

COMPANY PROFILE



Cardno Eppell Olsen's practical experience, innovation and comprehensive knowledge of current trends and legislation assists our clients, the community and future generations.

Cardno Eppell Olsen is a specialist traffic and transport consultancy and offers services throughout Australia and the world. Originating as Eppell Consulting in 1983 and becoming Eppell Olsen & Partners in 1994, the practice has grown to become a team of over 50 staff across four national offices. With its incorporation into the Cardno Group in 2005 it has substantial and broad based resources. The business unit is managed by Brett McClurg and John Olsen provides a national and international role in leading the traffic and transport skills across the entire Cardno group.

Cardno Eppell Olsen is part of the Cardno Group, a multi-disciplinary professional services organisation. Cardno's traffic and transport coverage is expanded through the Melbourne team of Cardno Grogan Richards (over 50 staff). Cardno foundations date back to 1936. Cardno has more than 3,000 staff in 60 offices throughout Australia and the world.

Physical Infrastructure

Cardno provides sustainable and economically viable infrastructure and management solutions to a wide range of public and private clients in Australia and overseas.

- Building & Property
- Coastal, Ocean & Marine
- Environment & Water Quality
- Development Assistance Engineering
- Landscape Architecture
- Management Services
- Mining & Resources
- Surveying
- Transport
- Urban Development
- Water & Wastewater.

Social & Economic Infrastructure

Cardno partners with private clients, sovereign governments and communities to create appropriate and sustainable solutions.

- Community Development
- Economic Revitalisation & Enterprise Development
- Education, Training & Human Capacity
- Development Assistance Engineering
- Governance, Law & Justice
- Health & HIV/AIDS
- Natural Resource Management & Agribusiness
- Public Sector Enhancement
- Reconstruction & Rehabilitation.

The Cardno Eppell Olsen team comprises over 60 staff in offices located in Brisbane (managed by Brett McClurg), Gold Coast (managed by Stephen Manton), Perth (managed by Raymond Cook) and Sydney (managed by Anissa Levy). From these offices we provide traffic and transport services to projects across Australia and have access to international, national and regional offices as part of the Cardno group. Cardno Eppell Olsen's service areas are discussed briefly in the following pages.



PRODUCTS & SERVICES

“Transport and land use planning lies at the core of what we want our environment to be; how we want to live, work, find satisfaction; and how we can be protected from the adverse effects of living in large communities. This is not a technical activity alone, it is intertwined with the values in society and must interact with them.”

Hans L Westerman - Cities for Tomorrow

Transport Modelling & Evaluation

Movement in urban areas is the link between activities, such as home, work, shopping, entertainment. The interaction of different land uses creates travel demand. Our models seek to explain this interaction and quantify travel demands. Our modelling skills are applied to numerous scenarios:

- Strategic Road Network Analysis
- Coordinated Signal System Assessment
- Local Area Investigation
- Microscopic Simulation of Detailed Traffic Systems
- Infrastructure Needs
- Multi Modal Demand Forecasting

Advanced modelling tools are used to ensure projects have the most complete answers possible. We are skilled in:

- EMME/2 and Tracts for strategic modelling
- SATURN for macroscopic
- Paramics for microsimulation
- aaSIDRA and TRANSYT for detailed intersection modelling

Infrastructure Concept Development

Development must be viewed holistically and planning and construction decisions cannot be made lightly. Cardno Eppell Olsen helps you make these informed decisions. We analyse traffic systems such as complex freeway interchanges and multi-modal arterials. We develop functional concepts at the early stages of the infrastructure planning process. With our assistance, clients see the big picture prior to making significant infrastructure commitments.

Our consultancy specialises in developing and evaluating design alternatives for sub arterial, arterial, freeway and interchange systems. We consider geometric, operational and performance issues as well as multi-modal access, regional and corridor system needs. Our specialist traffic and transport team complements the established civil and structural skills of the Cardno Group.

Traffic Operations

Traffic is complex. Transportation decisions cannot be made in isolation. Streets, roads and freeways are all interlinked, as each network affects and impacts another.

Cardno Eppell Olsen analyses road and network conditions for safety, operation and efficiency to ensure you are fully informed.

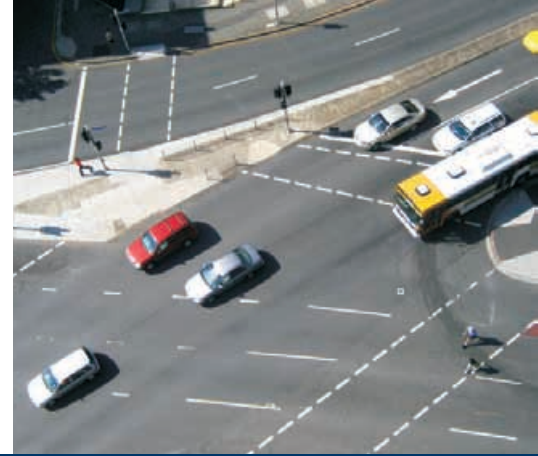
- Arterial Road Safety Schemes
- Area-wide Road Network Schemes
- Road Space Design
- Traffic Signal Coordination
- Traffic Signals Design
- Local Area and Activity Centre Schemes
- Intersection Analysis and Design
- Parking Management Plans

Advanced analysis tools such as aaSIDRA, TRANSYT, Paramics, TRAFFIX and design tools including AutoCAD and MapInfo are used.

Development Planning, Design & Assessment

Our engineers, planners, designers and analysts offer experience in all areas of traffic engineering and transport planning from master plans to small developments.

