

Your integrated transport infrastructure solutions





Newcastle Light Rail





About us

Downer designs, builds and sustains assets, infrastructure and facilities and we are the leading provider of integrated services in Australia and New Zealand.

At Downer, our customers are at the heart of everything we do. Our Purpose is to create and sustain the modern environment by building trusted relationships with our customers. Our Promise is to work closely with our customers to help them succeed, using world leading insights and solutions.

With a history dating back over 150 years, Downer is listed on the Australian Securities Exchange and New Zealand Stock Exchange as Downer EDI Limited (DOW). We are an ASX 100 company that also owns 88 per cent of Spotless Group Holdings Limited (SPO).

Transport infrastructure expertise

Downer has a long history of delivering transport infrastructure projects under a variety of contracting models. Services include the design and construction of light rail, heavy rail, bridge and roads, as well as track and station works, signalling and rail safety technology.

Our integrated capabilities enable intelligent transport solutions, road network management and maintenance, facility maintenance and utilities services. We also have particular expertise delivering services within the constraints imposed by a live operating environment.

Our business is founded on four Pillars and we demonstrate these in everything we do:

Safety

Zero Harm is embedded in Downer's culture and is fundamental to the company's future success



Delivery

We build trust by delivering on our promises with excellence while focusing on safety, value for money and efficiency

Relationships

We collaborate to build and sustain enduring relationships based on trust and integrity

Thought leadership

We remain at the forefront of our industry by employing the best people and having the courage to challenge the status quo

What we do

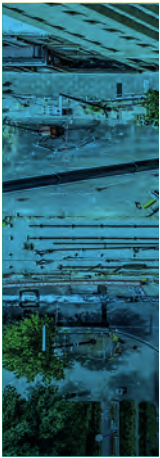
Local expertise.
World-class solutions.

Downer provides end-to-end transport infrastructure solutions for complex infrastructure in metropolitan and remote locations.



Project name		Civil	Rail Infrastructure
1	Adelaide Light Rail - AdeLINK Tram East Extension		■
2	ARTC Crossovers - NERL Earlyworks		■
3	Asset Management/Maintenance (Annual rolling Maintenance)		■
4	ATP - Advanced Train Control System		■
5	B-Line Brookvale Footbridge		■
6	Barongarook Creek Bridge Replacement	■	
7	Bendigo & Eaglehawk Station Upgrade		■
8	Berry to Bomaderry Princes Highway Upgrade	■	
9	Bogie Centre (Cardiff)		■
10	Broome Chinatown Revitalisation	■	
11	Bruce Highway - Ingham to Innisfail Overtaking Lanes	■	
12	Canterbury Road Upgrade	■	
13	Central West Bridge Replacements		■
14	Crown Perth- Great Eastern Drive Modifications	■	
15	Flash Butt Welding (Rio Tinto)		■
16	Gosford Passing Loops		■
17	Great Western Highway and Reservoir Road	■	
18	Heathcote Road Upgrade	■	
19	High Capacity Metro Trains - Depot		■
20	Hunter Water CTGM Pipeline	■	
21	Huon Highway - Summerleas Road Junction Upgrade	■	
22	Island Modernisation Project	■	
23	Karrinyup External Road Upgrade Works	■	
24	Level Crossing Renewal Adelaide to Tarcoola		■
25	Manangatang Resleepering Project		■
26	Maryborough Rail Depot		■
27	Midland Highway Bagdad - Mangalore Stage 2	■	
28	Midland Highway Perth Link Road	■	
29	Midland Highway, Perth to Breadalbane	■	
30	Mortdale Depot		■
31	Murchison Dam	■	
32	Murdoch Health and Knowledge Precinct	■	
33	New Intercity Fleet (NIF) Stations and Signalling Enabling Works		■
34	Newcastle Light Rail		■
35	O'Herns Rd Early Works & Stage 2	■	
36	Outer Harbour Sleeper Renewal		■
37	Parramatta Light Rail Stage 1		■
38	Peninsula Development Rd: 10 Mile Ck And South of Duckholes	■	
39	Port Macquarie Airport Upgrade	■	
40	QR SEQ Trenchless Culvert Replacements		■
41	Rio Tinto Track Infrastructure Maintenance and Renewals Services		■
42	Roelands Bridge Replacement		■
43	Shoalwater Bay Training Area Remediation	■	
44	Stockyard Maintenance		■
45	Timber Bridge Elimination North Coast Line Supply		■
46	Track Surfacing and Tamping		■
47	Transport Access Programs (TAP) Train Station and Car Park Upgrades		■
48	V1 Alliance Passing Loops		■
50	Warrego Highway Dalby to Miles Overtaking Lanes	■	
51	Yarra Trams Refranchise - Track Renewals		■

