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Government  
of South Australia

Department for Infrastructure and Transport

**Application Guidelines:  
Professional and  
Technical Services Framework  
(Pre-qualification No. 17C811)**

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INFORMATION

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## 1 INTRODUCTION

### 1.1 Government Agency's Requirements

Companies wishing to be pre-qualified for the Professional and Technical Services Prequalification 17C811 are invited to submit an application in accordance with these Application Guidelines. To be pre-qualified, applicants must be able to demonstrate that they have the appropriate skills, management systems and experience in the appropriate categories. The submission must contain all of the information requested in Section 2.2.

Your application must include agreement to the standard contract(s); State Procurement Board Goods and Services Agreement and/or Australia Standard 4122-2010 General Conditions of Contract and Special Conditions for Professional Consulting Services (also see section 2.2).

Any future work procured via Professional and Technical Prequalification 17C811 will be in accordance with these Conditions of Contract and Special Conditions and will not be negotiable.

#### Service Categories included in the Professional and Technical Services Framework (Prequalification) 17C811:

Category	Sub-category Services
<b>Contamination</b>	<ul style="list-style-type: none"> <li>- Contamination Assessment Services</li> <li>- Site Contamination Auditor Services</li> </ul>
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>- Energy and Carbon Modelling</li> <li>- Materials Lifecycle Analysis</li> <li>- Energy Management / Auditing and Renewable Energy Advice</li> <li>- Climate Change Risk Assessment</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>- Dilapidation</li> <li>- Environmental Planning &amp; Impact Assessment</li> <li>- Environmental Auditing</li> <li>- Environmental Training</li> <li>- Noise / Vibration</li> <li>- Air Quality</li> </ul>
<b>Vegetation Services</b>	<ul style="list-style-type: none"> <li>- Vegetation Assessment Services</li> <li>- Arborist (Tree Assessment) Services</li> <li>- Arboriculture (Tree Removal) Services</li> <li>- Fauna Assessment Services</li> </ul>
<b>Landscaping and Urban Design</b>	<ul style="list-style-type: none"> <li>- General Landscape Construction</li> <li>- Revegetation</li> <li>- Irrigation System Design</li> <li>- Irrigation Installation</li> <li>- Herbaceous Weed Control</li> <li>- Woody Weed Control</li> <li>- Bushcare</li> <li>- Landscape Maintenance</li> <li>- Landscape Design</li> <li>- Urban Design</li> </ul>
<b>Heritage</b>	<ul style="list-style-type: none"> <li>- Aboriginal Heritage</li> <li>- Non-Aboriginal Heritage: Heritage Architectural</li> <li>- Non-Aboriginal Heritage: Archaeological</li> </ul>

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Category	Sub-category Services
<b>Pavement Engineering</b>	<ul style="list-style-type: none"> <li>- Pavement Design</li> <li>- Traffic Counts/Counting</li> <li>- Geotechnical Testing</li> <li>- Consultant Design/Advice including Proof Engineering &amp; Verification</li> <li>- Traffic Management</li> <li>- Performance Testing – Resilient Modulus, Deflectograph, Skid Resistance</li> <li>- Granular Pavement Materials Quality</li> <li>- Pavement Materials Search</li> <li>- Quarry and Borrow Pit Management</li> </ul>
<b>Rail Professional and Technical Services</b>	<ul style="list-style-type: none"> <li>- Alignment &amp; Track Infrastructure</li> <li>- Signalling &amp; Communication</li> <li>- Electrification</li> <li>- Stations</li> <li>- Depots &amp; Stabling Yards</li> <li>- Crossings</li> <li>- Light &amp; Heavy Passenger Rail</li> <li>- Rail Safety Management System</li> </ul>
<b>Geospatial Surveying</b>	<ul style="list-style-type: none"> <li>- Cadastral Survey</li> <li>- Engineering Survey</li> <li>- Construction Survey</li> </ul>
<b>GIS Services &amp; Aerial Imaging</b>	<ul style="list-style-type: none"> <li>- GIS Services</li> <li>- Aerial Imagery &amp; Remote Data Capture</li> </ul>
<b>Structural Engineering</b>	<ul style="list-style-type: none"> <li>- Structural Design</li> <li>- Structural Drafting</li> <li>- Bridge Inspections / Safety Audits</li> </ul>
<b>Geotechnical Services</b>	<ul style="list-style-type: none"> <li>- Geotechnical Sampling and Insitu Testing</li> <li>- Foundation and Earthworks Design</li> <li>- Slope Stability and Retaining Investigation and Design</li> </ul>
<b>Economics</b>	<ul style="list-style-type: none"> <li>- Cost Benefit Analysis</li> <li>- Business Case</li> </ul>
<b>Transport Planning &amp; Design</b>	<ul style="list-style-type: none"> <li>- Road Design</li> <li>- Transport Planning Studies and Concept Design</li> <li>- Lighting Design</li> <li>- Traffic Signal Design</li> <li>- ITS</li> </ul>
<b>Transport Modelling and Analysis</b>	<ul style="list-style-type: none"> <li>- Strategic and Tactical Transport Modelling</li> <li>- Traffic Modelling</li> </ul>
<b>Stormwater</b>	<ul style="list-style-type: none"> <li>- Stormwater Design and Modelling</li> </ul>
<b>Disability Discrimination Act 1992 (DDA) Compliance</b>	<ul style="list-style-type: none"> <li>- Transport DDA Compliance</li> <li>- Premises DDA Compliance</li> </ul>