- Traffic and Parking Impact Assessment
- Development Access, Parking and Circulation Layout
- Service Vehicle Provision
- Pedestrian, Bicycle and Public Transport Facilities
- Expert Witness Statements and Hearing Evidence (Planning and Environment Court, District Court)
- Pavement Impact Assessment



Products & Services Continued...

Sustainable Transport Solutions

Our team considers the views and needs of multiple stakeholders. We address mobility needs across all members of the community, aiming to achieve optimum mobility for all. Our focus includes integrated transport and land use solutions, travel demand management and master planning.

- Integrated Local Transport Plans/Local Area Plans
- Movement System Planning
- Cycle Planning, Design and Auditing
- Main Street Revitalisation
- Pedestrian Planning, Strategy and Design
- Travel Demand Management/Modal Change Planning

Cardno Eppell Olsen supports consultation with the public and industry professionals to achieve integration of transport networks with all considerations.

Regional Transport Plans

Local and regional transport decisions affect networks at numerous levels and across many regions. Making the right decision is critical, as transport decisions can have both positive and negative impacts.

- Road Hierarchy Schemes
- Road Corridor and Network Planning
- Pedestrian, Cycle and Public Transport Strategies and Plans
- Freight Network Studies
- Development Planning Process Methodologies

Consideration of land use, traffic growth, opportunities for public transport, travel demand management and the planning process are paramount to successful transport system planning.

Public Transport Planning

Alternatives to private car use are vital to the sustainability of transport systems. We are experienced in developing transport alternatives, such as the development of bus priority strategies for major urban corridors. These include bus lanes, queue jumps and bus signal coordination. We have also developed public transport strategies and operation plans for a number of areas.

Transport Policies

Cardno Eppell Olsen works closely with all levels of government to provide the framework for sound organisational and policy development.

- Development Assessment Guidelines
- Parking Policy
- Infrastructure Charging Plans
- Mode Guidelines
- Road and Freight Hierarchy Principles

We are committed to achieving positive outcomes for our clients and the community.

Road Safety Studies

Many traffic accidents are preventable. Our team is committed to improving our road and traffic systems to reduce the road toll. We have a sound understanding of the codes of practice and have substantial expertise in

special areas of road safety. Our team consists of a number of accredited road safety auditors.

- Accident Investigation
- Crash Rate Analysis
- Road Safety Auditing
- Railway Level Crossing Safety
- Speed Limit Reviews

Working with local councils and state government authorities, we help our clients deliver safer transport systems.

Specialist Support Services

As experienced professionals, we provide a range of services to complement our traffic and transport advice.

- Community and Stakeholder Consultation Services
- Training Programs
- Court Appeals and Expert Witness Services
- Staff Secondments
- AutoCAD, MapInfo and CorelDRAW Skills

Cardno Eppell Olsen's team can provide assistance, training and support when you need more resources or expert advice.



PROJECT EXPERIENCE

Cardno Eppell Olsen provides insight into issues relating to the provision of road infrastructure within an increasingly complex environment. Their dedication to technical excellence is evident in the quality of their work combined with an understanding of client requirements.

Tom Baskerville, Director
(Strategy & Relationships)
- DMR Queensland

Penrith Integrated Transport & Land Use Study

The Penrith Integrated Transport and Land Use Strategy (PITLUS) was a joint initiative of Council and the NSW Department of Planning to create more sustainable transport options for residents, workers and visitors. PITLUS provides the transport context for Council's new city-wide Local Plan following the identification of Penrith as a Regional City. Actions for walking, cycling, bus, rail, taxi, freight and the road network were prepared in consultation with stakeholders to provide one of the regions first integrated transport strategies.

Principal Cycle Network Plan - Far North Queensland

We developed and prioritised a Principal Cycle Network Plan for Far North Queensland and undertook concept design development for high priority routes, which will be incorporated into the Far North Queensland Regional Plan 2026.

Leichhardt Oval Transport Management Plan

A traffic and transport management plan was developed for Leichhardt Oval during small scale and large capacity events. The plan includes a review of parking restrictions, implementation of special event clearways, increased public transport, shuttle bus services, promotion of events via portable & permanent Various Message Sign (VMS) and liaison with a variety of stakeholders including State Transit Authority (STA), the Roads and Traffic Authority (RTA) and Council.

Mt Lindesay/Beaudesert Strategic Transport Network Investigation (STNI)

The aim of the STNI was to determine the long-term transport needs in the region to 2056, including road, rail, bus and cycle infrastructure requirements. To understand the 2056 transport demands a range of population and employment projections and public transport usage levels were developed into scenarios. These scenarios were then used to test a number of potential road networks and estimates of public transport demands using the EMME/2 computer program.

Nerang Concept and Structure Plan

As part of a multi-disciplinary project team, Cardno Eppell Olsen helped develop a new urban design and planning vision for the Nerang study area which considers the area's unique opportunities and constraints. The vision is intended to be used by both the Queensland Government and Gold Coast City Council towards introducing new planning instruments for the betterment of Nerang and Gold Coast City. An assessment of the road network for Nerang considered both existing and future transport infrastructure, and developed a series of recommended improvement measures in relation to transport infrastructure for incorporation into the study vision.

Gladstone Nickel Refinery Traffic Report

Cardno Eppell Olsen prepared a traffic impact assessment of the proposed Gladstone Pacific Nickel Ltd nickel refinery and associated operations at Yarwun on the outskirts of Gladstone. This traffic impact assessment formed part of the Draft Environmental Impact Statement (EIS) for the nickel project. The Draft EIS was subsequently submitted to various stakeholders for their review and comments. Comments on the Draft EIS were received and collated by the Queensland Department of Infrastructure. Cardno Eppell Olsen has since been commissioned by Gladstone Pacific Nickel Ltd to review the original traffic impact assessment in light of both the project changes and the Draft EIS comments relating to the traffic operations of the project.



