

IMASSEE KOBELCO

Delivering sustainable solutions for the solar, civil and rail industries.

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Introduction

In 1998, Andrew Farrer and David Farrer joined forces to form DRASOL.

From there, we have grown to service the solar, civil, rail and waste water treatment industries in Australia. A family business, wholly South Australian owned and operated, made up of real people with the technical skills, expertise and equipment to get the job done.

At DRASOL we see investing in sustainability as the way to best serve our people, customers and communities we work in. This is our way of improving where we live today and for tomorrow.

Our values are based on reliability, respect, honesty, pride and integrity. These are the principles that define what we stand for at DRASOL and are at the core of everything we do. Our purpose is to be an innovative and solutions-based company dedicated to these core industries in Australia.

As we grow and evolve, we always look out for each other and strive to do the safe and right thing by our people, customers and communities. It is this willingness to rise to the challenge that has taken us from our beginnings to becoming an innovative, solutions-based company, always open to new ideas and new ways of improving.

Our core capabilities



Technical experience

Strong capabilities in all aspects of solar, civil, rail and waste water treatment projects, in addition to materials handling and logistics management.

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Quality management system

In-house developed Quality Management System tailored to suit diverse projects, incorporating a full suite of supporting documentation to satisfy project inspection and certification requirements.



Site-based teams

Site-based quality control teams operate alongside our trades and multi skilled operators, ensuring standards are maintained and remediation works are carried out promptly.



Fleet of modern plant & equipment

Investment in modern plant and equipment to provide advanced tools that increase efficiency, eliminating potential project delays and job re-work.





Extensive network of suppliers

Extensive network of suppliers and service providers to complement our in-house expertise.



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Industry best practice approach

Acknowledgement of current industry best-practice as the benchmark for our standards of service.



Diversity in projects

DRASOL are experienced in large and small-scale projects, working both under the umbrella of client systems and as a self-managed contractor.





Solar - NEXTracker system

DRASOL has invested extensively in procuring the specific Huck tooling and ancillary equipment necessary for installing the NEXTracker system specifically for Solar Projects.

SOLAR

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A new wave of sustainable and distributed energy

The number of solar farms under development in Australia has grown in recent years.

After several years of market and policy uncertainty and with construction costs coming down, solar farm developers and investors are feeling more confident about the prospects of medium-scale and large-scale solar power facilities.

Solar farms are distinguished from standard commercial solar installations by their size, location and purpose. Solar farms are generally in the megawatt (MW) scale and are ground-mounted as opposed to roof-mounted. Built to sell energy into the grid or to a designated purchaser – usually a heavy energy user or other commercial entity aiming to lighten electrical load or reduce their emissions footprint with clean energy offsets.

Historically, that meant building fixed-tilt solar arrays. Now however, developments in technology have resulted in advanced single-axis tracking systems with streamlined deployment and greater energy production. This in turn creates efficiencies and a positive return on investment for your next project.

These systems allow for easier construction design, offer better ground coverage, more yield and a faster payback.

DRASOL can install your solar farm in challenging locations, unconstrained from issues with terrain grades, flooding concerns or east-west facing slopes with a suitable design.



409 MW and 16,474 trackers successfully installed

With more than 409 MW and 16,474 trackers successfully installed across a diverse range of solar farm projects in Australia, DRASOL provide a winning value proposition.

We are experienced in both large-scale and small-scale projects, working under the umbrella of both external client systems and as a self-managed contractor, we are capable of providing a turnkey solution.

At DRASOL, we have extensive experience in the NEXTracker system and a healthy working relationship with the manufacturer, resulting in the ability to build a quality product in a short time frame.

We have developed safe systems of work based around modular

work groups. This greatly increases productivity with consistently high standards of quality workmanship.

On larger projects, rotation of work groups reduces fatigue and the negative effects of extended repetitive work.

DRASOL has a multi-skilled workforce trained in all aspects of mechanical installation, which allows us the flexibility to follow variances in tight project construction programs, and enables us to provide staff coverage in the event of absenteeism, should the need arise.