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### 1.2 Additions and Amendments

The Government Agency may amend or add to the information in these Guidelines or the Specifications at any time.

### 1.3 Your Use of Guidelines

Without the express prior written consent of the Government Agency, you must not re-produce, re-advertise and/or in any way use the contents of these Guidelines either in whole or in part, other than for the purpose of preparing and lodging an Application.

### 1.4 Procurement Process does not create a contract

Your Application is at your sole risk.

Nothing in these Guidelines, or Your Application must be construed as creating any binding contract or other legal relationship (express or implied) between you and the Government Agency.

### 1.5 Engagement of Aboriginal Businesses

The Department for Infrastructure and Transport encourages South Australian Aboriginal owned businesses to apply for the Professional and Technical Services Prequalification. Increasing Aboriginal economic participation through procurement is a priority of the Government Agency.

## 2 YOUR APPLICATION

### 2.1 Format of Application

Your Application must:

- a) be in English
- b) be endorsed by an appropriately authorised officer within your business with any alterations or prices clearly and legibly stated and any alterations initialled
- c) quote rates in Australian Dollars that are GST inclusive
- d) stipulate fixed prices (unless otherwise specifically required or indicated)
- e) observe word limits where specified as the Government Agency reserves the right to disregard any part(s) of Your Application that exceed any specified word limit
- f) be concise and only provide what is sufficient to present a complete and effective response.

The Government Agency may disregard any content in an Application that is illegible.

### 2.2 Application

Before completing an application you must check the website to determine that the category you are applying for is open.

[https://dit.sa.gov.au/contractor\\_documents/prequalification](https://dit.sa.gov.au/contractor_documents/prequalification)

Your application must be completed in accordance with the Application Form available at [https://dit.sa.gov.au/contractor\\_documents/prequalification](https://dit.sa.gov.au/contractor_documents/prequalification) and must include

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agreement to the standard contract(s), State Procurement Board Goods and Services Agreement and/or Australian Standard 4122-2010 General Conditions of Contract and Special Conditions for Professional Consulting Services.

### **2.3 Cost of Preparing Your Application**

You are responsible for the cost of preparing and submitting Your Application (s) and all other costs arising from your participation in the Procurement Process.

### **2.4 Validity**

By lodging an Application You agree that the Application will remain open for acceptance by the Government Agency for the validity period specified.

### **2.5 Government Agency's Use of Your Application Materials**

Upon lodgement, all of your Application Materials will become the property of the Government Agency.

Intellectual Property owned by You or any third parties forming part of the Application Materials will not pass to the Government Agency with the physical property comprising the Application Materials. However, You acknowledge and agree that You have the authority to grant to the Government Agency an irrevocable, royalty free licence to use, reproduce and circulate any copyright material contained in the Application to the extent necessary to conduct the Evaluation and in the preparation of any resultant contract.