Project Experience Continued...

Pine Rivers Road Safety Audit

This project included road safety audits associated with the design phase for two major intersection upgrades. South Pine Road/Dawson Parade/Plucks Road design included the upgrade of two priority control intersections to include signals. Old North Road/Samsonvale Road/Youngs Crossing Road intersection design included the replacement of an existing roundabout with traffic signals and included ancillary works on the adjacent approaches.

Port Kembla Coal Terminal Environmental Assessment Road Safety Review

As part of the Environmental Assessment for Port Kembla Coal Terminal, our team assessed proposed changes to existing operations to a proposed 24 hour 7 day per week delivery of coal via public road and increased delivery of coal over a ten year period. This included staff members undertaking a drive through in a coal truck on potential truck routes to get an understanding of general road safety issues including speed, swept path analysis, sight distances and road environments.

Macquarie University Transport Management Access Plan

This considered the transport issues associated with the ongoing and future development of the University. A strategic model was developed to predict traffic impacts over a 25 year timeframe. The likely transport impacts of the development scenarios were considered and a package of policy, service and infrastructure measures was developed including bus priority, end-of-trip facilities, pedestrian spine routes, casual bike parking and improved bus stop facilities.

Ripley Valley Master Plan

As part of a multi-disciplinary team, and in a significant role in an Enquiry by Design (EBD) process, we provided traffic and transport input to a master plan for a new community (110,000 plus people) at Ripley. A structure plan was developed incorporating the results of the EBD and the strategies and plans developed for road network, walking, cycling and public transport networks.

Perth to Bunbury Fast Rail Patronage Demand Modelling

Cardno Eppell Olsen is currently assisting the Western Australian Public Transport Authority (PTA) by developing a patronage forecast model for the proposed Perth to Bunbury Fast Rail project. The new and more direct route terminating in the Bunbury CBD has been estimated to reduce travel time by at least a third, to approximately one and a half hours, based on train speeds of up to 160km/h. This compares with the current Australind train service which takes two and a half hours and terminates 3km from the Bunbury CBD. The study findings will also assist the PTA in assessing the economic feasibility of the proposed service with regard to projected passenger mode share and demand.

M1 Eastern Distributor Sydney Stage 5 Road Safety Audit

Cardno Eppell Olsen was commissioned by Airport Motorway Limited to undertake a road safety audit along the entire length of the Eastern Distributor to determine potential road safety issues. The audit included a review of on and off ramps, examination of traffic movements from the traffic control room, desktop analysis of crash data and a review of design drawings.

Waterfront & Palm Jebel Ali Water Transport Study

Cardno is leading an international consultant team in the United Arab Emirates to develop a marine transportation strategy for the new city of Waterfront and the adjacent Palm Jebel Ali development in Dubai. The combined Waterfront and Palm Jebel Ali area is being planned for a population of nearly 2 million and will feature a number of man-made islands and an extensive canal system which provide significant opportunities for marine transport to complement landside public transport services, including a new Metro system and light rail transit (LRT) as well as buses and taxis. The project has identified major water routes for ferries and water buses and scoped an appropriate fleet size and identified locations for major terminals and transport hubs. As an extension to the initial project, Cardno is also investigating the potential for using more eco-friendly alternative fuel sources such as liquid natural gas, hydrogen fuel cells and solar.

Lennox Head Southern Precinct Modelling

Cardno Eppell Olsen was commissioned by Ballina Shire Council to undertake detailed modelling of the Lennox Head Southern Precinct using the microsimulation model Paramics. The purpose of this modelling was to confirm the works required to satisfy the future traffic projections and development requirements in the area. The modelling included a detailed analysis of the future development yields and an analysis of the implications of constructing the proposed Hutley Drive connections in stages.



John Olsen
Director & Discipline Leader

John has been involved in all aspects of transportation planning from data collection and model development to formulation and evaluation of projects and policies.

Land use and transport planning and the development and application of analytical models have been a keen interest. John brings understanding of transport systems and traveller behaviour and wide experience in practical application to developing planning methodologies and management of transport planning projects.

With his earlier experience in consulting in UK, in Main Roads, Premiers' Departments and studies in USA, John now has over 35 years professional practice experience in his specialty area of traffic and transport engineering and planning. He has dealt with the full range of traffic engineering operations and policy issues, and undertaken traffic planning and analysis using the full spectrum of analysis tools for intersections and traffic networks. John also has extensive involvement in the formulation of studies and their management, including technical direction of multi-disciplinary teams.



Brett McClurg
Director & Business Unit Manager

Brett began with the firm in 1989 and is now a Director and one of the leaders of the Traffic Engineering section of the practice. He is also the manager of our business operations throughout the traffic and transport unit of Cardno, being responsible for offices in Brisbane, Gold Coast, Sydney and Perth.

Over the course of his professional experience, Brett has been involved in the full range of work for the firm including traffic modelling, systems planning, signals design, road safety assessments, local area traffic management, traffic operations and development planning and assessment. With the growth of the firm Brett has moved to specialise in the traffic engineering area of the practice and leads that team.

Brett has developed the road safety audit team within the firm and is an accredited senior road safety auditor. He participated on secondment in the taskforce formed to develop Queensland's Railway Level Crossing Safety Guidelines. Brett has prepared numerous reports and presented evidence for appeals to the Planning and Environment court. His experience over the industry makes him an asset to master planning for development projects.



Shane Healey
Business Development Manager

Shane is a Senior Traffic Engineer and Principal with Cardno Eppell Olsen and functions as the Business Development Manager for the groups operations in Queensland and Western Australia. Shane has over 15 years experience in the delivery of traffic engineering and transport planning projects across Australia.