A core component of our construction teams are from indigenous backgrounds or members of rural communities which DRASOL have trained extensively. We believe it is important to invest in the local communities, both financially and with skills-based knowledge, and our approach is aligned with the goals of the Australian Industry Participation Policy.





PORT PIRIE SOLAR FARM

Working with local South Australian company Australian Ground Mount Systems (AGMS) DRASOL completed the Port Pirie Solar Farm owned by the Renew Power Group.

The project was made up of 206 single axis trackers supplied by NEXTracker and 18,480 Jinko PV Panels.

As with any job of this size and nature, there are challenges, but with the help of the hard working DRASOL team it was completed in time for the other contractors to follow. The crew were very proud of completing the full mechanical install from start to finish in a 5 week equivalent build programme, and MPower Solutions– the EPC were very happy.



CLIENT	Australian Ground Mount Systems (AGMS)
LOCATION	Port Pirie, SA
SERVICES	Mechanical install, Quality Assurance, Technical Support and Tooling.
SYSTEM	NEXTracker – 206 Trackers installed
TIMELINE	2018-19
CAPACITY	5 MW

MOBILONG SOLAR FARM

In May, DRASOL took up the challenge of a new product installing the Arctech Skyline, for Western Australian company Balance Utility Solutions.

The project was a 5Mw Solar Farm with 15,729 panels at Murray Bridge South Australia, 70 kms east of DRASOL's home base, Adelaide. Learning a new system has its challenges but with the help of the excellent team from Balance, the hard working DRASOL crew completed the job to the satisfaction of the client. It was a pleasure to work on a job where any issues that arose could be solved quickly and efficiently.

It was also another project where the piling was installed to a very high level thanks to Luke Cousins and his team at Pilecom. Looking forward to working with this team again soon.



CLIENT	Balance Utility Solutions
LOCATION	Murray Bridge, SA
SERVICES	Mechanical install, Quality Assurance, Technical Support and Tooling.
SYSTEM	Arctech
TIMELINE	2019
CAPACITY	5 MW



BUNGALA SOLAR FARM

The Bungala Solar Farm Project is a solar power farm adjacent to Emeroo and Wami Kata near Port Augusta in South Australia. Stage One was connected to the grid in May 2018. The second and final stage was connected to the grid in early November 2018.

The completed project contributes 220 MW to the electricity grid from 275 MWdc generation and expects to produce 570 GWh per year. The DRASOL team installed the NEXTracker system with 9,342 trackers in total.

Key services included: the mechanical install above the pile, quality assurance, technical support and provision of custom tooling. The project is in a culturally and environmentally sensitive location and was established with due consideration of local traditional heritage and the resident flora and fauna.

DRASOL sourced and engaged a significant proportion of our workforce from members of the local communities, investing heavily in the upskilling and training of these human resources.

Our engagement of these rural and indigenous community members promotes the positive effects of multiculturalism through the sector and is aligned with achieving the goals of the Australian Industry Participation Policy.





CATCON
Port Augusta, SA
Mechanical install above the pile (does not include piling work). Quality Assurance, Technical Support and Tooling.
NEXTracker 9,342 Trackers installed
2017 - 2018
220 MW

PETERBOROUGH SOLAR FARM

Developed by Renew Power Group, Peterborough Solar Farm is a 5.6 MW facility located in Peterborough, South Australia.

The clean power station consists of 15,624 Trina Solar panels mounted on NEXTracker single-axis tracking system and SMA inverters.

This medium-scale project comprising 194 trackers was installed by DRASOL in two working weeks, equating to a 30% time-saving in the client's mechanical construction programme.

Our highly flexible and multiskilled personnel were able to react and adapt to the variances in task brought about by this condensed build schedule, maintaining efficiency whilst continuing to deliver a quality product.

DRASOL also installed the PV modules on this project, and by working under the framework of our internal QA system offered a turnkey solution requiring minimal input from the client.

The challenges of working in a relatively isolated location were negated by our extensive remote support capabilities, as we have a suite of spare tooling packages and OEMtrained mechanics to service and repair our specialist Huck tooling on site.