### 3 SCOPE AND REQUIREMENTS

#### 3.1 Requirements Reference Schedule

Category and Sub-Category services	General Summary Description	Minimum qualifications	Key relevant Standards/Guidelines	Example Deliverables
<b>Contamination Services</b>				
Contamination Assessment Services	<p>Contamination assessments may be required for:</p> <p>Due diligence in land acquisition or disposal processes;</p> <p>Assessing materials for the purpose of waste disposal/re-use; and assessing sites for potential risks to human and ecological health. Contamination assessments may include investigation and assessment of sites to determine nature and extent of site contamination waste classification or risk to human/ecological health.</p> <p>May also include the development of management plans and models if required.</p>	<ul style="list-style-type: none"> <li>- Demonstrate that the technical reviewer/project director is a Certified Site Contamination Practitioner (SCP) in accordance with SA EPA Site contamination policy: certification of practitioners, 2018</li> <li>- An appropriate tertiary degree or post graduate qualification (junior staff to operate under the direct supervision of Senior Technical Staff or SCP)</li> </ul>	<ul style="list-style-type: none"> <li>- National Environment Protection (Assessment of Site Contamination) Measure - ASC NEPM (1999 as amended 2013).</li> <li>- SA Environment Protection Act 1993</li> <li>- SA Environment Protection Regulations 2009</li> <li>- Environment Protection (Water Quality) Policy 2015</li> <li>- Environment Protection (Air Quality) Policy 2016</li> <li>- Environment Protection (Waste to Resources) Policy 2010</li> <li>- SA EPA Guidelines for Assessment and Remediation of Site Contamination 2018</li> <li>- SA EPA Current Criteria for the Classification of waste – including Industrial and Commercial Waste (Listed) and Waste Soil, 2010</li> <li>- SA EPA Standard for the production and use of waste derived fill, 2013</li> <li>- Health Guidelines for Assessing Human Health Risks from Environmental Hazards, 2012</li> </ul>	<ul style="list-style-type: none"> <li>- Preliminary Site Investigations</li> <li>- Detailed Site Investigations</li> <li>- Detailed Risk Assessments</li> <li>- Waste Classification</li> <li>- Remediation, Site or Environmental Management Plans</li> <li>- Soil, Groundwater or Soil Vapour Remediation Design and Implementation</li> <li>- Underground Storage Tank Investigations, Exhumations and Remediation</li> <li>- Human Health and Environmental Risk Assessments</li> <li>- Groundwater or Soil Vapour Monitoring, Management and Remediation Plans</li> <li>- Contaminant Transport Modelling</li> <li>- Vapour Risk Modelling</li> </ul>

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<p>Site Contamination Auditor Services</p>	<p>Site Contamination Auditor to undertake independent review of assessment and/or remediation work carried out by assessment consultants in accordance with regulatory frameworks. Audit triggers include regulatory, planning &amp; development or voluntary.</p> <p>The audit functions/types may include nature and extent of site contamination, including restricted scope, Remediation that is or remains necessary, including restricted scope. Site suitability. Waste Derived Fill.</p> <p>As conditions of past audits, review of subsequent documentation (i.e. additional monitoring rounds or management plans) may be required by an Accredited auditor.</p>	<ul style="list-style-type: none"> <li>- A person that holds current accreditation as a Site Contamination Auditor by the SA EPA.</li> <li>- Contractor to demonstrate that the auditor has access to a strong support team, inclusive of resources from varying levels.</li> </ul>	<ul style="list-style-type: none"> <li>- As above</li> <li>- SA EPA Guidelines for the site contamination audit system, 2010</li> </ul>	<ul style="list-style-type: none"> <li>- Review letters/reports</li> <li>- Site Contamination Audit Reports</li> <li>- Site Contamination Audit Statements</li> </ul>
<p><b>Sustainability</b></p>				
<p>Energy and Carbon Modelling</p>	<p>Preparing whole of life estimates of energy use and carbon emissions for infrastructure projects and assets</p>	<ul style="list-style-type: none"> <li>- A person with an appropriate qualification and a minimum of five years' experience in energy or GHG management including GHG assessment and auditing aligned with the Greenhouse Gas Protocol Corporate Reporting Standard.</li> <li>- Demonstrated understanding of the Infrastructure Sustainability Council of Australia (ISCA) Energy and Carbon Guideline</li> </ul>	<ul style="list-style-type: none"> <li>- Greenhouse Gas Protocol Corporate Reporting Standard</li> <li>- ISCA Energy and Carbon Guideline</li> </ul>	<ul style="list-style-type: none"> <li>- Whole of life energy and carbon estimates</li> </ul>
<p>Materials lifecycle analysis</p>	<p>Modelling of material lifecycle impacts (including embodied carbon).</p>	<ul style="list-style-type: none"> <li>- A person with 5 years' experience and an appropriate qualification in one of the following fields; life cycle assessment, engineering or material science.</li> </ul>	<ul style="list-style-type: none"> <li>- ISCA Materials Calculator and Materials Calculator Guideline</li> <li>- Australian National Life Cycle Inventory Database</li> </ul>	<ul style="list-style-type: none"> <li>- Completed ISCA Materials Calculations Australian National Life Cycle Assessment</li> <li>- Register of materials and associated activities and consumption data</li> </ul>