Shane has held senior positions with Cardno Eppell Olsen in both Queensland and Western Australia. This included being the Brisbane Office Manager, Perth Office Manager until 2010 and the founder of the firms' Gold Coast operations in 2003.

Shane has significant experience with development master planning and traffic operational assessment, having had senior level involvement in traffic assessment and design studies for retail, residential, commercial and industrial development proposals throughout Australia and overseas. Shane has a high level of experience in transport planning areas including corridor studies, master planning, parking assessments, transport infrastructure concept design and management of road safety related projects.

Key projects in which Shane has been heavily involved include detailed parking and transportation studies for Westfield Shopping Centres at Helensvale, Mt Gravatt, Carindale and Innaloo, strategic and detailed road network master planning for the Varsity Lakes and Emerald Lakes mixed use residential developments. He has regularly been called upon to provide expert evidence in Queensland Planning and Environment Court appeal matters. Shane also has a good understanding of road safety audit and traffic management plan practices and guidelines and has previously assisted Main Roads Queensland in delivering road infrastructure projects during a secondment to the Far North Queensland district.

Anissa Levy

Business Unit Manager, NSW Traffic and Transport Planning

Anissa has over 16 years experience in the transport industry in both the private sector and with local government. She is now the manager of the Sydney office and is responsible for the team's delivery of services throughout New South Wales

As a practiced project manager, Anissa has wide ranging experience with client, stakeholder and community liaison. Anissa has worked closely with private and public land developers, private bus operators, community groups and Local Governments. Before working with Cardno Eppell Olsen, Anissa spent seven years at Baulkham Hills Shire Council and was responsible for transport planning, including local and regional transport modelling and the development of their Integrated Transport Strategy. During this time Anissa was responsible for assessing all large development applications, re-zoning, DCP and Masterplan applications.

Anissa also prepared Traffic Studies for numerous Local Environmental Plans and Development Control Plans for the Baulkham Hills Shire. Anissa worked on projects such as Norwest Business Park, Kellyville / Rouse Hill Release Area, Balmoral Road DCP, North Kellyville and Box Hill Urban Lands Feasibility Studies, Castle Hill and Mungerie Park Town Centres. Anissa represented Council on various projects such as the Windsor Road and Old Windsor Road upgrades, North-West rail link, Parramatta and Blacktown T-ways and at the RTA's Regional Development Advisory Committee.

Anissa has extensive experience in traffic and parking studies and the development of Section 94 Contributions Plans for both rural and urban local governments and as well as traffic impact assessments for private developments. Anissa has provided Statements of Evidence and Expert Witness testimonies to the Land and Environment Court. Throughout her career Anissa has gained extensive experience and knowledge in the field of transport planning including utilising various transport modelling packages.

Stephen Manton

Gold Coast Office Manager

Steve joined Cardno Eppell Olsen in June 2007 as Manager of Transport Infrastructure Planning. Stephen's role is now that of Gold Coast office manager. Steve was previously based in Sydney for eight years and moved to the Gold Coast at the start of 2007.

Steve is a senior traffic engineer with more than 18 years of professional experience in traffic engineering and transport planning gained in Australia, New Zealand and the United Kingdom. Over the course of his career Steve has worked on a wide range of transportation studies and impact assessments in both the public and private sectors, with a particular lean towards the transport assessments associated with infrastructure planning for major transport projects.

He has experience across a broad range of disciplines in the traffic engineering and transport planning arena complemented by strong communication and project management skills. Steve has been the traffic and transport team leader on a number of large and high-profile multi-discipline engineering projects in addition to being the Manager of the traffic and transport section with his previous employer (Connell Wagner) in Sydney.

Ray Cook

Perth Office Manager

Ray is responsible for the management of the traffic and transport group in Perth, Western Australia. Ray has held positions as a traffic engineering manager and has over 25 year's international traffic, transport and safety engineering experience. He has a wide range of traffic and transportation project management experience acquired in Australia, New Zealand, the UK and Asia. He has extensive experience in the management of projects involving the study of infrastructure related to traffic impacts and is familiar with traffic management techniques to improve network safety and performance.

He has been project manager/team leader for numerous transport studies involving traffic data analysis, vehicle/pedestrian trip generation, traffic forecasting, transport modelling, traffic engineering, temporary traffic management, public transport, cycle/pedestrian facilities, accident investigation, transport assessments, public consultation and infrastructure master planning.

Cardno Eppell Olsen provides factual, independent advice. We ensure that clients, both public and private, understand the issues as well as alternatives. Whether the decision is to build bicycle paths or duplicate a major bridge, we have the skills and tools to make appropriate analysis and provide informed

Jerryn Zwart

Manager Sustainable Transport Solutions

Jerryn has qualifications in town planning and joined the firm in 1994. She brings extensive experience and expertise to her position as Manager, Sustainable Transport Solutions. Jerryn specialises in transport/land use integration and sustainable mode planning. She has undertaken cycle and pedestrian planning for local and regional areas including network planning, best practice reviews, strategy development as well as addressing issues such as safety and security through CPTED Risk Analysis. Jerryn is fully certified to undertake CPTED Risk Assessments. As part of her experience, she has also developed an expertise on parking policy and management, addressing many challenging issues, including the relationship between parking, economic development and travel demand management.

Jerryn has been involved in the project management and development of many transport planning projects and has extensive experience in project managing multi-modal studies, involving modelling, consultation, existing and future analysis, and innovative solutions. Jerryn has also been involved in the master planning of new developments including Enquiry By Design Workshops, concept design, analysis and development of strategies and action plans for Ripley Valley, Mt Peter, Ipswich City Centre and various transit oriented developments.