CLIENT	GCo Electrical
LOCATION	Peterborough, SA
SERVICES	Mechanical install above the pile (does not include piling work). Quality Assurance, Technical Support , Tooling, PV Modules and Materials Handling.
SYSTEM	NEXTracker 194 trackers installed and 15,624 Modules
TIMELINE	2018
CAPACITY	5.6 MW



WOODLAWN SOLAR FARM

The Woodlawn Solar Farm is a 2.4 MW facility located in Woodlawn, New South Wales.

The clean power station consists of the NEXTracker single-axis tracking system.

This 90 tracker installation was established to provide energy for the bio-waste reactor at the Veolia Woodlawn recycling facility.

DRASOL constructed the trackers and installed the modules on piles driven by others in challenging terrain, adapting our construction methodology to meet the specification and parameters of a high-slope design. Our flexible delivery model combined with the speed and quality of install enabled the client to achieve a 40% compression in timecritical tasks, with DRASOL completing our package of works in the equivalent of a 2-week build programme.



CLIENT	AUSGMS
LOCATION	Woodlawn, NSW
SERVICES	Mechanical install above the pile (does not include piling work). Quality Assurance, Technical Support, Tooling, PV Modules and Materials Handling.
SYSTEM	NEXTracker 90 trackers installed and 7,200 Modules
TIMELINE	2018
CAPACITY	2.4 MW

ROYALLA SOLAR FARM

The Royalla Solar Farm is a 20 MW facility located in Royalla, ACT.

DRASOL supplied the mechanical installers and technicians for this project as specified by the client.

This project delivered significant benefits to Royalla and the wider community – in particular new clean electricity to meet the region's energy needs. Working under challenging environmental and weather conditions our expertise enabled the client to successfully complete this project.



CLIENT	CATCON
LOCATION	Royalla, ACT
SERVICES	Supply mechanical installers and technicians.
SYSTEM	FIXED
TIMELINE	2014
CAPACITY	20 MW



MOREE SOLAR FARM

The Moree Solar Farm commenced construction operations in February 2015 and 12 months later it started supplying electricity to the grid.

A 56 MW facility located in Moree, NSW. DRASOL provided mechanical installers and technicians as required by the client. The NEXTracker system continually oriented the solar panels with the arc of the sun, increasing power output each day.

Delivering new clean electricity to meet the region's energy needs and help further the development of the Australian renewable energy industry.



CLIENT	CATCON
LOCATION	Moree, NSW
SERVICES	Provide mechanical installers and technicians.
SYSTEM	NEXTracker
TIMELINE	2015
CAPACITY	56 MW

BARCALDINE SOLAR FARM

The Barcaldine Solar Farm is a 25 MW facility located in Barcaldine, QLD. The 93 hectare site has approximately 79,000 solar modules.

The site generates approximately 53,500 megawatt hours of renewable energy each year.

The project has been designed using single-axis tracking technology maximising the total energy generated and the effectiveness and efficiency of each of the panels. DRASOL mobilised a team of mechanical installers and technicians to deliver to the client's requirements, timeline and budget.



Image sourced from: reneweconomy.com.au

CLIENT	CATCON
LOCATION	Barcaldine, QLD
SERVICES	Provide mechanical installers and technicians.
SYSTEM	NEXTracker
TIMELINE	2016
CAPACITY	25 MW

CIVIL

Successfully delivering civil projects with our trusted clients

Our civil capabilities are best demonstrated by our successful track record in assisting with the delivery of more than 20 key civil projects across Australia since establishing in 1998.

Over these past two decades, DRASOL have developed into a solutions-based business with the capability and expertise to deliver detailed excavation, earthworks, drainage and in-ground services.

As a result of working with a range of Tier 1 Contractors on major projects, DRASOL has developed business systems, honed the skills of our human resources and invested in plant and equipment to better offer the services that are required. Being a subcontractor to a range of corporate joint ventures, consortia and public/private partnerships has enabled us to evolve our business to exceed the high standards demanded in this realm.