What we do



Leading provider of end-to-end transport infrastructure solutions

Track construction

Downer has expertise in the design management, procurement, construction and commissioning of rail infrastructure across passenger, freight, mining, and light rail networks.

We specialise in the timely delivery of multi-disciplined projects, and have the capability to blend rail infrastructure management and technical skills with a comprehensive understanding of the latest construction techniques and practices, while integrating maintenance requirements.

Light rail

Downer understands the challenges and opportunities inherent in delivering major public infrastructure in an urban corridor with complex community and stakeholder interfaces. We are unique in our offering to provide teams with proven local and international light rail delivery and operations experience. This is delivered through:

- Rail tracks
- Stations
- Vehicles
- Depots
- Signalling
- Utilities
- Power
- Ticketing
- Road network management
- Traffic signals, lights, intelligent transport systems (ITS)
- Operations
- Maintenance
- Accreditation management
- Asset management.

Time critical self-performed rail infrastructure delivery

Downer provides specialised delivery of complex rail infrastructure projects, which have short possession based self-delivery requirements. Downer has delivered these projects to various customers, including:

- **Adelaide Light Rail: Construction of a 'grand union' (four-way tram intersection) with complex geometry within the 14-day occupation period**
- **Track renewals for ARTC: Works delivered include turnout renewals, level crossings, culvert renewals, renewals of rail bridges, crossovers, tamping works, welding/de-stressing and temporary signalling works**
- **Elizabeth Street track renewals for Yarra Trams: Project was delivered during a four-day occupation, and involved the full road closure of Elizabeth Street between Collins and Flinders Streets. Works included renewal of the scissor crossover terminus at Elizabeth Street, reconstruction of 100m of track and council re-sheeting of Flinders Lane.**

Newcastle Light Rail

Downer delivered this project for Transport for NSW through a Managing Contractor model.

Newcastle Light Rail is 2.7 kilometres of light rail track from Newcastle Interchange to Pacific Park in Newcastle East, 200 metres from Newcastle Beach.

The light rail includes six stops and follows the old heavy rail corridor for approximately one third of the route before moving onto Hunter and Scott Streets. The light rail is a major part of the Revitalising Newcastle program, which aims to help reconnect the city to the waterfront, generate new jobs, create more public space and deliver better public transport solutions.



What we do



HCMT Depot and Stabling Yard, Pakenham



Transport Access Program Station Upgrade, Harris Park

Depots

Downer has comprehensive expertise in developing and upgrading state-of-the-art depots that include maintenance facilities, stabling yards, and cleaning and bio wash facilities.

Our depots provide the capacity, technology and design to deliver major and mid-life refurbishments of rollingstock.

Our experienced teams identify opportunities to:

- Streamline forecasted processes within the depot and create efficiencies
- Improve facility sustainability
- Foster innovation within each depot
- Promote safety in engineering design.

Station construction and upgrades

Train station upgrades are complex, multi-disciplined engineering projects. Each requires significant planning and smart engineering to minimise the impact on safety and operations of the existing railway system, as well as on the community and environment.

Downer delivers integrated station upgrades, including successful projects for Transport for NSW as part of the Transport Access Program. Our station upgrades seek to maximise construction and commissioning activities during track possessions, which involve substantial

activity within a 48-hour window when train services are not running.

Our team has the capacity to:

- Undertake station upgrade works in various contracting forms to suit our customers
- Deliver accessible, modern, secure and integrated transport infrastructure
- Deliver station upgrades with minimal disruption to neighbouring communities.

