

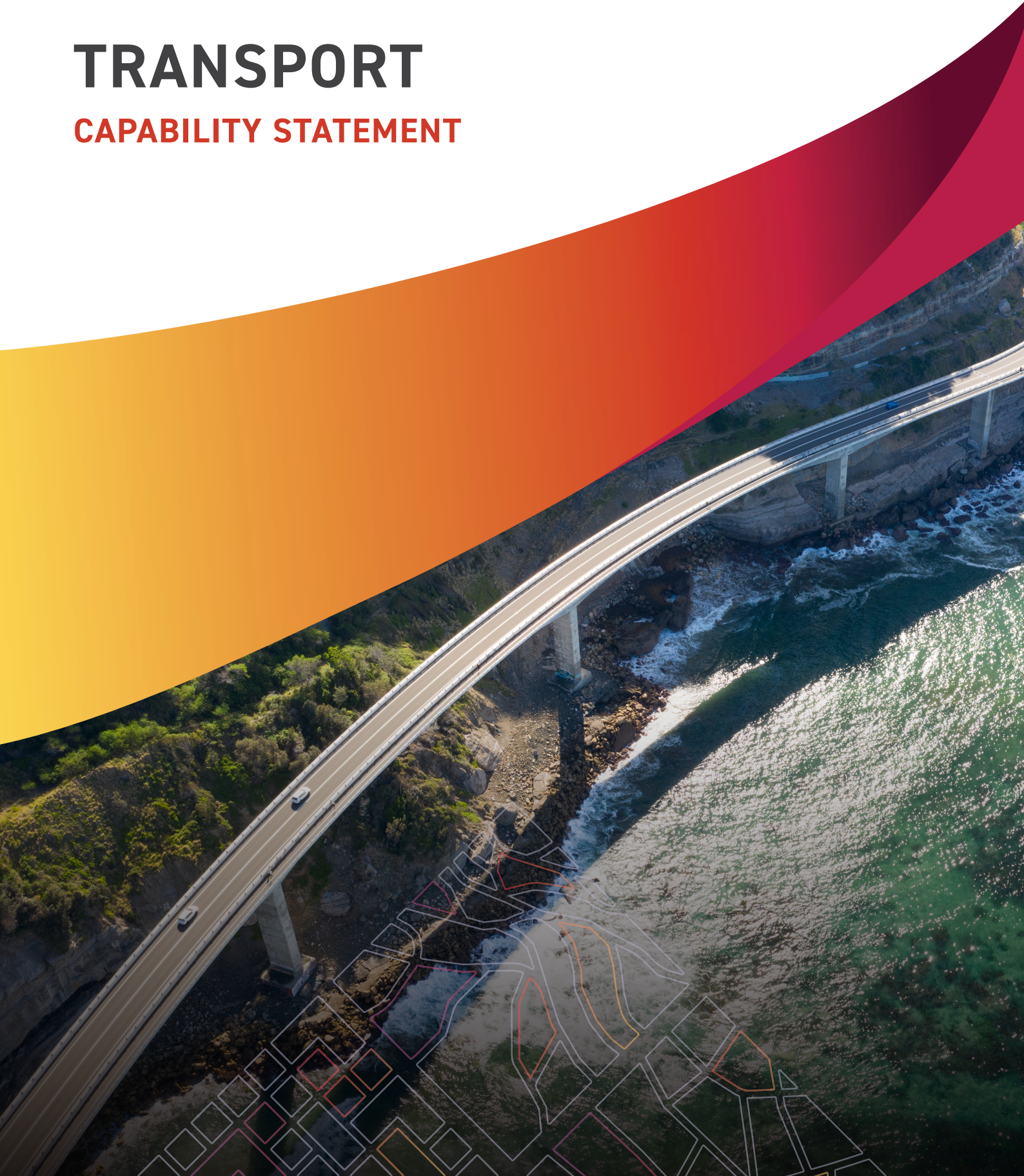


PLAN / DESIGN / DELIVER

Premise

TRANSPORT

CAPABILITY STATEMENT





INTRODUCTION

Premise is a full-service multidisciplinary consultancy that provides tailored solutions across various sectors including Built Environment, Water, Environmental & Renewables, and Transport.

Our diverse skills and experience, coupled with our collective drive and determination, has created an energetic culture of thought leaders focused on providing greater outcomes within both public and private arenas. We are committed to providing unparalleled leading-edge capability and solutions to our clients, delivered with a local, regional and personalised touch.

Above all we strive to exceed our clients' expectations each and every day.