With clients ranging from local and state government departments throughout Australia to local and national organisations, we have been exposed to the full range of legislative and corporate requirements and conduct our operations accordingly. Exposure to both private and public stakeholder input has highlighted the importance of the additional factors that need to be considered across the broader community when delivering civil projects.

DRASOL supplies civil solutions for utility provider assets, residential/commercial subdivisions and major infrastructure projects. Installation of stormwater drainage and in-ground services is our specialty. With extensive experience working in live traffic corridors, commercial/industrial developments and live rail environments we have evolved to provide safe work practices whilst maintaining high standards of quality and productivity.





The power of selfmanaged, autonomous work groups

We have the capability to provide self-managed, autonomous work groups working under DRASOL management systems or resources that operate under client direction.

This offers flexible solutions to meet the variances in market demand. We have worked on a broad range of infrastructure projects including the following:

- Elevated highways
- Lowered carriageways
- Trunk water mains with deep excavation
- Pedestrian precinct upgrades
- Commercial properties & car parks
- Residential sub-divisions
- Utility service installation
- Stormwater pollutant traps and detention systems

Key to our success is the ability to deliver the technical components of major civil projects in challenging situations, where a combination of training and prior experience provides the client with the confidence they need to engage us.



DARLINGTON UPGRADE PROJECT

The Darlington Upgrade Project is an important stage in the delivery of Adelaide's North-South Corridor, comprising approximately 3.3 kilometres of motorway with significant grade separations and road bridges.

Source: Government of South Australia

DRASOL provided multiple work groups over an extended period carrying out a wide range of services including:

- Wastewater infrastructure and valve installation
- Potable water mains
- Electrical/communications infrastructure (common service trenching)
- Large diameter stormwater drainage
- Deep excavations with shoring
- Gross pollutant traps and detention systems
- Detailed excavation and minor pavement works

Significant stormwater infrastructure was installed, with pipework up to 3m diameter at depths up to 7m. Our crews selfmanaged this installation and coordinated crane support and logistics to enable the smooth delivery of a quality product.

Other DRASOL work groups installed potable water and utility service conduits under livetraffic conditions, working within significant time-critical schedules to avoid disruptions to peak traffic flows.

We also installed a significant stormwater management asset comprising pollutant traps and pre-cast detention chambers founded on a heavy-duty cast insitu concrete base.

By following a stringent safe working methodology these works were completed ahead of schedule and without incident.



CLIENT	Gateway South (Fulton Hogan & Laing O'Rourke)
LOCATION	Darlington, South Australia
SERVICES	Installation of in-ground services, major stormwater infrastructure, detailed excavation and pavement works.
TIMELINE	2016 - 2019



DARLINGTON PIPELINE PROJECT

DRASOL has extensive experience working in live traffic corridors, commercial and rail environments. We have evolved to provide safe work practices whilst maintaining high standards of quality and productivity for all types of civil projects.

The Darlington Pipeline required the installation of new 1200mm and 900mm diameter potable water mains, enabling the decommissioning of existing services to make way for the new lowered motorway.

Working under York Civil and SA Water, DRASOL crews carried out pipe laying, bedding and backfill operations, whilst providing site support to the third party welding crews. Scope of works included:

- Bulk excavation and installation of shoring
- Pipe bedding & Level 1 Certified backfill
- Wastewater relocation
- Live service cutovers
- Access chambers, manholes
 and valve boxes

The urban nature of this site location required the infrastructure to be installed amongst multiple live services, necessitating a highly skilled workforce with the ability to problem solve under timecritical constraints and live traffic environments.



CLIENT	York Civil
LOCATION	Bedford Park & Darlington, South Australia
SERVICES	Potable water trunk mains, valve installation, manholes and chambers, deep excavation
TIMELINE	2016

HORNSDALE WIND FARM

With a diverse skills set and broad range of experience DRASOL has branched out to offer our civil services to the renewable energy sector.

The Hornsdale Wind Farm is currently South Australia's largest renewable generator, a 309MW facility located approximately 200km north of Adelaide.