Transport Access Program

Transport for NSW has commissioned the upgrade of multiple train stations across NSW to improve accessibility for all commuters and to ensure compliance with the Disability Discrimination Act.

Downer has designed and constructed 10 train stations in the Sydney metropolitan area. Upgrades include the installation of new lifts, constructing and upgrading stairs, footbridges and family accessible toilet facilities, constructing new bus stops, shelters, kiss-and-ride areas and bike racks, and installing new lighting and CCTV cameras.

The TAP project has delivered significant station improvements which will make a valuable contribution to the local community for many years to come.

High Capacity Metro Trains Depot

The High Capacity Metro Trains (HCMT) project is the largest procurement of rollingstock in Victoria's history and will be delivered as an 'availability based' Public Private Partnership with the Victorian Government. Downer has partnered with Plenary Group and CRRC Changchun to deliver this \$2.3 billion project under the Evolution Rail consortium.

The HCMT Depot and Stabling Yard Project involves the design and construction of the new Train Maintenance Facility at Pakenham East, including:

- State-of-the-art new train maintenance workshop (17,500m²) with all specialist equipment integrated to enable maintenance of the existing fleet and potential new driverless fleet
- Stabling yard with capacity for 80 new trains
- 20-plus kilometres of new track, overhead lines and signalling
- Operator's building, which is over 1,275m² in size.

What we do



Rio Tinto Rail Maintenance and Renewal Services



Signalling works

Rail systems engineering (signalling and assurance)

Downer has worked in the rail sector in Australia for more than 150 years and it remains a core part of our business today.

Through our history of designing, building and operating complex rail infrastructure, we have gained significant rail systems engineering knowledge, capability and experience.

We are a leading rail signalling contractor with major projects across Australia and New Zealand. Our signalling solutions include turnkey infrastructure alterations, factory builds of signalling equipment, signalling construction, and commissioning of signalling works. All works are undertaken under a mature and robust systems engineering and safety assurance process, that aligns with our customers' needs and requirements, providing surety of compliance and delivery throughout the project lifecycle.

Rail maintenance

Downer provides comprehensive solutions for the maintenance of rail infrastructure. We have a proven track record of delivering cost effective maintenance solutions for the rail industry.

With experienced people and specialist rail plant we are able to offer a complete maintenance package. This can be tailored to suit the requirements of a wide range of

customers from one-off yard maintenance projects to long-term national contracts. We are proud of our culture that strives to maximise the life of assets and deliver value for money in a safe and efficient manner.

Turnkey operational and technical support for Yarra Trams

Downer, in partnership with its joint venture partner Keolis, operates and maintains the network and associated operational control and management systems that underpin the Yarra Trams network. Downer offers market-leading, cost effective support on a range of services to Yarra Trams. These services include track renewals, cross over renewal, removal of track, reconstruction of junctions, SCADA system, Automatic Vehicle Monitoring System, general network communications, passenger information systems, automatic points control systems, including onboard vehicle and wayside assets.

Level crossings

On behalf of the Australian Rail Track Corporation, Downer has undertaken a significant number of level crossing upgrades, re-rail projects and associated infrastructure works in South Australia.

Rail renewals, Rio Tinto

Downer is a preferred supplier for Rio Tinto, delivering rail renewal services. This includes full track maintenance and renewal services for over 1,000 kilometres of Rio Tinto's network, as well as providing scope to deliver additional services such as flash butt weld commissioning and track surfacing support.

A target of 35 per cent local content has been set within the first five years of the contract, including partnerships with local businesses to develop a Pilbara rail workshop facility, as well as the delivery of rail training to improve the skills and capability of local suppliers.

This work is in addition to other services for Rio Tinto Iron Ore, including tyre management and track construction.



What we do



Civil

Downer is a leading provider of civil construction, engineering and asset maintenance services to road, rail, water and other infrastructure sectors in Australia. Our civil capability draws on the combined strength of our specialist staff, management systems and comprehensive resources, enabling us to provide cost effective, value-adding services covering an extensive range of construction, management and maintenance projects.