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Energy management/ auditing and renewable energy advice	Undertaking energy audits/ assessments of assets' energy consumption and demand profiles, preparing recommendations for improved energy management and tariff optimisation.  Opportunity analysis and recommendations for renewable power and energy efficiency solutions.	<ul style="list-style-type: none"> <li>- A person with a minimum of 5 years energy auditing experience (including carrying out Type 2 Energy Audits).</li> <li>- Demonstrated experience in assessing, scoping and programme design of renewable energy projects, including commercial scale Solar of 1 MW or larger (not aggregated).</li> </ul>	<ul style="list-style-type: none"> <li>- AS/NZS 3598.1:2014 Energy Audits – Commercial Buildings</li> </ul>	<ul style="list-style-type: none"> <li>- Energy audits</li> <li>- Renewable power and energy efficient technology opportunities/ feasibility analyses</li> <li>- Solar system design</li> <li>- Lighting design</li> <li>- Business cases for energy efficiency/ demand management initiatives</li> </ul>
Climate change risk assessment	Assessment and treatment of risks associated with natural hazards and climate change.	<ul style="list-style-type: none"> <li>- A person with an appropriate tertiary qualification or post graduate qualification with a minimum 3 years' experience in Climate Change assessments must be involved throughout the climate and natural hazard risk assessment process.</li> <li>- This person must oversee natural hazard data and climate change projection identification and the risk assessment.</li> </ul>	<ul style="list-style-type: none"> <li>- AS 5334-2013 Climate change adaptation for settlements and infrastructure - A risk based approach</li> <li>- AS/NZS ISO 31000:2009 Risk management - Principles and guidelines</li> <li>- Climate Change Impacts &amp; Risk Management: A Guide for Business and Government (Australian Greenhouse Office, 2006)</li> </ul>	<ul style="list-style-type: none"> <li>- Stakeholder engagement</li> <li>- Resilience planning</li> <li>- Natural hazard risk assessment</li> <li>- Designing treatment options</li> </ul>
<b>Environmental Services</b>				
Dilapidation	Undertake dilapidation survey / property condition assessment, including coordination of property access, to accurately record the internal and/or external condition of selected buildings/structures pre and/or post construction or maintenance activities. The dilapidation reports may be used to objectively assess compensation claims should owners / residents believe their properties were adversely affected by construction activities.	<ul style="list-style-type: none"> <li>- An appropriate qualification e.g. Associate Diploma in Building; Degree in Architecture; Degree in Structural/Civil Engineering.</li> <li>- Minimum 5 years appropriate experience in dilapidation surveys</li> </ul>	<p>Refer: <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a></p> <ul style="list-style-type: none"> <li>- The Department's Management of Noise and Vibration: Construction and Maintenance Activities Environmental Instruction 21.7 (Section 5.3.2)</li> </ul>	<ul style="list-style-type: none"> <li>- Dilapidation report including photos and/or video evidence of existing building/structure condition.</li> <li>- Advice to inform compensation claims</li> </ul>

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	The dilapidation reports may be used to objectively assess compensation claims should owners/ residents believe their properties were adversely affected by construction activities.			
Environmental Planning & Impact Assessment	Documentation and coordination of environmental investigations, technical papers, data analysis, and interpretation of project designs in order to cover all facets of environmental management.  Services required may also include: preparing and obtaining environmental approvals; and preparation and review of Environmental Management Plans and procedures; provision of recommendations for contract specific technical requirements for environmental aspects.	<ul style="list-style-type: none"> <li>- An appropriate tertiary environmental degree or post graduate qualification;</li> <li>- Minimum 3 years appropriate experience (graduates to operate under the direct supervision of senior qualified staff)</li> </ul>	Refer: <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a> <ul style="list-style-type: none"> <li>- Contractor's Environmental Management Plan Guidelines</li> <li>- Environmental Approval Procedures Environmental Instruction 21.1</li> <li>- Environmental Impact Assessment Report Template</li> </ul>	<ul style="list-style-type: none"> <li>- Environmental Impact Assessment Report</li> <li>- Environmental approval documentation (including application and approval documentation)</li> <li>- Environmental Investigation Reports</li> <li>- Environmental Management Plans</li> <li>- Environmental Contract Specific Technical Requirements</li> </ul>
Environmental Auditing	Preparation of an audit plan, coordination and undertaking of on-site audits of construction projects (environmental systems and environmental management) and documenting findings and recommendations in an Audit report.	<ul style="list-style-type: none"> <li>- An appropriate tertiary environmental degree or post graduate qualification;</li> <li>- Environmental auditor qualifications (e.g. Lead Auditor - Environmental Management Systems)</li> <li>- Minimum of 5 years environmental auditing experience;</li> </ul>	Refer: <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a> <ul style="list-style-type: none"> <li>- Environmental Audit Guidelines for Construction (Road, Bridge and Marine Facilities)</li> <li>- ISO 19011:2018</li> <li>- ISO 14001:2015</li> </ul>	<ul style="list-style-type: none"> <li>- Environmental Audit Plan</li> <li>- Environmental Audit Report</li> </ul>
Environmental Training	Preparation and delivery of an environmental training plan, training literature and presentations	<ul style="list-style-type: none"> <li>- An appropriate tertiary environmental degree or post graduate qualification;</li> <li>- Train the trainer qualifications</li> </ul>	Refer: <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a>	<ul style="list-style-type: none"> <li>- Environmental training plan</li> <li>- Environmental training handbooks</li> <li>- Presentations/slides</li> </ul>