Anthony Burke

Senior Traffic Engineer

Since joining the firm Anthony has utilised his traffic engineering and planning skills on a variety of projects using strategic and micro simulation modelling packages such as EMME2 and Paramics.

Anthony managed the EMME/2 modelling of Ipswich Motorway Upgrade Review in 2007. This placed him as one of the Senior Traffic Engineers within the Dinmore to Goodna Origin Alliance team. He managed the SATURN modelling team delivering a calibrated base network and future year models for initial option testing, BCR analysis and construction staging.

Anthony also has experience in Micro-Simulation with Wollongong Bus and CBD Traffic Implementation Plan Paramics modelling and Kawana Town Centre Paramics Modelling. He has worked on Lower Oxley Creek Structure Plan and Paradise Wetlands Neighbourhood Plan, Queensland Children's Hospital Master Plan, the University of Sunshine Coast Traffic and Parking Management Plan as well as several Traffic Impact Assessments and Environment Impact Assessments.

Anthony has strengths and analysis capabilities in GIS and relational databases. Anthony brings to the firm advanced skills in GIS mapping, programming, software design and development as well as extensive experience with project management, client liaison and training. He also has skills in data management and analysis, and the implementation of Open GIS compliant systems.

Paul Hatcher

Senior Transport Planner

Paul brings to the team nearly 30 years experience in traffic engineering and transport planning. Paul joined Eppell Olsen and Partners in 1988 from Main Roads where he had already gained extensive experience in transportation models and signal system software.

His background in operational research adds significantly to the depth and scope of the work able to be undertaken by the firm. Paul has been leading the firm's search for opportunities in overseas markets. He was involved in a major Infrastructure Planning Review Study for the Municipal Government of the city of Hangzhou in China.

Paul's critical role was to provide a western perspective to the Municipal Government planning agencies, to assist them to determine their priorities for funding and construction of major transport infrastructure in Hangzhou.

Since the establishment of the Cardno International office in Abu Dhabi, Paul has been involved on a number of projects in Abu Dhabi and Dubai.

Hannes Grobler

Senior Transport Planner

Hannes has qualifications in town and regional planning and joined the firm in 2008 as a Senior Transportation Planner after working in South Africa and New Zealand. Hannes specializes in the integration of land use and transportation, sustainable transport planning and regional development strategies. As part of his experience he has undertaken public transport strategies, regional and national highway planning schemes, urban and rural spatial development strategies, and integrated transportation assessments. Hannes has been involved in project management and the development of a vast array of projects and strategies including capital expenditure and infrastructure development strategies. Other projects Hannes has had experience in include assessment of development projects in regard to traffic impact, public transport servicing, road hierarchy, supervision of traffic surveys and parking supply surveys.

Ian Harper

Senior Traffic Engineer

Ian has worked in both the public and private sectors being involved in a large range of traffic engineering and highway design projects. Ian is proficient in the core highway and traffic engineering areas of the business, particularly development impact assessment, geometric design and intersection operational assessment and design.

Ian is a fully qualified road safety auditor and has a significant level of experience in undertaking audits in the UK, both as a team member and team leader.

Ian is currently involved in the undertaking or several road safety reviews as part of the Department of Main Roads network level road safety assessment to improve the safety of Metropolitan District road sections.

Stephen Harkins

Senior Traffic Engineer

Stephen has more than nine years of experience within Traffic and Transportation gained in Australia and the UK and has Chartered Engineer status (through Engineering Council UK, and the Institution of Highways & Transportation). Since arriving in Australia, 2 years ago, Stephen has been Project Manager for several Traffic Impact Assessments across Queensland and provided road, parking and intersection capacity analysis to both the public and private sectors. He has been Project Manager on design and implementation projects and is responsible for all output from engineers, graduates and technicians.

Stephen recently project managed the Traffic Impact Assessment on time and on budget towards the Environmental Impact Statement for the multi-billion dollar GLNG Project. It will be the world's first to process coal seam gas into liquefied natural gas. Centred in Gladstone (but spanning a road network over an area equivalent to the size of England), the impacts of construction and operations traffic movements were assessed for the project's expected 30 year duration.

He has also provided traffic and transport planning advice from initial stages through to detailed capacity analysis and Development Applications for residential, commercial, industrial and mixed-use developments across South East Queensland, including the proposed redevelopment of the Seahaven Resort on Noosa's Hastings Street, Bellvista 2 and Pelican Waters Southern Lakes on the Sunshine Coast. Site layout design and car parking provision analysis and assessment has also been provided for existing and redeveloping shopping centres including the Stockland Rockhampton centre. Stephen has also undertaken Road Safety Audits for the public sector.

He has undertaken and managed the design of local area traffic management schemes for the provision of improved pedestrian, cycling and public transport facilities as well as for road safety improvements and he is an experienced road safety auditor.

Ryan Miller

Senior Traffic Engineer

Ryan has knowledge in traffic impact assessments, intersection modelling, traffic signal operations and design, working knowledge of the SCATS system, intersection analysis and layout design, road safety audits, incident response planning and management, major special event planning and traffic management, the ability to create traffic management and control plans for construction sites as well as major special events. Ryan is also an IPWEA Accredited Level 2 Road Safety Auditor.

Ryan has also undertaken Pedestrian & Mobility Plans (PAMPS), Transport Management & Accessibility Plans (TMAPS) for Part 3A Major Projects for the NSW Department of Planning, has working knowledge of the microsimulation model Paramics, and has prepared concept designs for various car parks. Ryan is also experienced in major road resurfacing contracts and pavement management systems including HDM4.

John McCormack

Senior Traffic Engineer

John has over five years experience in traffic and transport engineering including involvement in both private and public sector projects. Since this time he has become proficient in the core traffic engineering areas of the business, particularly development impact assessment, parking demand and management and intersection assessment and design. He is skilled in geometric design and his skills have been applied to a variety of site layout and road network issues.