LOCATIONS

We have over 200 people in the following locations:

NEW SOUTH WALES

- > Albury
- > Dubbo
- > Goulburn
- > Orange
- > Oran Park
- > Wagga Wagga

WESTERN AUSTRALIA

- > Perth

QUEENSLAND

- > Brisbane
- > Mackay
- > Rockhampton
- > Sunshine Coast
- > Townsville

PAPUA NEW GUINEA

- > Port Moresby



PHILOSOPHY

Premise is committed to going above and beyond to plan, build and deliver innovative projects informed by expertise, an ethical framework, strong relationships, and a commitment to creating valued places and vibrant communities.

Premise strives to exceed expectations in every area. For our clients and communities.

Every aspect of our work is informed by an ethical framework. We want to enrich the communities where we work and leave the world a better place. A greater place.

Together, we are more than the sum of our parts. Our collective expertise and shared drive allow us to deliver greater outcomes.

We are Premise.

**Our vision is to lead the creation
of valued places, communities
and environments.**

OUR CAPABILITIES

With a team of over 200 staff, Premise can offer capability and experience in engineering (civil, structural, environmental, traffic and water), project management, planning, surveying, contract administration, and architecture.

Premise has an established Transport and Traffic Team with expertise and experience in Transport, Roads, Traffic, Bridges, Pavements and all related disciplines associated with the delivery of Transport infrastructure projects.

Premise is regularly consulted by State, Federal and Local government as well as private industry clients in the development, management and operation of infrastructure assets. Premise partners with organisations to develop solutions for new infrastructure and the replacement and improvement of existing transport assets.

Premise has been involved in projects in the transport, freight, water, health, education, resources and energy sectors and have delivered a wide range of public and civil infrastructure projects that add value to the local communities in which we work. Our expertise and experience are demonstrated by the support from our clients.

Our extensive knowledge of the factors influencing the transport industry allows us to create safe, robust, cost effective and sustainable engineering solutions which meet the future transport needs of the community, business, services and industries across Australia and Papua New Guinea.

OUR SERVICES

Highway Design

Premise has worked in collaboration with State and Local Government and asset developers, owners and managers, on various regional, local and major road and transport projects across Queensland and the Asia Pacific.

- > **Gregory Developmental Road and Collinsville-Elphinstone Road (DTMR).**
Options assessment and detailed design of pavement rehabilitation for 9.0km and 4.6km respectively of flood prone highway. Involved geometric design, pavement design, drainage and flooding assessment.
- > **Upper Burdekin Wind Farm (Windlab)**
Traffic and Engineering services were provided to identify and assess over-size-over-mass (OSOM) route options for the transport of components from the Port to the site. Identification of site access locations, condition assessment of structures, verification of geometric constraints and constructability. Involved close liaison with three (3) Local Authorities and Department of Transport and Main Roads (DTMR).
- > **Township Pathway Network Planning, Mackay Regional Council (MRC).**
Planning of the shared use pathway and footpath networks for townships within the region. Prioritisation of projects with consideration of road safety, vulnerable road users, demand, cost and transport disadvantage.
- > **Elliot Springs, Julago (Lendlease)**
Traffic Engineering Impact assessment and Master Planning was completed including road hierarchy selection, provision for active and public transport and intersection design. Detailed design of all sub-arterial roads including intersections, roundabouts, signalised intersections parking and bus bays. Included Major Collector Road detailed design and construction supervision.
- > **Dalrymple Road Strategic Corridor Planning, Mt Louisa, Townsville Qld**
Concept planning for four-laning of Dalrymple Road between Thuringowa Drive and Shaw Road incorporating ultimate carriageway alignment, Bohle River bridge crossings and Rapid Transit routes.
- > **Bruce Highway Larsens to Lannercoast Street Upgrade (DTMR)**
As an alliance partner, Premise undertook the preliminary and detailed engineering design for 4.5km of the Bruce Highway at the southern approaches to Ingham, Queensland. The design included 2 signalised intersections and pavement rehabilitation works.



