrete silos,

ancillary buildings and three grouped silos ranging in height from 25m to 55m.

Work crews operating with safety harnesses from work boxes suspended from 200t, 100t and 60t cranes systematically removed asbestos and hazardous waste. 16t of non-friable asbestos-containing materials and 2000m^2 of asbestos containing sheeting were removed.

Demolition works were completed using a long-reach Komatsu PC1250 demolition excavator with shear and cutter attachments. Where silos exceeded the excavator's maximum reach of 40m, works were completed manually using the work boxes suspended from cranes. Demolished concrete across all works totalled 25,000t.

Civil works included the dewatering, decontamination and removal of underground silo footings, tunnels and basements to depths of 8m to 10m below ground. Many of these structures protruded into the neighbouring properties, requiring the project team to clear these obstructions for a current residential subdivision underway on an adjacent construction site.

Project Challenges

Various latent conditions slowed the demolition works and required careful planning and close consultation to ensure their proper handling. The first being the discovery of over 8000t of abandoned cement present in the silos. The project team processed, loaded, transported and disposed of these additional materials without affecting the overall program of delivery.

DEMOLITION OF A GAS TO LIQUIDS PLANT AND ASSOCIATED FACILITIES

Gas to Liquids (GTL) is a refinery process to convert natural gas or other gaseous hydrocarbons into longer-chain hydrocarbons, such as gasoline or diesel fuel.

McMahon Services were engaged to demolish an aboveground GTL Facility and all associated infrastructure across a 500ha site, including steel towers with various pipes and pressure vessels, a waste water treatment plant, a reverse osmosis unit, coal tar compound and the gathering network of pipes, flanges, valves and vessels.

The functionality of this associated infrastructure needed to be identified and understood prior to demolition to ensure hazards associated with environmental spills to ground, pressurised systems, hazardous components and fire were eliminated or mitigated.

The facility, which had been decommissioned since 2018, was inoperable and was mechanically and electrically isolated. Legacy plant and equipment remaining on site comprised of processing plant and equipment, pipework, vessels, tanks, surface and sub-surface gathering networks, and a number of auxiliary buildings and equipment.

Prior to any demolition works commencing, pipework and vessels were inspected and cleaned of any residual materials, predominately through hydro-blasting and the undertaking of a triple rinse process, which involved the application of tank cleaning detergents coupled with hydro-blasting and vacuum cleaning techniques.

Four coal tar storage tanks with a combined capacity of 415,000L, a 50,000L diesel tank and all associated pumps and piping were also cleaned using similar methods.

We utilised mechanical demolition using our long reach excavator, which mitigated any working at heights risk that would have otherwise been present through manual demolition works. The largest tower on site measured approximately 20m and required the use of a high reach excavator with demolition shears to safely dismantle. 1.5km of pipework and 767t of various metals were recycled off site.

Gas testing equipment was calibrated for known gases present on site and run continuously during the demolition works. No hot works were permitted due to the risk of the presence of flammable materials in the redundant infrastructure.

DESIGN AND CONSTRUCT IN HERMANNSBURG

The outback town of Hermannsburg, also known as Ntaria, is a historic settlement and a National Trust-listed historic precinct located 130km west of Alice Springs. The town has a population of approximately 600 people, of which 85% identify as being Aboriginal.

McMahon Services was engaged to deliver the design, construct and fit out works for a new government building in the town, including civil and stormwater, concrete foundations, mechanical, electrical and hydraulic services, structural works, security, fire services, doors and windows, fencing, roofing and cladding, joinery and painting.

Consideration of the design and its constructability was a key to the project's success. Construction consisted of a "slab on ground" design with a pre-fabricated structural panel roof and walling system. This design minimised on-site construction requirements given the remote nature of the site and the extreme weather conditions likely to be encountered during construction.

Being 130km west of Alice Springs within the MacDonald Ranges of the Central Australia region of the Northern Territory, the site provided several logistical challenges including accommodation, transport and materials supply. Careful planning was essential to ensure the availability of the resources, including power and water. Onsite generators were required to provide the site with a reliable power supply and water was tinkered in to ensure adequate water without straining the communities already limited supply.