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<p>Noise and Vibration</p>	<p>Provision of high quality noise and vibration advice and reporting to support Departmental needs.</p> <p>Required to assess noise and vibration from road, rail and marine projects (construction and operation) and provide recommendations for mitigation measures. May include undertaking field measurements/monitoring and modelling.</p> <p>Personnel may be required to contribute to community engagement activities.</p>	<ul style="list-style-type: none"> <li>- Acoustic engineer (defined as a Member of the Australian Institute of Engineers and eligible for membership in the Australian Acoustical Society)</li> <li>- Minimum 5 years appropriate experience</li> </ul>	<p>Refer: <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a></p> <ul style="list-style-type: none"> <li>- Road Traffic Noise Guidelines</li> <li>- Management of Noise and Vibration: Construction and Maintenance Activities Environmental Instruction 21.7</li> <li>- EPA Guidelines for the Assessment of Noise from Rail Infrastructure</li> <li>- Australian Standard AS 1055.2 "Acoustics – Description and Measurement of Environmental Noise"</li> <li>- Australian Standard AS 2702 "Acoustics – Methods for the Measurement of Road Traffic Noise"</li> </ul>	<ul style="list-style-type: none"> <li>- Noise and Vibration Assessment Reports (including data and models)</li> <li>- Noise and Vibration Monitoring Reports (including data)</li> <li>- Construction Noise and Vibration Management Plans</li> <li>- Noise and Vibration Mitigation Management Plan</li> <li>- Provision of specialised noise and vibration advice</li> <li>- Mapping including shapefiles</li> </ul>
<p>Air Quality</p>	<p>Provision of air quality advice and reporting to support Departmental needs.</p> <p>Tasks may include: undertaking field measurements/monitoring, preparation of air quality models, detailed air quality assessments, reporting and provision of recommendations for mitigation measures.</p>	<ul style="list-style-type: none"> <li>- Specialist or engineer (defined as a Member of Clean Air Society of Australia and New Zealand)</li> <li>- Minimum 5 years appropriate experience</li> </ul>	<p>Refer: <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a></p> <ul style="list-style-type: none"> <li>- Air Quality Guidelines</li> <li>- Air Quality Screening Tool</li> <li>- National Environment Protection (Ambient Air Quality) Measure</li> <li>- National Environment Protection (Air Toxics) Measure.</li> </ul>	<ul style="list-style-type: none"> <li>- Air quality assessment reports (including Department screening tool, air quality monitoring data and models, as required)</li> <li>- Air quality monitoring reports (including data)</li> </ul>
<p><b>Vegetation and Fauna Services</b></p>				
<p>Vegetation Assessment Services</p>	<p>Undertake vegetation surveys, reporting and preparation of applications for vegetation clearance.</p>	<ul style="list-style-type: none"> <li>- Accredited Consultant under Native Vegetation Council (for Native Vegetation)</li> <li>- Appropriate tertiary qualifications</li> </ul>	<p>Refer (Vegetation/Fauna): <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a></p> <p>AS 4970-2009 Protection of trees on development sites DEW NVC Standard, Guidelines and Policy</p>	<ul style="list-style-type: none"> <li>- Vegetation Survey reports</li> <li>- Vegetation survey data sheets</li> <li>- Development Applications (including, if required, attendance and presentation at SCAP and/or Local</li> </ul>

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			Department of Environment (Commonwealth) Guide to Matters of National Environmental Significance, Environment Protection and Biodiversity Conservation Act	<p>Council hearings)</p> <ul style="list-style-type: none"> <li>- Native Vegetation Clearance Applications (including, if required, attendance and presentation at NVC and/or Local Council hearings)</li> <li>- Vegetation Clearance Documentation</li> <li>- Provision of plans/mapping including shapefiles</li> </ul>
Arborist (tree assessment) Services	Undertake tree assessments, reporting and preparation of applications for vegetation clearance.	<ul style="list-style-type: none"> <li>- AQF Level 5 Qualified Arborist (Tree Assessments/Reports)</li> <li>- Tree Risk Assessment Qualification</li> </ul>	<p>Refer (Vegetation/Fauna): <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a></p> <p>AS 4970-2009 Protection of trees on development sites</p>	<ul style="list-style-type: none"> <li>- Tree Assessment Reports</li> <li>- Tree and palm transplanting reports</li> <li>- Development Applications (including, if required, attendance and presentation at SCAP and/or Local Council hearings)</li> <li>- Vegetation Clearance Documentation</li> <li>- Provision of plans/mapping including shapefiles</li> </ul>
Arboriculture (Tree Removal) Services	The pruning, removal and care of trees.	<ul style="list-style-type: none"> <li>- Senior managers have at least 5 years' experience in the industry or similar.</li> <li>- Senior supervisors have at least 3 years' experience in the industry or similar.</li> <li>- All supervisors to have a minimum of level 3 certificate in arboriculture or equivalent.</li> <li>- All Supervisors to have Work Zone Traffic Management qualification.</li> <li>- 100% of staff to have successfully completed white card training</li> <li>- All field staff have completed</li> </ul>	AS 4373 "Pruning of Amenity Trees"	<p>Main activities may include:</p> <ul style="list-style-type: none"> <li>- The pruning and removal of small, medium or large sized trees</li> <li>- Tree pruning and removals in confined and/or hazardous areas e.g. close to power lines, road verges, buildings etc.</li> <li>- Removals adjacent to or likely to impact native vegetation</li> <li>- Tree stump removals</li> </ul>