Traffic and Transport Planning

Premise has worked on a wide range of traffic engineering and transport planning projects across Queensland including:

- > SIDRA network modelling of closely spaced intersections and coordinated traffic signals *surrounding the Townsville City Bus Interchange including recommendation of public transport prioritisation measures*
- > PARAMICS microsimulation modelling *Mackay Bus Station and Upper Ross Corridor, Townsville Airport*
- > Network options evaluation and strategy development *Mackay Port, Garbutt Commercial Area, Murray and Balgal Beach*
- > Central Highlands Council and Whitsunday Council *Traffic impact assessment for commercial developments on behalf of Local Authorities*
- > Transport network planning and impact assessment for the master planned communities *Cosgrove, Everleigh, Harris Crossing, Riverstone, Sanctum and Sarina Beach Ecologically Sustainable Community*
- > Traffic impact assessment and haulage route analysis for mines and renewable energy projects *Near Lakeland, Mount Isa, Dajarra, Cloncurry, Hughenden, Nebo, Kingaroy, Warwick and Gatton*
- > Traffic management planning *Townsville Bulk Storage and Handling Facility's proposed intermodal facility at Berth 4, Port of Townsville*

Bridge and Civil Structures Design

Premise has an established Structural Team that works collaboratively with our Civil Team and has delivered various key projects in collaboration with State, Local Government and corporate organisations.

- > Andromache Bridge And On-Roads Replacement *Proserpine For Whitsunday Regional Council*
- > Vine Creek Bridge *Tablelands Regional Council, Far North Queensland*
- > Alderley River Crossing *40km North Of Hughenden, North Queensland*
- > Hornibrook Ngi New Standard Bridge Panel *Papua New Guinea*

HIGHWAY DESIGN

Case Studies

CRYSTALBROOK ROAD REHABILITATION OPTIONS ANALYSIS

Proserpine, QLD

A 3.6km section of Crystalbrook Road in Proserpine, QLD, has been exhibiting repeated pavement failures to varying degrees along its length. Premise conducted a comprehensive investigation of the failures and provided the Department with a report detailing our findings, the rectification options considered, and our recommended rehabilitation option.

Premise used several methodologies to determine the reasons for the road failures including site inspections, geotechnical investigation, engineering survey and service location, and traffic composition review against location and type of failures and sub-surface conditions. Once the investigations were complete, Premise provided the Department of Transport and Main Roads (TMR) with detailed reporting of our findings and the options for rehabilitation. Premise also provided recommendations for alternative options based on several factors including ease of construction, construction under live traffic conditions, durability (design life) and cost.

Premise completed the detailed design and documentation for rehabilitation of the road pavement including the urban and rural road segments. This work includes vertical alignment design, pavement design and drainage improvements.

CARMICHAEL RAIL PROJECT ROAD INFRASTRUCTURE

Isaac Region, QLD

Carmichael Rail Network are constructing a 200km rail line connecting the Carmichael coal mine to an existing Aurizon rail line for access to the port at Abbot Point north of Bowen. This includes a program of capital upgrades to the local and state-controlled road network in the Whitsunday and Isaac Regions. This work requires the upgrade of intersections, level crossings roads and rail over-passes to enable construction. The Premise team has delivered various roads packages in collaboration with Isaac Regional Council and Department of Transport and Main Roads Queensland including:

- > Reconstruction of 25km of Stratford Road for use by heavy and commercial vehicles, including an intersection with Suttor Development Road (TMR);
- > Accesses, bulk earthworks, roads, stormwater drainage and traffic advice for Accommodation Camps;
- > Carmichael-Elphinstone Road overpass temporary bypass;
- > Suttor Development Road / Haul Road Intersection;
- > Glen Avon Road / Haul Road Intersection.

There was also a requirement to construct a 4km extension of Stratford Road incorporating a rail level crossing and a 7km property access to a design standard acceptable to the Local Authority. The existing alignment and pavement of Stratford Road is not suitable for the projected traffic or the 100km/hr proposed design speed requirement. Extensive horizontal and vertical realignment of the road was required to achieve the required design standards.

Through this project, Premise was able to demonstrate the company's ability to support remote project construction and collaborative approach to stakeholder engagement and management.

TRAFFIC AND TRANSPORT PLANNING

Case Studies

DAM AND IRRIGATION PROJECT GRANITE BELT WATER LIMITED

Stanthorpe, QLD

The Premise Traffic Engineering Team was engaged to assess the impact on state transport infrastructure generated by construction of the proposed 13ML dam and 126km pipeline network, extending generally along the New England Highway from Cottonvale to Ballandean.

Traffic Engineers commenced work on this project in July 2020 by assessing the traffic impact of the pipeline network and dam construction methodology. Premise responded to ongoing changes to the technical aspects and construction methodology, delivering the Traffic Impact Assessment for state transport infrastructure.

INNOVATION AND VALUE ADDING

Data Collection

The scale of the study area required large volumes of data. The challenges of collecting the data were compounded by tight project timelines and the COVID19 transport disruption. The data was combined with link and intersection counts provided by TMR to validate the survey data.