Working with our long-term client CATCON we provided mechanical fitters to install and set the wind tower foundation bolt rings. Electrical and communication conduits were also trenched and laid to provide service links through the tower bases. DRASOL civil crews constructed the following as part of the site access road infrastructure:

- Stormwater culverts and headwalls
- Gabion baskets
- Rock beaching and matting
- Swale drains
- Pavement reinstatement

hornsdalewindfarm.com.au



CLIENT	CATCON
LOCATION	Hornsdale, South Australia
SERVICES	Civil works, tower foundations, stormwater infrastructure
TIMELINE	2015 - 2016



HACKNEY AND NORTH EAST ROAD TRUNK WATER MAIN RENEWAL

The State Government's extension of the O-Bahn Busway via a tunnel on the outskirts of the Adelaide CBD necessitated significant relocation of SA Water assets from several major roadways.

DRASOL assisted long-term client Fulton Hogan with the following work components:

Scope of works included:

- Deep excavation and shoring
- Ground dewatering
- Pipe laying and backfill
- Valve installation and access chambers
- Asset decommissioning
- Pavement reinstatement
- Landscaping
- Out of hours work
- Live traffic scenarios and valve boxes

CLIENT	Fulton Hogan
LOCATION	Adelaide Metro, South Australia
SERVICES	Deep excavation, dewatering, pipe laying
TIMELINE	2015 - 2016

The works were carried out in the environmentally sensitive Adelaide Parklands and adjacent residential areas, requiring a high degree of consideration for the various stakeholders as well as members of the general public.

The broad skills set and experience of our personnel, coupled with our extensive range of plant and support equipment, enabled the completion of these works with minimal impact on the public and surrounding environs.

SERVICE LOCATING AND POTHOLING, TORRENS ROAD TO TORRENS RIVER (T2T) PROJECT

A significant component of the North-South Corridor programme is the Torrens Road to River Torrens Project, which delivered a 4km non-stop roadway with sections of lowered motorway up to 8 metres below the existing road surface.

As part of the T2T preliminary design phase DRASOL were engaged directly by DPTI to carry out extensive service locating and potholing on a 4.8km stretch of the major road corridor. The entire package was conducted out-ofhours with stringent guidelines and time constraints on access to the work zones.

DRASOL self-performed these works, which involved the provision of the following services:

- Community liaison and stakeholder engagement
- Management of night works access and environmental plans

- Coordination of utility providers attendance, inspection and network access permits
- Traffic management plans, approvals and implementation
- GPS survey, data capture and reporting
- Service locating
- Hydro-vac excavation and pavement reinstatement
- Rock beaching and matting
- Swale drains
- Pavement reinstatement

Our team was responsible for the real-time capture of GPS survey data and photographic records, which were regularly submitted to the client design team as a project deliverable.

The accuracy and clarity of the reporting was critical to facilitate the design process and in this respect DPTI's expectations were far exceeded.

CLIENT	Department of Planning, Transport and Infrastructure (DPTI)
LOCATION	Adelaide Metro, South Australia
SERVICES	Service locating, potholing, GPS survey and data capture, traffic management
TIMELINE	2014 - 2015



SA WATER'S NORTH SOUTH INTERCONNECTION SYSTEM PROJECT (NSISP)

The NSISP is a crucial component of SA Water's Network Water Security Programme, a long-term strategy to deliver a flexible, integrated solution for water transfer and distribution until 2050.

DRASOL were engaged to assist York Civil install a 750mm diameter MSCL pipe through the North Eastern Metro suburbs over a 6 month period in challenging, live traffic conditions.

Works carried out included:

- Service locating and hydro-vac potholing
- Deep excavation up to 6m with dewatering
- Shoring and temporary
 protection of existing services
- Pipe preparation for welding
- Installation of isolation and scour valves with associated chambers

- Pipe wrapping and protective coating systems
- Pavement reinstatement
- Pedestrian management

The asset was installed through a range of sensitive locales including creek crossings, residential areas, public open space and major road intersections.

DRASOL's can-do attitude coupled with a sound approach to safety and quality enabled the project to achieve increased productivity and time savings on projected programme durations.