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		<p>training in operation of chippers and chainsaws.</p> <ul style="list-style-type: none"> <li>- 25% of all field staff to have successfully completed 1st aid training.</li> <li>- 10% of field staff to have successfully completed Elevated Work Platform Training.</li> </ul>	<ul style="list-style-type: none"> <li>- Control of weed trees.</li> </ul> <p><b>Maintenance Pruning</b></p> <ul style="list-style-type: none"> <li>- Envelope pruning</li> <li>- Pruning for set back (roads/signage/infrastructure)</li> <li>- Formative pruning</li> <li>- Pruning to maintain sight distances at intersections etc.</li> <li>- Side pruning/Side grooming (pruning) to provide clear zone requirements <i>Acacia longifolia sophrae</i> only</li> </ul> <p><b>Safety Pruning</b></p> <ul style="list-style-type: none"> <li>- Thinning including the selective removal of secondary branches but retaining main structural branches.</li> <li>- Removal of dead wood (dead-wooding),</li> <li>- Selective removal of branches identified as causing a specific problem.</li> <li>- Reduction pruning to reduce the size of the crown either in height or spread.</li> </ul> <p>Remedial pruning to remove damaged, diseased or lopped branches back to undamaged/healthy tissue.</p> <p><b>Significant Tree Pruning</b></p> <p>All pruning works.</p> <ul style="list-style-type: none"> <li>- <b>Tree Hollow Relocations</b></li> <li>-</li> </ul>
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Fauna Assessment Services	Ecological impact assessment that may include desktop assessment and/or field work.	<ul style="list-style-type: none"> <li>- Appropriate tertiary qualifications</li> <li>- Minimum 3 years appropriate experience</li> </ul>	<p>Refer (Vegetation/Fauna): <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a></p> <p>Department of Environment (Commonwealth) Guide to Matters of National Environmental Significance, Environment Protection and Biodiversity Conservation Act</p>	Ecological impact assessment report.
<b>Landscaping and Urban Design</b>				
General Landscape Construction	The implementation of landscape projects that contain a range and/or a combination of landscape activities as part of the total project.	<ul style="list-style-type: none"> <li>- Senior managers have at least 5 years' experience in the industry or similar.</li> <li>- Senior supervisors have at least 3 years' experience in the industry or similar.</li> <li>- All supervisors to have a minimum of Level 3 certificate in horticulture, Level 3 certificate in irrigation (Irrigation pre-qualification only), or appropriate industry qualification for the categories being applied for.</li> <li>- All Supervisors to have Work Zone Traffic Management qualification.</li> <li>- 100% of staff to have successfully completed White Card training.</li> <li>- To be invited to tender for work within a rail corridor 10% of staff to have successfully completed Department Passenger Transport Services Track Awareness Training (including risk management and medical).</li> <li>- Field staff has adequate experience appropriate to the</li> </ul>	<ul style="list-style-type: none"> <li>- Appropriate legislative obligations.</li> <li>- The Department's Master Specifications.</li> </ul>	<p>Main activities may include:</p> <ul style="list-style-type: none"> <li>- Tubestock and nursery stock planting</li> <li>- Advanced tree planting</li> <li>- Weed control</li> <li>- Direct seeding</li> <li>- Hydroseeding</li> <li>- Irrigation</li> <li>- Paving</li> <li>- Concreting</li> <li>- Grassing</li> </ul>