John has been involved with development related projects for residential, industrial, commercial and retail developments throughout Queensland and New South Wales, involving project management, traffic impact assessments, traffic management and road safety, along with master planning and integrated transport studies.

David Zohar

Senior Traffic Engineer

David joined Cardno Eppell Olsen soon after he completed a Masters Degree in Transportation and Highway Engineering. His thesis was presented at the TRB 86th annual meeting and published in the TRR journal of the TRB. David has six years of both international and local experience in traffic and transport. David brings extensive knowledge in road safety assessments, car parking, masterplanning, city and regional plans, railroad crossing safety audits, multimodal integrated public transport centres, subdivision design, service station design, local area traffic management and detailed road design.

David has been involved in the preparation of traffic impact assessments for a diverse range of development projects from large regional shopping centres and residential subdivisions to mixed use commercial facilities throughout Queensland and northern New South Wales. As part of ongoing project experience, David has assisted in preparing technical reporting for Planning and Environment Court cases. David has developed a detailed knowledge of the key transport and design modelling packages.

Russell Yell

Senior Traffic Engineer

Russell has extensive experience in the assessment and improvement of urban transport networks. This work has been for public and private sector clients, involving masterplanning, design and real time traffic management.

He also has a wealth of experience in station and interchange design. This has involved looking at passenger forecasting as well as the assessment of the transport node and its integration with the surrounding environment. To aid this work Russell has developed a strong understanding of Legion pedestrian micro-simulation software. Russell has built up a high level of ability in several traffic and pedestrian modelling software packages, namely: LINSIG 2; TRANED 2; OSCADY; ARCADY; VISSIM, Aimsun and Legion.

Daniel Suter

Senior Traffic Engineer

Daniel has 7 years of experience working for Local and Territory governments as a traffic engineer. Daniel has a unique understanding of what government organisations (the eventual asset owner's) require to maintain and operate the road network. With this experience Daniel has the capability to deliver real workable solutions to road engineering problems.

Daniel's area of expertise is in traffic signals. He has worked on all aspects of traffic signals ranging from their initial design right through to their ongoing operation and maintenance.

Daniel has reviewed numerous TIA reports ranging from small residential developments through to large industrial sites. Daniel's government background gives him a comprehensive understanding of what government organisations are looking for in TIA reports.

Daniel has also undertaken several road safety audits and is qualified to Select/Modify and Apply RTA traffic control plans.

Adrian Bateman

Senior Traffic Engineer

Adrian has thirteen years experience as a traffic and transport engineering consultant working in both England and Australia. He has significant experience in the assessment and design of road based infrastructure required to support land use changes for private and public sector clients and also includes periods working within public-private partnerships and on secondment to local government.

Adrian has project management experience in undertaking traffic and parking assessments for developments, land use/transportation studies, corridor/town centre transport strategies, intersection design and analysis, design and assessment of pedestrian, cycle and public transport schemes, local area traffic management/traffic calming and road safety audit.

Mark Plattz

Traffic Engineer

Since commencing employment with Cardno Eppell Olsen, Mark has been involved in a number of significant infrastructure planning and development projects throughout Australia and overseas. Mark is proficient in the micro simulation packages Paramics and SATURN and is also an auditor of these models with the organisation. Mark has also capable skills in strategic modelling.

Mark has experience in the team lead role for large SATURN and Paramics planning projects and therefore has well developed skills in liaising with internal and external stakeholders. In addition to Mark's transport modelling skills, Mark has well developed traffic engineering skills and has experience project managing a wide variety of traffic impact assessments for proposed developments throughout Queensland.

Kirsty Bilton

Traffic Engineer

Kirsty has recently completed a staff exchange to the United States with Kittelson & Associates, Inc. During her time in the USA, Kirsty was involved in a variety of public and private sector projects including the development of access management strategies, geometric design and sketching of intersections and preparation of long range transportation plans.

Kirsty is proficient in many facets of Traffic Engineering with experience in parking assessments, car park design, site layout review, intersection operation assessment and servicing analysis. Kirsty has also been involved in the completion of traffic and transportation assessments for submission in Environmental Impact Statements for a number of significant projects throughout Queensland. Kirsty is skilled in using a number of engineering software packages including SIDRA Intersection, AutoCAD and Autoturn. She has also gained experience using a number of modelling programs including SATURN, Paramics and Tracks.

Peter Bilton

Traffic Engineer

Peter has recently completed a twelve month staff exchange to the USA, where he worked for Kittelson and Associates, Inc. During his time in the USA, Peter was heavily involved in the writing and production of the Highway Safety Manual, First Edition. Other projects Peter was exposed to in the US include at grade rail crossing studies, signalized corridor analysis and review of planning applications for developments of major impact.

Prior to going to the US, Peter spent six months working on secondment to the Brisbane North-South Bypass Tunnel Joint Venture project, planning and overseeing the implementation of temporary traffic changes during construction. During this time Peter gained skills in developing, implementing and auditing complex traffic control plans, highway design and temporary works impact analysis, and an appreciation for the complexities of construction of major projects in 'brownfields' sites.

Jamie Murphy

Engineering Draftsman

Jamie has over 10 years experience in drafting using AutoCAD and provides support in the preparation of conceptual road, car park and intersection plans. He has developed his skills with MapInfo in the design of GIS maps for use in consultation and planning studies.

Core experience is in the design and review of car park layouts and access configurations utilising the CAD-based program AutoTURN to simulate low speed turning manoeuvres of vehicles while applying design standards in their assessment. Jamie's niche skill is in traffic signals hardware design and construction estimates for new or established installations. Jamie has worked on over 50 traffic signals projects.