Roof and wall elements were prefabricated in Perth by SIPS Industries who specialise in products with high thermal insultation properties, essential to keeping the building comfortable, and were transported to site using a single semi-trailer truck. Not only did this allow the design to down-size mechanical heating and ventilation requirements, it also reduced the build from slab level to lock up to be achieved in only eight days.

Utilising local participation on this project was priority. Workforce peaked at 25 personnel, the project achieved a 6% Indigenous engagement rate, and completion of the project occurred two weeks early.

Impressively, the design and quality of the construction works of the building resulted in a 5-star Green Star rating from the Green Building Council of Australia.

COMMUTE TO CONSTRUCTION – BELLA VISTA TRAIN STATION ACTIVATION AREA

The $8.3 billion Sydney Metro Northwest was a project to construct a rapid transit link to the north-western suburbs of Sydney, New South Wales. It is Australia's largest public transport project to date, and included the construction of eight new metro stations, five existing stations upgraded to metro standards and 4000 new commuter car parking spaces.

At peak, the Bella Vista Train Station is met with a train ever four minutes. During the Sydney Metro Northwest project, it was identified that there was a need for a recreational space associated with the station.

An Interim Activation Area would provide a functional space for the community, train commuters, and local residents until a permanent space could be constructed. Landcom engaged planning and design consultancy company, Place Design Group, to design the Interim Activation Area and our Sydney team were awarded the construction works.

Works for the Interim Activation Area included bulk earthworks, creation of a raised platform joining to the existing station, construction of decorative reinforced concrete path walk ways and the installation of hydraulic and electrical underground services, we undertook comprehensive landscaping, the construction of an architectural deck and the installation of commercial outdoor furniture such as large seating pots and planters, picnic settings, benches, and the planting of native trees and plants.

The design incorporated large synthetic turf areas where children and families to come and play and a stretch of reinforced pavement that will allow food trucks and vendors a place to trade.

During the works, the project team demolished 10t of concrete and bricks, poured 190m^3 of new concrete, moved 3160m^3 of earth, installed six auger piles, laid 36m of high voltage and 1540m of low voltage cabling, and landscaped 1040m^2 of urban space.

Workforce peaked at 15 and 97% of all subcontracted works were sourced from New South Wales based small-to-medium enterprises.

A major challenge facing this project was completing the works in the short timeframe. The project team achieved this through multiple approaches.

The first strategy was to engaged subcontractors and suppliers who had recently completed works on the Sydney Metro City and Southwest Project. Thus, the project team were able to procure leftover stock that matched the architectural styles of the Metro Station.

The second approach was to overlap subcontractor works in instances where this would not normally occur on a delivery program of this type. For example, while landscaping was being completed on the south side of the project, casting and forming of planter boxes occurred on the northern end of the site. This strategy ensured the project was delivered on time.

The result – a beautiful, architecturally designed community space.

ICONIC LE CORNU FURNITURE
SITE DEMOLITION AND CIVIL WORKS

11,400
WORK HOURS COMPLETED OVER THE PROJECT

The iconic Le Cornu brand has been in Adelaide since 1861 when Phillip Joshua Le Cornu set up a small shop and stable in O'Connell Street, North Adelaide, and started producing furniture, commencing direct sales to the public in 1954.

In 1974, Le Cornu purchased the old Chrysler car assembly plant, and the 3.6-hectare site on Anzac Highway has been a historically recognised icon in Adelaide ever since. Sadly, in 2016 Le Cornu closed its doors for good.

In 2017, Kaufland purchased the site to establish a 20,000m^2 supermarket under their international brand. In order for Kaufland to develop their supermarket onsite, the former Le Cornu warehouse required demolition, site remediation and civil preparation works across the site.

The site comprised of warehouses, an administration building, pedestrian walkways, carpark, and concrete slabs, all requiring demolition. A decommissioned underground storage tank was identified on the south side of the site, and required remediation of residual hydrocarbons. It was removed through mechanical demolition methods and excavation. Demolition was achieved used mechanical methods with our specialised demolition excavators using a variety of attachments including buckets, grabs, shears and pulverisers.

Other works included the removal of 3400m^2 of asbestos containing roofing.