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		categories being applied for.		
Revegetation	The implementation of revegetation projects where a combination of activities may be used. Including direct seeding, weed control, seed collection, tube stock planting.	- As for General Landscape Construction	- Appropriate legislative obligations. - The Department's Master Specifications.	Main activities may include: - Seed Collection - Tubestock planting - Weed control - Direct seeding - Hydroseeding - Maintenance of plants
Irrigation System Design.	The design of irrigation systems for landscaped areas.	- appropriate tertiary level qualification in irrigation design	- Appropriate legislative obligations - Relevant Master Specifications	Main activities may include: - Irrigation System Design - Safety in Design Reviews Preparation of Irrigation construction drawings - Site inspections - On site construction verification - Release of Hold Points, - Preparation of as-constructed irrigation design drawings
Irrigation Installation	The installation of irrigation systems where irrigation is a component of the project.	- As for General Landscape Construction	- Appropriate legislative obligations. - Master Specifications.	Main activities may include: - Supply and installation of irrigation systems - Supply and installation of back flow prevention devices, - Preparation of as-constructed documentation - Maintenance of irrigation systems
Herbaceous	The control of herbaceous weeds (annual, biennial & perennial) including declared plant species and environmental weed species on Department roads and other assets where herbaceous weed control is the only or major component of the project. Main activities may include: chemical	As for General Landscape Construction plus: - Licensed in accordance with the <i>Controlled Substances Act 1984</i> and to adhere to the <i>Agricultural &amp; Veterinary Products (Control of Use) Act 2002</i> ; and - Demonstrated knowledge of vegetation/weed identification.	- Appropriate legislative obligations. - Master Specifications. Refer: ( <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a> ) -Herbicide Resistance Environmental Instruction 21.4	- Effective control of declared plant species and environmental weed species with no off target damage  - Herbicide Use Report - Effective control of declared plant species and

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	control of herbaceous weeds.		-environmental weed species list -PIRSA Standards and Guidelines -DEW Standards and Guidelines	environmental weed species with no off target damage - Herbicide Use Report
Woody Weed Control	The control of woody weeds including declared plant species and environmental weed species on Department roads and other assets where weed control is the only or major component of the project.  Main activities may include: control of weed trees and shrubs; cut and swab; stem injection; stump removal; foliar spraying; disposal of vegetative material.	As for General Landscape Construction plus:  - Licensed in accordance with the <i>Controlled Substances Act 1984</i> and to adhere to the <i>Agricultural &amp; Veterinary Products (Control of Use) Act 2002</i> ; and  - Demonstrated knowledge of vegetation/weed identification.	Appropriate legislative obligations. Master Specifications.  Standards and Guidelines - Refer: ( <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a> ) - <a href="#">Herbicide Resistance Environmental Instruction 21.4</a> - environmental weed species list - PIRSA Standards and Guidelines - DEW Standards and Guidelines	- Effective control of declared plant species and environmental weed species with no off target damage  - Herbicide Use Report
Bushcare	Minimal disturbance weed control technique used in areas of native and sensitive vegetation.  Main activities may include tree removal, cut and swab, stem injection, Spot spraying, hand pulling, stump removal and disposal of vegetative material. It is both essential and critical that there be an avoidance of disturbance to the soil and to native plants when undertaking bushcare activities.	- As for General Landscape Construction and  - Licensed in accordance with the <i>Controlled Substances Act 1984</i> and to adhere to the <i>Agricultural &amp; Veterinary Products (Control of Use) Act 2002</i> ; and  - Demonstrated knowledge of vegetation/weed identification	- Appropriate legislative obligations. - Master Specifications.  Refer: ( <a href="https://dit.sa.gov.au/standards/environment">https://dit.sa.gov.au/standards/environment</a> ) - Herbicide Resistance Environmental Instruction 21.4 - <a href="#">Phytophthora (Dieback) Control Environmental Instruction 21.3</a> - PIRSA Standards and Guidelines - DEW Standards and Guidelines	- Effective control of declared plant species and environmental weed species with no off target damage - Herbicide use report
Landscape Maintenance	The maintenance of newly-installed or established landscaped areas.	- As for General Landscape Construction  - Licensed in accordance with the	- Appropriate legislative obligations. - Master Specifications.	Main activities may include: - Mowing - Slashing



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		<p><i>Controlled Substances Act 1984</i> and to adhere to the <i>Agricultural &amp; Veterinary Products (Control of Use) Act 2002</i>; and</p> <ul style="list-style-type: none"> <li>- Demonstrated knowledge of vegetation/weed identification</li> </ul>		<ul style="list-style-type: none"> <li>- Weed and other pest control</li> <li>- Vegetation trimming</li> <li>- Watering of trees and plants</li> <li>- Replacement of plants, turf and hydroseeded areas</li> <li>- Removal of litter</li> <li>- Irrigation system maintenance (above ground drip systems only)</li> </ul>
Landscape and Urban Design	Landscape and Urban Design includes the development of design opportunities for improving the quality of public places as well as delivering economic, social and environmental benefits.	<ul style="list-style-type: none"> <li>- Appropriate Tertiary level qualification and/or post graduate degree in landscape architecture &amp; urban design.</li> <li>- Appropriate experience commensurate to the project (minimum 5 years)</li> <li>- Registered Landscape Architect (AILA) or equivalent.</li> </ul>	<ul style="list-style-type: none"> <li>- Appropriate legislative obligations.</li> <li>- Master Specifications</li> </ul>	<p>Deliverables may include:</p> <ul style="list-style-type: none"> <li>- Site analysis, design development and detailed design</li> <li>- Contextual analysis</li> <li>- Visual impact assessments</li> <li>- Cost estimates</li> <li>- Master Planning</li> <li>- Preparation of urban design principles and frameworks</li> <li>- Stakeholder liaison</li> <li>- Project visualisations and photomontages</li> <li>- Early Design and Construction Works</li> <li>- Bridge Aesthetics Reports</li> <li>- Lighting Strategies</li> <li>- WSUD Strategies</li> <li>- Irrigation Strategies</li> <li>- Engagement and management of specialist subcontractors</li> <li>- Preparation of landscape and urban design construction drawings</li> <li>- Safety in Design Reviews</li> <li>- CPTED</li> <li>- Maintenance Access Strategies</li> <li>- Maintenance and Durability Reports</li> <li>- Landscape Maintenance Plans</li> <li>- Placing nursery orders</li> </ul>