Connie Kotze

Graphic Designer

Connie's expertise at Cardno Eppell Olsen is in the production of conceptual maps and figures, as well as the production of report templates, annual newsletters and community consultation materials. She organises materials intended for print production and multimedia platforms - included in this, the creation and maintenance of internal corporate and client websites.

Connie also works with the Cardno corporate marketing team and helps implement the Cardno visual standards. She is responsible for the design and upkeep of various promotional materials and the creation and upkeep of templates used within Cardno and Cardno merger partner business units.

Sam Laybutt

Transport Planner

Sam has three years experience in traffic engineering and transport planning. Since joining Cardno Eppell Olsen in 2006, he has been heavily involved with public and active transport planning, traffic and parking studies, traffic impact assessments and strategic transport planning. Sam also has skills in various software packages, including SIDRA and MapInfo.

William Lee

Traffic Engineer

William has been involved with an extensive number of traffic impact assessments for commercial and residential developments throughout Queensland and New South Wales.

In undertaking these projects, William has incorporated the application of numerous computerised analysis tools to undertake detailed operational analysis of transport networks in the area. His involvement in such projects has incorporated the application of intersection design layouts.

William has also been involved in the assessment of access location and parking requirements relevant to local governments and Australian Standards for development proposals including commercial, residential and service station developments. He has also been involved with the assessment of impacts of heavy vehicle movements on pavements.

Michael Gillies

Traffic Engineer

Michael joined Cardno Eppell Olsen as a graduate traffic engineer in 2006 after completing his degree in Civil Engineering and Commerce at the University of Queensland. Prior to working at Cardno Eppell Olsen, Michael worked at GHD in their traffic engineering department where he assisted senior engineers in traffic impact assessments and intersection analysis. At Cardno Eppell Olsen Michael has been involved in similar areas with an expansion into the modelling and planning areas of Traffic Engineering.

Jeffrey Baczynski

Traffic Engineer

Whilst with the firm, Jeffrey has become proficient in the core traffic engineering areas of the business, particularly development impact assessments, pavement impact assessments and intersection analysis and design. Jeffrey is skilled in using several engineering software packages including SIDRA Intersection, MapInfo and TRAFFIX. Jeffrey has been involved in the preparation of development impact assessments for various land uses including residential subdivisions, regional shopping centres and industrial park developments.

Tom Goodhand

Traffic Engineer

Tom has six years experience shared between Australia and the United Kingdom. His experience is varied and includes traffic engineering, transport planning, assessments of land development projects and transport modelling for a range of private and public sector clients. Tom has been involved in traffic engineering techniques associated with land development projects including traffic generation, distribution, assignment and intra-development trips for mixed land uses. He has extensive experience in using the TRANSYT and SIDRA computer packages for the analysis of intersections. Tom has also been part of a team responsible for maintaining a city wide traffic model on behalf of a local authority.

Hai Nguyen

Traffic Engineer

After completing his University degree, Hai worked for two years on Urban Residential Planning and Management in Hanoi. Hai also spent two years studying his masters degree at the Asian Institute of Technology to develop his knowledge and skills for application on several transportation projects in Vietnam from 1999 to 2006. Hai is rapidly developing his skills in key traffic areas, with experience in parking assessments, intersection assessment, and traffic data analysis and Hai also has experience in strategic transport modelling using EMME/2 software. Hai has been involved in traffic impact assessments for new developments including the use of aaSIDRA intersection modelling package. Hai also possesses skills in the utilisation of AutoCAD, and MapInfo.

Alex Williams

Engineering Draftsman

Alex has been working as a draftsman for Cardno Eppell Olsen since early 2007. He has had three years prior drafting and design experience in Hydraulics and Civil disciplines from working in North Queensland and Victoria. Alex is proficient in the use of AutoCAD and AutoTURN and provides support in the preparation of conceptual road, car park and intersection plans. He has experience in the use of the GIS software MapInfo.

Aaron Rosenstiel

Traffic Engineer

Since joining Cardno Eppell Olsen, Aaron has developed his skills in the core traffic engineering areas of the business, particularly development impact assessment, parking demand and intersection assessment and design. As well as skills developed in operational assessment, he has also utilised his skills in a number of parking design and site layout matters. Aaron has been involved in traffic signals design and preparation of schedules and materials lists. Aaron is also proficient with the use of the AutoCAD software suite.

Clement Lim

Traffic Engineer

Clement has ample experience in developing traffic simulation models using Paramics and SATURN. His computer software literacy includes SIDRA, AutoCAD and AutoTURN to assist him in car park reviews, providing design advice for shopping centre and industrial site layouts and truck loading bays. As a Level 1 Road Safety Auditor, Clement has been involved in a number of traffic impact assessments (TIA) and has equipped himself with technical knowledge in preparing local area traffic management plans (LATM), pedestrian mobility and access plans (PAMP) and crash assessments.

Andrew McGill

Transport Planner

Andrew is a member of the Sustainable Transport Solutions team, which specialises in planning for pedestrians, cyclists and public transport users. Andrew has been involved in a variety of projects related to the provision, assessment and/or improvement of sustainable transport systems. Andrew has gained experience in mobility and access requirements, CPTED analysis, shared path development and assessment, network connectivity improvement, community consultation, policy and strategy development, public transport servicing assessment and travel demand management.

Adam Gwatking

Traffic Engineer

Adam has proficient knowledge of aaSIDRA intersection analysis package and AutoCad software. Other programs in which Adam is competent includes AutoTURN and EMME2 Modelling. Adam has also been heavily involved with research and analysis for various court appeals.