Key civil services:

- Construction and maintenance of roads, bridges, airfields and car parks
- Rail infrastructure
- Stabilisation of subgrade and pavements
- Placement of gravel pavements
- Pavement solutions: sealing, asphalt and other bituminous products
- Bulk and detailed earthworks
- Drainage construction
- Landscaping
- Road furniture installation
- Lighting and Intelligent Traffic Systems (ITS)
- Services relocation
- Traffic management.

Barongarook Creek bridge replacement

This project involves the design and construction of a two-span bridge on Princes Highway across the Barongarook Creek. The project required the demolition of the existing bridge while building the new structure in a staged construction process. However, VEC proposed an alternative option that included a temporary bypass to remove all the traffic from the construction site.

This will allow the team to demolish the existing bridge and construct the new structure without live traffic. This option was preferred by the customer, as it offers a much safer solution and means less risk.

Berry to Bombaderry Princes Highway upgrade

Downer and its joint venture partner Seymour Whyte are delivering the Berry to Bomaderry Princes Highway upgrade project for Roads and Maritime Services (RMS).

The upgrade will see 10.5 kilometres of four-lane highway construction involving major civil and roadworks including underpasses, overpass bridges, U-turn facilities, intersections, interchanges and utility relocations.

Bridges and structures

Downer is a leader in the design and construction of bridges and has built a diverse range of structures across Australia and New Zealand. We undertake projects ranging from large multiple-span highway bridges to small, single-span bridges, providing tailored designs and construction methods to suit customers' needs.

In Australia, we deliver our bridge and structures services through our subsidiary, VEC Civil Engineering (VEC). VEC's bridge construction capabilities include:

- Road
- Rail
- Pedestrian bridges
- Culvert constructions
- Bridge rehabilitation.

The VEC business provides end-to-end bridge building services. This includes self-perform excavation works, pre-casting of concrete elements, piling and bridge construction. VEC also has a steel fabrication department which fabricates guardrails, posts and other items.

The business has a wealth of experience in performing construction works under limited closure periods, always ensuring on-time delivery that meets the customer's requirements.

What we do



Specialist in the delivery of complex contract types

Downer has extensive experience across a wide range of standard and bespoke contracting models for various customers within the Australian construction industry.

These contract model types include:

- Managing contractor
- Design and construct
- Alliance
- Early contractor involvement
- Lump sum construct only
- Cost plus.

Specialist plant services

Downer owns a large fleet of specialised rail equipment and plant with a pool of resources suitable for all rail assets and conditions which we can make available to customers. All plant and equipment is maintained to exacting standards, ensuring that customers have access to safe and reliable equipment.

We maintain and operate a growing fleet of tampers, regulators and ballast cleaners. Plant services include, but are not limited to:

- Tamping and regulating of narrow, broad and standard gauge railways
- Ballast cleaning of narrow, broad and standard gauge railways
- Flash butt welding, either on or off rail
- Sleeper renewal plant (tie renewal/replacement)
- Maintenance of on-track machines, either in our dedicated rail workshop or field repair and servicing capable
- Supply of rail capable excavators and trailers

- Supply of rail maintenance/renewal small tools
- Supply of specialist equipment for track geometry recording (Abuts/Krab), Verse testing equipment
- Hirail Elevated Work Platforms for overhead wiring, vegetation management or other elevated work requirements such as bridge repair/inspection.

Revitalising local economies and developing local workforces

Through our experiences and values, we understand the role we play in contributing to the economic prosperity of the regions we work in. Downer provides transport solutions that connect communities and support economic growth. We achieve outcomes through technology transfer commitments and by engaging with local suppliers, including the promotion of a supply chain-wide lean manufacturing initiative, partnering with training providers, manufacturing associations and agencies representing disadvantaged communities.

Our projects revitalise regions we work in by:

- Generating local jobs
- Providing skilled training
- Investing in the next generation of experts and leaders
- Attracting inward investment throughout the supply chain
- Reskilling and transitioning workers from declining industries
- Setting new benchmarks for apprenticeships
- Providing employment opportunities for disadvantaged workers
- Transforming cities with transport and infrastructure.