Our civil team were also on site completing the bulk earthworks to make safe areas where large underground features such as tanks and pits were removed, Level 1 backfill of large excavations, stockpile and material tracking, environmental testing, geotechnical and compaction testing.

Early on in the project a historic 'Chrysler' sign on Maple Avenue was also removed from site and preserved for future display at a local museum. This sign was situated near a powerline, which required coordination of the works and approval from SA Power Networks to complete without risking safety or damaging local electricity networks.

Environmental Performance

There were environmental concerns about the previous site conditions due to the history of the land use as a vehicle and military manufacturing site, and that chemicals may have leeched out of hidden underground storage tanks and pits.

Each stockpile that was created was given a unique identification number relevant to its location so that it could be tested for contaminants and tracked. Testing directed how each stockpile was treated and ranged from removal from site as contaminated waste or buried at a depth that would not affect the sites future use.

The site was cleared and was handed over to Kaufland, but at the start of 2020 it was publicly announced that Kaufland would no longer be going ahead with the construction of their supermarket chain. In October 2020 it was confirmed that the State Government had acquired the site, leaving the plans open for a future development.


McMAHON
SERVICES


BEFORE


AFTER

SHIPPING CONTROL TOWER TAKES A TUMBLE

The Port of Port Hedland is the world's largest bulk export port, and in 2018/19 the port hosted 3,190 vessel visits and 513.3 million tonnes of product passed through the port.

The Shipping Control Tower was built in 1968, and after 50 years the port had outgrown the capabilities and functionality of the 35m high tower. The tower had become maintenance intensive, and was unable to be upgraded with modern technology. A decision was made to construct a new shipping operations tower – thus engaging McMahon Services and design partners WGA Engineering to safely fell the tower, to make way for the new high-technology Hedland Tower – Integrated Marine Operations Centre (IMOC).

Rather than traditional mechanical demolition, it was determined that induced collapse of the tower would provide the safest demolition option. It eliminated Working at Heights risks which delivered significant cost benefits.

Salvage works included the removal of the lift car and the Control Tower's blue doors for display in the Hedland Integrated Marine Operations Centre reception area, with other miscellaneous items being gifted to the Port Hedland Historical Society.

Induced collapse design, methodology and execution

Steel plates were installed beneath the 40m by 20m by 4m cracker dust impact zone pad to protect service trenches during the collapse. 6.0m long containers were installed around the pad to minimise debris spread during collapse and protect the many services and structures in the direct vicinity of the fell zone.

The top instrument tower section of the Control Tower was cut then lifted out with a 100t crane reducing the overall height of the Control Tower to 33m.

Two pull cables with 30t shackles were then attached to the top of the tower, one for the induced collapse pull and the other as a contingency. Concrete cutting was performed at the base of the tower in a sequenced approach to ensure the tower remained stable during the cuts but sufficiently weakened so when it was pulled, the tower collapsed in the correct fall position.

The induced collapse felling was achieved with a 52t Komatsu WA600 front end loader attached to the pull cable. The loader was positioned 55m from the tower and protected by double stacked sea containers.

The final step involved a 30t excavator with a rock breaker to demolish the fallen tower. Construction and demolition waste were removed off site in semi-tippers for recycling and scrapping.

"Pilbara Ports Authority's Engineering and Infrastructure and Marine Operations teams worked closely with contractors McMahon Services and WGA Engineering to ensure the felling of the Tower occurred smoothly and most importantly, safely."

PILBARA PORTS AUTHORITY

BALLESTRIN RAPID EXPANSION INTO COMPLEX CONCRETE DELIVERY

It's been two years since Michael Hyde took on the role of General Manager of Ballestrin Construction Services, McMahon Services' concrete construction and remedial services company.

Recently, Michael took time out from his business schedule to reflect on the challenges and growth the business has faced in that time.

"Initially we were only about concrete works, often operating as a subcontractor to second and third tier builders and civil project management companies," said Michael. "Now we are the project managers."