CLIENT	York Civil
LOCATION	South Australia
SERVICES	Excavation, pipe laying, temporary road construction, shoring
TIMELINE	2012

EATON RESIDENCE

The owners of this significant property overlooking Adelaide engaged DRASOL to install access tracks to facilitate construction of an extensive private residence after being advised that the works were not feasible.

DRASOL carried out rock stabilisation and employed geotechnical landscaping techniques to work with the client and the environment to provide solutions outside the realms of a standard approach to construction.

Works delivered included:

- Gabion baskets and rock retaining structures
- Driveways and pavement construction
- Stormwater harvesting and management
- Fire track access routes
- Utility services installation

The successful delivery of this interesting project was the result of taking a holistic approach to meeting the client's wishes and working with rather than against the underlying topography, whilst also accommodating applicable codes of practice and regulatory requirements.





CLIENT	Private
LOCATION	Adelaide Hills, South Australia
SERVICES	Earthworks, utility services, rock stabilisation
TIMELINE	2012 - 2014



Providing services for delivery of reliable and safe rail infrastructure

Rail in Australia underpins the national economy and is at the forefront of innovation, productivity and world's best practice.

Australian rail continues to push the limits of efficiencies for business across the world. Recently a heavy investment in technological advancement and product development has ensured we continue to be a competitive player within the global market place.

DRASOL has been involved in the rail industry for many years. With extensive experience across light and heavy rail, in both broad and narrow gauge formats in the live corridor, DRASOL is well placed to support our clients with their rail projects.

Our key services in rail comprise:

- Under-Track Crossings
- Signalling Pit and Pipe Infrastructure
- Stormwater Culverts
- Swale Drains and French Drains
- Erosion Control
- Station and Platform Demolition and Upgrades
- Car Parks, Street Lighting, Pump Stations
- Multiple Road Level Crossings
- Formation, Stabilisation and Reinstatement work



Highly trained and certified workforce

DRASOL was contracted for a 4 year period by the Tracksure D&C joint venture responsible for the entirety of the Adelaide Metropolitan Rail Revitalisation Programme.

This exposed DRASOL to many aspects of the rail industry sector. By combining our in-ground services expertise with civil works experience, DRASOL provide a quality solution for stormwater drainage, signalling infrastructure, formation reconstruction and carriageway level crossings.

DRASOL have the capability to provide a highly trained workforce with all current certification to satisfy Rail Safe-Working Management requirements. This offers peace of mind to our clients, knowing we mitigate operational and project management risks.

Key to our success is our core capability and strength in carrying out signalling and drainage works in the rail corridor under challenging conditions and time constraints.

Our purpose-built and aftermarket modifications provide specialised rail-sector plant including the following:

 23 tonne Excavator with Engcon head (360-degree rotation with tilt capability) with rubber pads

- 13 tonne Excavator with Engcon head with rubber pads
- Specialist 4 in 1 bucket
- Fork tines & hydraulic compaction attachments to suit
- Rail threader
- Sleeper grab
- Remote-controlled trench compaction unit
- Portable GPS survey control equipment

DRASOL Rail Projects – Historical Timeline

1998	Adelaide Outer Harbour Line, Stage 1 and Stage 2 – Davison Earthmovers
1999	SA Regional Sidings Upgrades, Pinnaroo and Crystal Brook – John Holland
2000	Glenelg Tram Line Maintenance Contract – John Holland SteamRanger Heritage Railway Line Maintenance – John Holland
2007	Glenelg Tram Line Resleepering, South Terrace – Davison Earthmovers
2008	Glenelg Tram Line City-City West Link, Adelaide CBD – Coleman Rail
2009	Glenelg Tram Line Signalling Upgrade, South Terrace – Coleman Rail Belair Line Upgrade, Adelaide Metro – John Holland/Coleman Rail JV Craigieburn Rail Project, Victoria – Coleman Rail
2010	Glenelg Tram Depot Upgrade, Adelaide Metro – Tracksure JV
2011	Tottenham Track Slew, Victoria – Coleman Rail
2011/14	Adelaide Metropolitan Rail Revitalisation Programme – Tracksure JV
2013	Adelaide Rail Electrification Programme-Traction Power – John Holland
2017	Torrens Junction Grade Separation, Adelaide Metro – Geotech Port River Bridge Upgrade, Adelaide Metro – Coleman Rail
2018	Outer Harbour Line Level Crossing Upgrades, Adelaide Metro – Coleman Rail
2018/19	SteamRanger Heritage Railway, Mt Barker and Currency Creek – Coleman Rail
2017/ONGOING	Public Transport Services Maintenance Contract, Adelaide Metro – Coleman Rail