Crash Mitigation Strategy

Premise assessed traffic impacts based on the likelihood of interactions between traffic generated by different project components and peak traffic volumes. Following a review of road crash data, Premise recommended a stratified approach to performance standards. Consistent with the Department of Transport and Main Roads' "Guide to Traffic Impact Assessment", Premise identified a suite of strategies for avoiding and managing traffic impacts in preference to the construction of mitigation works.

OGDEN STREET CBD BUS HUB TOWNSVILLE CITY COUNCIL

Townsville, QLD

Premise was the lead consultant for redevelopment of Ogden Street and the creation of a transport hub in the heart of Townsville.

We worked closely with Townsville City Council, and relevant stakeholders, to deliver a key asset for the Community.

The Project objectives for the engineering design was to:

- > Prepare concept planning and a feasibility study including traffic engineering to commensurate the location within the CBD;
- > Prepare preliminary and detailed design documentation including architectural representations of the project;
- > Prepare detailed cost estimates including a P50 and P90;
- > Prepare specification and constructability reviews;
- > Prepare a Road Safety Audit of the project.

The concept design review included site analysis, traffic design, civil design, and the coordination of specialist design disciplines. The Townsville City Council CBD Bus Hub was a prominent project that will provide significant infrastructure in the support of the revitalisation of Townsville's CBD.



RISK MANAGEMENT FRAMEWORK FOR LARGE ANIMALS ON ROADS **DEPARTMENT OF TRANSPORT AND MAIN ROADS (TMR)**

Townsville, QLD

In 2017, the Northern Coroner recommended that TMR as lead agency, together with Townsville City Council and the Queensland Police Service develop and implement a Joint Management Plan (JMP) to proactively manage the risk to road users from animals on roads. Premise was engaged by TMR to develop a Risk Management Framework (RMF) for large animals on roads as part of the overall JMP.

The unusual nature of the project presented many challenges without obvious solution. Challenges included developing an objective methodology for evaluating and combining factors affecting risk level, and stratifying control measures to allow an escalation of responses with risk level. The RMF developed by Premise for the Townsville local government area is being presented by TMR as a model for development of similar frameworks for other districts.

BUSINESS CASE AND PRELIMINARY DESIGN FOR REPLACEMENT OF BRIDGES ALONG FITZROY DEVELOPMENTAL ROAD (DMTR)

Business Case

Project consists of development of a Business Case Report for the upgrade of three bridges along Fitzroy Developmental Road, located at Harry Brandt Creek, Isaac River, Isaac River Overflow. The upgrade is required to improve safety for all vehicles and provide sufficient width for passing vehicles as well as supporting economic prosperity locally.

Fitzroy Developmental Road is a strategic link regularly used by OSOM dimensional vehicles and a Type 1 road train route, and safety concerns of vehicles passing each other on the bridges requires to be addressed to support future development of the route. Upgrades consist of:

- > A 2.3km road upgrade and two new bridges (54m and 27m in length) at the Isaac River site;
- > A 1.4km road upgrade and new 54m length bridge at Harry Brandt Creek.

Preliminary Design

Preliminary design drawings consist of horizontal and vertical alignment, type cross sections and bridge general arrangement drawings.

Risk Assessment and Concept Estimate

A risk register was established at an early stage and treated as a 'live' document, being updated as the job progresses, with a focus on safety, constructability and road user requirements. The outcomes of the risk assessment enable evaluation to ensure adequate allowance is included in the cost estimate.

The identification of relevant costs and benefits forms the basis of the cost-benefit analysis to establish the benefit cost ratio (BCR).



BRIDGE DESIGN

Case Studies

NEW STANDARD BRIDGE PANEL HORNIBROOK NGI

Ramu Highway, Papua New Guinea

Premise was awarded the Hornibrook NGI Bridge panel design project to provide professional consultancy services for the proposed design and documentation for a standardised structural steel panel single lane road bridge system for single spans from 18 to 57 metres with steel profiled decking. The bridges are designed to be launched in an assembled state to accommodate the limited construction equipment available in rural Papua New Guinea. The new panel bridge system is designed to comply with T33 and T44 PNG bridge loading standards, and the relevant equivalent current Austroads loading.

Premise was engaged to produce a Structural Design Criteria Report which will list the design standards, materials, gravity, traffic, and environmental loads to be used to develop the new bridge system. Premise produced preliminary modelling and designs, including proposed bridge launching information, for the new structural steel road bridge system including members and connections to comply with the Structural Design Criteria Report. As a result, a total of fourteen individual standardised bridge designs were required for completion. Premise developed the standard panel and bridge configurations to optimise commercial competitiveness for the bridge lengths most commonly constructed by the client.