Downer and Bama build a lasting legacy

Downer is proud to partner with leading Indigenous business Bama Services to deliver transport and infrastructure solutions in North Queensland. In FY19 the Downer-Bama partnership, which began in 2014, delivered \$10 million worth of major infrastructure on the Peninsula Development Road (PDR) in Cape York to improve the accessibility, safety and reliability of transport infrastructure for the local community.

As well as the successful delivery of the Cape York project joint venture, our partnership includes:

- A Downer project manager seconded to Bama to provide support and expertise in 2014 via the Jawun program, who is now a permanent Bama employee
- Local Indigenous labour to assist Downer's VEC business on its bridge strengthening project on the Mulligan Highway in Cape York
- Bama employees engaged through Downer's Spotless Defence maintenance contracts to deliver landscaping work at the Royal Australian Air Force (RAAF) Scherger military air base at Weipa
- Exploring further partnerships for joint road and civil project delivery in Cape York and beyond, consisting of bridge projects, traffic management and secondment, and people development opportunities.

How we work



Innovation

Innovation is promoted across Downer.

We draw on innovation to ensure continuous improvement across our business groups and to provide services that are aimed to exceed the expectations of our customers. We do this by encouraging staff to take ownership of innovation through active involvement in their worksite, providing tools and support to change managers, and giving formal recognition and reward for efforts.

Our people have a vested interest in doing things smarter, safer and more efficiently and realise innovation results in an improved working environment. Team meetings and management forums are used to promote and share innovations, and communicate processes, tools and methods that contribute to sustainable development and deliver cost savings and efficiency improvements.

We also work collaboratively within our organisation and with our customers, suppliers and subcontractors to ensure our innovations are targeted to achieve world's best practice and maintain our position as a leading service provider.

High Capacity Metro Trains (HCMT) Maintenance Facility

- Design, construction and commissioning of maintenance and stabling facilities
- 80-train capacity
- Calder Park Light Service Facility
- Stabling yards with a 30-train capacity.

High capacity signalling will be installed onto trains during the delivery phase.



Newcastle Light Rail - one of the first true catenary-free systems in Australia

Newcastle Light Rail (Stage 1) consists of 2.7 kilometres of a dual light rail track from the new transport interchange and includes six stops. The project also includes a SaM facility with capacity for six vehicles, operating control centre and controls system, utilities, road works and associated precinct works.

The system operates **one of the first true catenary-free systems in Australia** and charge stations at stops only.



Our approach



Zero Harm, safety, environment and sustainability

Zero Harm is embedded in our culture and is fundamental to our future success of delivering on our promise to create and sustain the modern environment. We are committed to achieving our goal of Zero Harm.

At Downer, Zero Harm means sustaining a work environment that supports the health and safety of our people and conducting our operations in a manner that is environmentally responsible and sustainable.

Our Zero Harm culture is built on leading and inspiring, verifying the effective management of risks that have the potential to cause serious harm, rethinking processes, continuously improving our management systems, applying lessons learnt, and adopting and adapting practices that aim to achieve zero work related injuries and unintentional harm to the environment.

We're focused on developing solutions to reduce our energy consumption and greenhouse gas emissions, while at the same time increasing our cost competitiveness.

Our approach to Zero Harm and associated performance is a market differentiator for Downer as it enables us to work safely and environmentally responsibly in industry sectors where there are inherent hazardous environments. We firmly believe that any injury or environmental incident is unacceptable and preventable. In everything we do, Zero Harm is always our top priority.

To Downer, sustainability is delivering financial growth and value to our customers through our supply chain, looking after the health and safety of our people, having a diverse and inclusive workforce, minimising our impact on the environment and enhancing the liveability of the communities in which we influence.

Downer supports the Paris Agreement and accepts the Intergovernmental Panel on Climate Change (IPCC) assessment of the science related to climate change. We recognise the opportunities that this presents, are committed to transitioning to a low carbon economy, and pride ourselves on developing industry-leading, environmentally sustainable solutions for our customers.

Downer remains focused on developing solutions to reduce our energy consumption and greenhouse gas emissions, while at the same time increasing our cost competitiveness.

Our ability to manage the impacts of our activities on the environment and communities in which we operate is fundamental to our long-term success. We will continue to cultivate robust environmental management systems and resource efficiency programs to sustain the natural and built environment for future generations.



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