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Our experienced crews are capable of stripping track, replacing and remediating formation, installing signalling and drainage and placing ballast and sleepers ready for the track construction gangs to complete the process.

OUTER HARBOUR LINE RESLEEPERING PROJECT

DRASOL's initial foray into the rail industry was to support Davison Earthmovers with the resleepering of this metropolitan rail line.

Our company gained invaluable knowledge by working with the experienced people involved in this project, and this proved to be a springboard for growth and evolution into the organisation that we are today.

In the 20 years since then we have worked with the head contractor John Holland on multiple projects across a broad range of size and complexity and are still enjoying that business relationship to this day.

CLIENT	Davison Earthmovers
LOCATION	Adelaide Metro
SERVICES	Resleepering, minor earthworks
TIMELINE	1998

EASTLINK TRAM EXTENSION PROJECT, ADELAIDE

The first stage of works for the expanded AdeLINK tram network, EastLINK is an extension of Adelaide's tramline along North Terrace to the East End of the CBD.

DRASOL provided multiple work crews to support the JV in many aspects of project delivery, from pre-works service relocation to new signalling infrastructure, track drainage, excavations for turnouts, formation preparation and pavement reinstatement.

Works carried out included:

- Service location
- Hydro-vac excavation
- Signalling pit and pipe infrastructure
- Detailed excavation and demolition
- Minor concreting and pavement construction
- Street lighting and furniture installation

The project comprised a variety of shutdown and outof-hours working scenarios in a live-traffic environment, with significant interfaces with local businesses and the general public.

Our autonomous work groups operated under full Rail Safe Working throughout the project, including activities under existing overheads being managed by our in-house PRES (Person Responsible for Electrical Safety).

CLIENT	Downer EDI-York Civil Joint Venture
LOCATION	North Terrace, Adelaide
SERVICES	In-ground services, road crossings, track drainage, street furniture
TIMELINE	2017-2019

Due to its rural location one of

whilst maintaining traffic flow

through the site, an unusual

scenario where DRASOL's

works.

the crossings was reconstructed

ingenuity and ability to operate

outside of the square enabled the smooth completion of the

STEAMRANGER HERITAGE RAILWAY UPGRADES

The SteamRanger is a historical railway operating a number of different heritage steam and diesel hauled tourist trains between Mt Barker and the coastal holiday towns of the Fleurieu Peninsula.

DRASOL were engaged by Coleman Rail to carry out level crossing replacement works at two locations where timber sleepers were still in place in the road pavement.

Services included:

- Pavement and track removal
- Bulk excavation
- Formation treatment and reinstatement
- Drainage and signalling infrastructure
- Sleeper installation
- Ballast & pavement reinstatement

CLIENT	Coleman Rail
LOCATION	Mt Barker and Currency Creek, SA Regional
SERVICES	Level crossing upgrade, track maintenance
TIMELINE	2018

GLENELG TRAM LINE VICTORIA SQUARE TO CITY WEST EXTENSION

The extension of the Glenelg Tram Line from Victoria Square through the CBD necessitated significant pre-works under live traffic conditions to minimise disruption to the city prior to the major shutdown works.

Over a 7 month period of night works DRASOL were engaged to install new signalling ducts and pits across each of the future tram/road intersections.