Michael noted that a key driver behind Ballestrin's success is the experience of the team. "Two years ago, we employed a single project manager. Now we have four. All are tertiary qualified engineers with decades of experience in delivering complex infrastructure projects,"

"Our aim is to provide our clients something different form a traditional concrete company – a high end service offering more than just pouring concrete" explains Michael.

He also noted that while new starters have brought their valuable experience to the team, significant investments have been made to enhance the existing team. "Project Managers are backed by our equally qualified project engineers, who commenced as graduates, learned the nuances of our specialist services through hands-on, site-based roles, grew into their roles and can now manage and deliver concrete projects on their own, as well as Site Supervisors, who lead the work force and bring their years of experience to ensure a technically sound product is delivered to the highest safety standards."

In 2020, Ballestrin employees over 80 construction industry specialists. We operate across all states and territories of Australia and deliver complex structural concrete works for transport, building, Defence, water, industrial, resources and marine sector clients.

Leveraging his two decades tendering and project managing complex projects, Michael drove Ballestrin's new strategic direction from day one, and that strategy has paid off. Ballestrin now operates as principal contractor for tier one contractors, such as Laing O'Rourke, Lendlease and JBHP, operating on some of the largest infrastructure projects currently underway in Australia.

A key project that could potentially be the beginning of us undertaking high value concrete construction projects is the works being undertaken at the Osborne Naval Shipbuilding Precinct Infrastructure Development. Some of the works include detailed excavation of footings, beams and trenches, suspended slabs and concrete columns, and installation and pour of a post tensioned slab.

Growth has allowed Ballestrin to diversify its service offering. "A major opportunity for Ballestrin is concrete remediation works, and these projects are often as complex as constructing new structures. In the last year we've remediated waste water treatment plants in short shutdown windows, repaired critical mining infrastructure inside operating processing plants, and undertaken major concrete improvement works on large industrial complexes."

SOLID PERFORMANCE FOR OUTER HARBOR LOGISTICS FACILITY

Qube is Australia's largest integrated provider of import and export logistics services operating in over 130 locations across Australia, New Zealand and South East Asia with a workforce of over 6,500 employees. They comprise of three business units including Ports, Bulk and Logistics division, Infrastructure and Property division and Strategic Assets division.

Qube's Logistics Warehouse Facility in the Adelaide suburb of Outer Harbor required a new 9000m^2 insulated storage facility for food and beverages.

"Situated directly adjacent to the Port of Adelaide container terminal, when complete the facility will boast eight container packing and unpacking doors plus an enclosed breezeway for protected freight loading and unloading,"

"The addition of this new warehouse will provide significant opportunities for efficient freight handling particularly for customers importing and exporting in the food and beverage sector." Qube explained.

The scope of works included the placement and finish of 9000m^2 of internal fibre super flat ground slabs, the placement and finish of 1550m^2 of external combi hardstands, and the form and finish of internal pad footings including set out and installation of hold down bolts. Over 2500m^3 of concrete works were completed on site.

Additional works included the construction of 21,700m^2 of conventional pavements to the undercover breezeway road.

Extremely Tight Tolerances Achieved with Somero S-485 Laser Screed

To achieve the tight tolerances for the internal warehouse super flat floor, the project team utilised their Somero S-485 Laser Screed design to achieve very precise levelling. The S-485 significantly improved the quality and accuracy of the finished concrete levels and tolerances, and allowed for a series of continuous monolithic, joint-free pour for slabs. The Laser Screed easily overcomes difficulties posed by hand screeding fibre reinforced concrete, while quality and accuracy of levels and tolerances are dramatically improved through laser guiding technology.

The pour was complex particularly because the works occurred prior to the installation of structural steel, cladding, roofing and external doors, leaving the completed concrete floor exposed to natural elements such as sun, rain, heat, cold and wind that had to potential to deteriorate the desired flatness requirements.

Despite all challenges, the slabs were installed in 12 staged pours with a minimum final flatness or levelness rating of FF50/FL30, and were not affected to adverse weather conditions during the construction and completion of structural works.