Since joining Cardno Eppell Olsen he has gained experience in a number of areas including parking studies, intersection analysis, traffic impact assessments, event management planning and strategic transport modelling. Adam has the ability to design car parking areas around building and land constraints to maximise the number of parking spaces.

Other provisions include bicycle parking, disabled car parking, parent with pram parking, motorcycle parking, taxi and bus set down areas and indents.

Gary Wood

Traffic Engineer

Gary has a range of skills from his works in traffic engineering, traffic modelling, traffic impact assessment and public transport implementation planning. He has assisted in various major projects that required detailed microsimulation (VISSIM) and intersection modelling analysis (SIDRA). The nature of VISSIM models which he has developed ranged from multi-modal urban situation (Brisbane CBD) and highway environment (proposed Northern Link and Cairns). Gary has been involved in the delivery of transport projects both in the UK and Australia. Gary is a committee Member of AITPM after being nominated and elected by fellow traffic engineers.

Since joining Cardno Eppell Olsen, Gary has been involved with research and analysis for various development court appeals. He has also provided input for Microsimulation projects.

Brendan Hogan

Traffic Engineer

Brendan has played a role in a variety of different projects. These have included the preparation of traffic impact assessments, geometric design advice and intersection operational analysis for a range of developments throughout the Gold Coast and surrounding regions.

Through this work Brendan has gained valuable experience in traffic generation and distribution, car parking and service vehicle provisions, sustainable transport integration, road safety measures and intersection analysis utilising the SIDRA software package as well as working with AutoTURN and AutoCAD programs.

Richard Isted

Transport Planner

Richard started work with Cardno in 2006 after completing his Bachelor of Computing and Mathematical Sciences at UWA. Richard has principally been involved in transport modelling, planning and data analysis, as well as being involved in a range of traffic engineering activities, including parking demand, and concept intersection design. Richard has experience in undertaking transport assessments and developing transport management plans for regional centres, road / rail corridors, district and local structure plans, schools, shopping centres, industrial and mine sites, sports stadiums and special event facilities.

Richard brings a range of skills from operations research, mathematics, statistics and computer science to the transportation field. Richard also has experience in a number of the major transport modelling packages including CUBE, Paramics and SIDRA, and has developed models for both forecasting multi-modal travel demand and micro-simulating complex road situations. Richard also has experience in developing and facilitating workshops and technical presentations, particularly with regard to transport models.

Neill Miller

Traffic Engineer

Neill has recent experience working in traffic and transport engineering. He has experience in intersection modelling and analysis, traffic management plans, incident response planning and management, traffic impact assessments and traffic, parking and public transport studies.

Jacob Martin

Traffic & Transport Engineer

Jacob has undertaken transport modelling and traffic analysis in both Perth and the South West region of Western Australia, including mixed-use, residential and commercial developments. Jacob has strong analytical knowledge and computer programming skills, and has experience using the transport modelling computer programs Cube, Paramics and SIDRA. Jacob is has worked on community projects and has completed traffic impact assessments for small and large-scale developments of all types. Jacob has additional experience in such areas as project management, estimation, procurement and cost analysis.

Gurjit Singh

Traffic Engineer

Gurjit has gained experience in Intersection Analysis with the use of aaSIDRA, conducting swept-path analysis using AutoTrack and has basic AutoCAD experience. He has experience in organising and carrying out traffic and parking surveys as well as the subsequent analysis of the data collected.

Gurjit has completed traffic impact assessments for various developments, which often involves intersection analysis and advice to the developers or architects on such issues as calculation of trip generation, carpark design advice and site access advice, including access for service vehicles. He has also completed road safety audits, black-spot studies and junction analyses using the Highway Capacity Manual (HCM).

Fungai Mugari

Traffic Engineer

Fungai has been actively involved in the preparation of traffic impact assessments for a range of developments throughout Queensland.

Fungai has experience in traffic generation and distribution, car parking and service vehicle provisions, intersection analysis, including SIDRA analysis as well as an understanding of micro simulation packages, Paramics and SATURN. During this period of time Fungai has also had exposure to and has successfully worked with AutoTURN and AutoCAD.

Brendyn Rheinberger

Intern Traffic Engineer

Brendyn has assisted with traffic signals design on the state-controlled road network in locations on the Gold Coast, which have also been required as part of upgrades for new development. This work has involved locating signal hardware, lantern configuration and aiming, integration with existing Telstra, electricity and drainage services as well as the signage and linemarking changes required.

Utilising his AutoCAD skills, Brendyn has designed carpark and internal road layouts. He has been involved in network modelling, assisting with the design of internal road networks using swept path analysis software, Autoturn. He has also assisted in preparation of technical reporting that has accompanied development applications lodged with local and state government agencies.

Damian Vassallo

Intern Traffic Engineer

Damian's work at Cardno Eppell Olsen has seen him gain experience in a broad range of projects. A significant proportion of these have been private sector projects undertaking traffic impact assessments to be lodged with development applications. These have incorporated traffic generation estimates and distribution, impact assessment, intersection analysis and modelling and parking assessments.

Damian has also been involved in significant government infrastructure and planning projects where he has had exposure to network modelling packages including Saturn and Paramics.

Administration Support

Our team provides administrative support through the following staff across our four national offices:

Lisa Ballard - Administration Manager
Stacey McCosh - Brisbane Office Support
Taryn Stone - Gold Coast Office Support
Carol Mikaelian - Sydney Office Support
Kahli Allpress - Perth Office Support



“Transport and land use planning lies at the core of what we want our environment to be; how we want to live, work, find satisfaction; and how we can be protected from the adverse effects of living in large communities. This is not a technical activity alone, it is intertwined with the values in society and must interact with them.”

Hans L. Westerman - Cities for Tomorrow





**Cardno
Eppell Olsen**

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