ANDROMACHE BRIDGE AND ON-ROADS REPLACEMENT WHITSUNDAY REGIONAL COUNCIL

Proserpine, QLD

Premise was engaged by Council as the Design Consultant for a replacement bridge and onroads on Gunyarra Road, Proserpine. The timber bridge had seen irreparable damage as a result of Tropical Cyclone Debbie in 2017. The existing bridge was replaced with an 'on alignment' prestressed reinforced concrete girder bridge. The new design resulted in the regrading of the approaches. 'Value engineering' was a key factor in the design of the upgrade. The extremely low traffic volumes and constrained vertical geometry of the site meant that many of the engineering decisions throughout the project pushed the limits of 'extended design domain'.

The scope of services that Premise was engaged in included Preliminary Structural and Civil design, Detailed Design and Documentation and Construction Phase Inspection and Certification. During the preliminary design process Premise provided several development structural options for consideration by the Council. The new bridge was initially required to be at the same level as the old bridge as per the requirements of National Disaster Relief and Recovery Arrangements. Premise collaborated with Council and other stakeholders to review this as the concrete units replacing the previous timber units were deeper and maintaining the same height would have caused hydraulic issues with the bridge. With the approval of the assessing authority Premise were able to design the bridge at a height that maintained the same hydraulic profile. Following completion of the design phase of the project in April 2017 Premise oversaw the construction works completed by the project contractor.



OTHER RELATED SERVICES

Hydraulics

Premise have the capability to undertake stormwater management/drainage investigations and studies including detailed hydrologic analysis and 1D/2D hydraulic modelling. Examples include:

- > **Morven Cattle Yard Transportation Interchange Yard**
Detailed hydrologic assessment and 1D/2D hydraulic modelling of floodplain
Impact assessment on neighbouring rail and road infrastructure
- > **Noah Creek Bridge**
Detailed flood assessment
1D Hec Ras and 1D/2D TUFLOW modelling to inform the design of a new bridge on the Cook Highway

Pavements

Premise can undertake detailed in-situ pavement assessment and prepare pavement designs. Examples include:

- > **Moray Carmichael Boundary Road/Elgin Road**
Preliminary and detailed pavement design of 97km of rural access road
Unbound and bound design options
- > **Gregory Developmental Road and Collinsville-Elphinstone Road**
Assessment of pavement options and detailed design

Contract Administration Services

Premise can offer full-service programme and project management services including works inspection, preparation of funding applications, contract administration, programme/project reporting, stakeholder management and works inspection. Example projects include:

- > **Haughton Pipeline Project**
Premise undertook the project management of this \$215m project
Overall coordination and management, liaison with Traditional Owners, liaison with local industry and stakeholders, development of procurement plans, preparation of tender documents and contracts and project reporting
- > **Napranum NDRRA Program**
Premise have undertaken the full gambit of works for the 2014,2015,2016 NDRRA programs for Napranum Aboriginal Shire Council
Administration and management of the entire program from assisting Council with applications for funding, inspections and identification of REPA works, full contract administration and reporting to QRA



CONTACT US

NEW SOUTH WALES

Albury

598 Macauley Street
Albury NSW 2640
PH (02) 6058 0100

Dubbo

1st Floor, 62 Wingewarra Street
Dubbo NSW 2830
PH (02) 6887 4500

Goulburn

Shop 3, 31 Clinton Street
Goulburn NSW 2580
PH (02) 4822 1366

Orange

L 1, 60-62 McNamara Street
Orange NSW 2800
PH (02) 6393 5000

Oran Park

S 301, L 3, Oran Park Podium
351 Oran Park Drive
Oran Park NSW 2570
PH (02) 4632 6500

Wagga Wagga

64 Hammond Ave
Wagga Wagga NSW 2650
PH (02) 6921 3312

WESTERN AUSTRALIA

Perth

Unit 7, 110 Erindale Road
Balcatta WA 6021
PH (08) 9441 2700

QUEENSLAND

Brisbane

L 11, 300 Adelaide Street
Brisbane QLD 4000
PH (07) 3253 2222

Mackay

L 2, 45 Victoria Street
Mackay QLD 4740
PH (07) 4829 3660

Rockhampton

21 East Street
Rockhampton QLD 4700
PH (07) 4829 3660

Sunshine Coast

L 1, Shop 1, 51-55 Bulcock Street
Caloundra QLD 4551
PH (07) 3253 2222

Townsville

84 Denham Street
Townsville QLD 4810
PH (07) 4772 0666

PAPUA NEW GUINEA

Port Moresby

Office 3, Level 3
Monian Tower
Douglas Street
Port Moresby
PH +675 313 7963

premise.com.au