NEW ADDITIONS TO FLEET

McMAHON SERVICES OPERATES AND MAINTAINS ONE OF AUSTRALIA'S LARGEST PRIVATELY-OWNED FLEETS OF CONSTRUCTION AND DEMOLITION PLANT AND EQUIPMENT. OUR $80 MILLION NETWORK OF COMPANY-OWNED PLANT AND EQUIPMENT IS CAPABLE OF SERVICING PROJECTS IN URBAN, RURAL AND REMOTE LOCATIONS ANYWHERE IN AUSTRALIA.

Over 400 major plant items comprise of dozers, demolition and civil excavators, graders, roller, dump trucks, batching plants, service trucks, water trucks, soil blending machines, prime movers, hook life bin trucks, low loaders, semi-tippers and cranes.

The list below is a summary of those items added in 2020.

Trucks and Trailers	
Isuzu FRR107-210 tipper	1
Volvo FM13 Hooklift Truck	1
Volvo FM13 Tandem Tipper	2
Maxitrans Quad Dog tipper trailer	2
Stoodley tri axle tipper trailer	1
Volvo FH16 Prime Mover	2

Specialised	
Rammer 2577 Hydraulic Rock Breaker	1
Salmon Concrete Pulveriser	2
Rammer 455 Hydraulic Rock Breaker	1
Kubota 20 kva Generators	2

Light Vehicles	
Hilux Ute	24
Landcruiser Sahara Sedan	2
Landcruiser ute	1

Earthmoving Equipment	
Komatsu HM300 Articulated Dump Truck	2
Komatsu PC220 Excavator	2
Komatsu PC130 Excavator	2
Komatsu PC88 Excavator	1
Komatsu PC360 Excavator	2
Komatsu PC138 Excavator	1
Caterpillar 745C Articulated Dump truck	2
Bobcat S650 Skidsteer loader	1
Komatsu WA470 Loader	3
Komatsu WA380 Loader	1
Telestack Track Stacker	3
Metso Lokotrack Impact Crusher	1
Weiler W430 Shoulder Paving Machine	1

TRANSPORT AND LOGISTICS: THE BACKBONE TO SELF-DELIVERY

"The ability to source and mobilise the necessary equipment to project sites wherever they may be is a key factor in McMahon Services offering to the industries it serves"

PRIME MOVER MAGAZINE, SEPTEMBER 2019

Our Transport and Logistics team is a critical component to how we operate as a premier construction and services delivery company. The backbone to our ability to self-perform key works on all our client's projects, McMahon Services' Transport and Logistics Group is responsible for the relocation of our extensive fleet of plant and equipment across Australia and New Zealand to where we need it, when we need it.

As a diverse multidisciplinary services provider these locations can often be hard to reach or difficult to access. From remote outback sites and offshore islands, to central business districts in Australia's largest cities and the mountains in-between, our Transport and Logistics team will get it there.

Accredited under the National Heavy Vehicle Accreditation Scheme (NHVAS) our fleet includes prime movers, AB-triple road trains, semi-tippers, low loaders and drop decks, and hook lift bin trucks able to transport every item of plant and equipment item that we own and operate, from small skid steers and one tonne excavators, to our 412t Komatsu PC4000 demolition excavator, and everything in between.

On the road for at least 200 days each year they clock up a staggering average of 1.5 million kilometres. That's the equivalent of driving every paved road in Australia and New Zealand three times over.

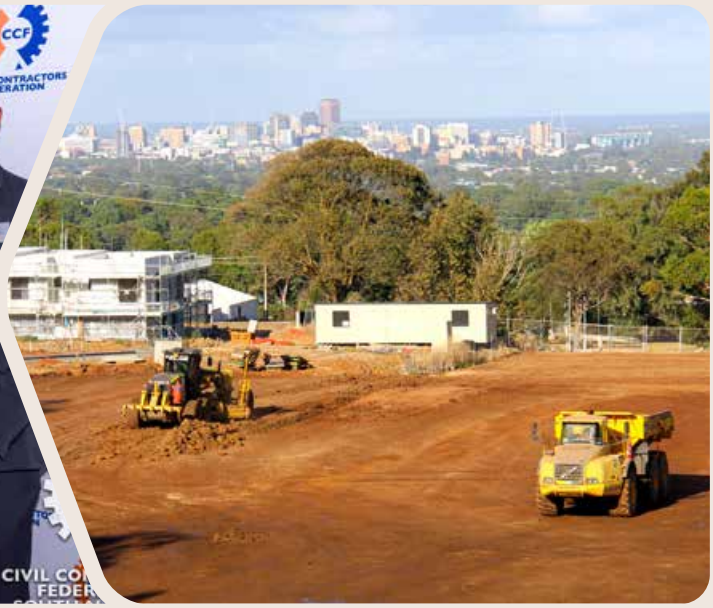
To ensure the safety of our drivers, each is equipped with either email-enabled or satellite phones when operating outside of communications networks maintaining constant communication with our head office.