Services carried out included:

- Hydro-vac excavation and service locating
- Road crossings for signalling infrastructure
- Relocation of street lighting and furniture
- Electrical conduit and pit installation
- Pavement and footpath reinstatement

Due to the historically urban nature of the location there were a myriad of undocumented services and in-ground structures that had to be incorporated, modified or worked around during these time-critical out-of-hours shifts.

CLIENT	Coleman Rail
LOCATION	Adelaide CBD
SERVICES	Traffic signal modifications, street lighting and furniture, pavement reinstatement
TIMELINE	2009 & 2015

ADELAIDE METROPOLITAN RAIL REVITALISATION PROGRAMME

As part of the South Australian Government's plan to revitalize the public transport network over a 10 year period, the entire existing rail passenger network was upgraded. The Rail Revitalisation Programme was the centrepiece of the Department of Transport and Infrastructure's investment and transformed the rail network.

DRASOL were engaged by Tracksure to deliver the majority of the drainage and signalling infrastructure upgrades, as well as providing a turn-key solution for level crossing replacement and re-sheeting activities. Almost 80 km of formation drainage and 30 level crossings were upgraded during the course of this significant capital works project.

Work packages delivered included:

- Level crossing construction and replacement
- UTX (under track crossings)

- Track formation drainage
- Signalling infrastructure
- Station excavation and formation construction
- Major Council stormwater installation (1.6m diameter RCP)
- Pump stations
- Culverts and headwalls
- Rock beaching and scour protection

DRASOL specialised in detailed earthworks and excavation activities in restricted access spaces, our zero-swing plant proving ideal for working in stations, cuttings and under bridges.

Our experienced crews are capable of stripping track, replacing and remediating formation, installing signalling and drainage and placing ballast and sleepers ready for the track construction gangs to complete the process.

CLIENT	Tracksure (John Holland, Coleman Rail and York Civil JV)
LOCATION	Adelaide Metropolitan Network
TIMELINE	2011-2014

GLENGOWRIE TRAM DEPOT UPGRADE

The Glengowrie Tram Depot was upgraded to expand and convert the stabling yards from a timber sleeper/ballast arrangement into a fully concreted track slab.

DRASOL were engaged to install signalling infrastructure, track drainage and carry out detailed excavation for new overhead power support gantries, storage buildings and tram wash facilities.

We also assisted with the replacement of the depot entrance turnouts after new office facilities had been constructed.

Services included:

- Trade waste and grease arrestors
- Wastewater and potable water service modifications
- Track formation and drainage
- Track slab pre-pour reinforcement preparation

This challenging project was delivered in a live-rail environment as the depot remained fully operational throughout the construction programme. Our crews were well-received on site due to their diligent approach to safety and adherence to strict electrical isolation procedures.

CLIENT	Coleman Rail and York Civil
LOCATION	Adelaide
TIMELINE	2010-2011 and 2019

TOTTENHAM TRACK SLEW

This project was embarked on to separate regional and metropolitan train services and make room for the future construction of a 40km twin track rail link from Southern Cross Station to West Werribee. The works were completed in a 7 week programme with a 2 week shutdown.

DRASOL were engaged during the time-critical shutdown period to provide round the clock crews installing cross track services, signalling pit and pipe infrastructure and track formation drainage.

Services included:

- Mobilisation of plant and personnel from Adelaide
- Signalling pit and pipe infrastructure
- Under track crossings
- Track drainage

CLIENT	Coleman Rail
LOCATION	Tottenham, Victoria
SERVICES	Under track crossings, signalling infrastructure, track drainage
TIMELINE	2011

CRAIGIEBURN RAIL PROJECT

Facilitating the expansion of Melbourne's metropolitan passenger train network, the Craigieburn Rail Projects enable electric trains to be stabled, maintained and cleaned at a predominantly greenfield site at Craigieburn in Melbourne's outer north.

For two separate delivery components of these works DRASOL were engaged by Coleman Rail to provide multiple work.

Services included:

- Mobilisation of plant and personnel from Adelaide
- Signalling pit and pipe infrastructure
- Under track crossings
- Track drainage

CLIENT	Coleman Rail and York Civil
LOCATION	Craigieburn, Victoria
TIMELINE	2009

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