Keeping the fleet in shape, our Adelaide based plant and equipment maintenance workshop undertakes regular inspections of our truck fleet as well as ensuring that each vehicle is maintained in accordance with manufacturers specifications.

Plant and equipment is not all we can move around the two countries. Our fleet also transports hundreds of thousands of tonnes of demolition waste and scrap steel from project sites to recycling centres, and similar volumes of pavement and fill materials used in civil earthworks projects as well as being fully licensed to transport asbestos, PCB oils and other hazardous wastes.

Our teams' reputation and capabilities has extended beyond McMahon Services and we now also transport goods and materials for several of our key supply partners, including Coates and Komatsu.

CCF EARTH AWARDS WIN



We are excited to announce our win in the $5 million to $10 million category for Hamilton Hill Stages 1, 2, 3A, 3C and 4 Remediation Works.

The project involved the transformation of a former 100-year waste dump into a prestigious planned community in Woodforde, Adelaide, with an impressive 99% of all waste being repurposed into geotechnical fill or recycled off site.

The project was complex and difficult to scope requiring multiple remediation strategies for differing contamination types and depths.

We effectively crushed, sorted and segregated waste streams within the old dump site so that they could be repurposed and reused as geotechnically suitable fill material to allow the bulk earthworks and reshaping of Hamilton Hill and make it suitable for residential construction.

Over a quarter of a million tonne of landfill waste was excavated, and all but three truck loads was reused or recycled.

Congratulations to the project team and everyone involved!

NEW SENIOR APPOINTMENTS

Richard Roberts
General Manager, NZ

Richard has joined McMahon Services as General Manager for our New Zealand operations. He brings 15 years of demolition, asbestos remediation and construction experience to the role, gained on projects in the United Kingdom and New Zealand. Since joining the team, he has led many business development opportunities in the local demolition and asbestos remediation markets, and has directed project delivery across the country.

Richards's expertise includes operational management of teams undertaking high-risk design and construction works, financial management and contractual delivery of complex projects, team development and management and project management. His industry experience includes healthcare, commercial, Defence, power, manufacturing, high-rise buildings and central business district works.

His qualifications include a Bachelor of Science in Geography and Geology, a Postgraduate Certificate in Management, and a Level 4 National Vocational Qualification in 4 Asbestos Management.

Peter Gratwick
Environmental Services Manager, SA

Peter has recently joined our Civil Engineering Group as Environmental Services Manager. He is responsible for business development and client relationship management across the environment and remediation market sector. His qualifications include a Master of Science (Environmental Pollution Control) and a Bachelor of Science (Geography and Geology).

He brings to the role 20 years of environmental expertise gained in Australia, New Zealand, the United Kingdom and Europe in roles as diverse as project management, business development, tender and proposals management, cost estimating and strategic planning, often on a global level.

His past projects include environmental works on Shell's 692km South Caucasus Pipeline constructed through Azerbaijan, Georgia and Turkey. Other environmental expertise includes contaminated land management, remediation, environmental testing, environmental impact studies and pollution control.

Dale Golding
Construction Manager, SA

Dale joined Adelaide's Demolition and Decommissioning Division as Construction Manager for industrial projects, with a focus of project delivery for our current and future works at BHP's Olympic Dam mine.

He brings over 20 years of industry experience in the demolition, construction, mining, automotive, manufacturing, water and Defence industries in operations, financial management, client account management and human resources roles.

His qualifications include a Masters of Business Administration, Graduate Diplomas in Management and Human Resources, and an Associate Diploma in Occupational Health and Safety.

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