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				<ul style="list-style-type: none"> <li>- Hold Point Releases</li> <li>- Site inspections and reporting</li> <li>- Defect Inspections and reporting</li> <li>- Asset handover documentation and agreements</li> </ul>
<b>Heritage</b>				
Aboriginal Heritage	<p>Provision of high quality advice and reporting on Aboriginal cultural heritage matters including legal obligations and community engagement.</p> <p>Typical activities/tasks required include: assessments; field surveys; engagement and negotiation with Aboriginal representatives/groups; reporting including recommendations for mitigation and management measures; preparation of management plans; inductions; monitoring of site work.</p> <p>Other activities/tasks that may be required include: management of discoveries of Aboriginal heritage site, objects and remains; management of repatriation and reburial of Aboriginal heritage objects and remains; conducting salvage excavations; preparing and obtaining applications for concurrence, permits and authorisations.</p>	<ul style="list-style-type: none"> <li>- An appropriate Tertiary level qualification or post graduate qualification in archaeology, anthropology and/or history</li> <li>- Minimum 5 years appropriate experience (experience working with SA Aboriginal communities is preferred)</li> </ul> <p>Membership preferably with:</p> <ul style="list-style-type: none"> <li>- Australian Archaeological Association or</li> <li>- Australian Association of Consulting Archaeologists or</li> <li>- Australian Anthropological Society</li> </ul>	<p>Refer (Cultural heritage):<a href="https://www.dit.sa.gov.au/standard s/environment">https://www.dit.sa.gov.au/standard s/environment</a></p> <p>Aboriginal Affairs and Reconciliation Standards, Guidelines and Policies</p> <p>Australian Association of Consulting Archaeologists Standards, Guidelines and Policies</p>	<ul style="list-style-type: none"> <li>- Aboriginal heritage risk assessment report</li> <li>- Aboriginal heritage survey report</li> <li>- Central archive search results</li> <li>- Engagement and negotiation with Aboriginal representatives/groups</li> <li>- Cultural Heritage Management Plan (including discovery protocols)</li> <li>- Authorisation documentation (including application and authorisation documentation)Manage discoveries of Aboriginal heritage site, objects and remains</li> <li>- Manage repatriation and reburial of Aboriginal heritage objects and remains</li> <li>- Conduct salvage excavations</li> <li>- Aboriginal cultural heritage induction State Government concurrence on Aboriginal</li> </ul>

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				<p>heritage risk management services</p> <ul style="list-style-type: none"> <li>- Mapping including shapefiles</li> </ul>
Non-Aboriginal Heritage – Architectural	Provision of high quality advice and reporting on non-Aboriginal heritage (Architectural) and legal obligations to support Departmental projects.	<ul style="list-style-type: none"> <li>- Relevant experience (minimum 5 years)</li> <li>- Appropriate tertiary education</li> <li>- Registered Architect for building related heritage assessments and conservation management plans and/or work</li> <li>- ICOMOS member preferable</li> </ul>	<p>Appropriate legislative obligations. Master Specifications. Cultural heritage: <a href="https://www.dit.sa.gov.au/standards/environment">https://www.dit.sa.gov.au/standards/environment</a></p> <p>The International Council on Monuments and Sites (ICOMOS) Standards, Guidelines and Policies including Burra Charter, Department of Environment and Water (Heritage South Australia) Standards, Guidelines and Policies</p> <p>Department of Environment (Commonwealth) Standards, Guidelines and Policies</p> <p>Department of Environment and Water Standards, Guidelines and Policies</p>	<ul style="list-style-type: none"> <li>- Heritage Impact Assessment and/or Statements</li> <li>- Conservation Management Plans</li> <li>- Asset Management Plans</li> <li>- Dilapidation Surveys</li> <li>- Mapping including shapefiles</li> <li>- Preparation of application documentation to seek approvals and permits (including, if required, attendance and presentations)</li> <li>- Undertake conservation and protective measures</li> </ul>
Non-Aboriginal Heritage – Archaeological	Provision of high quality advice and reporting on non-Aboriginal heritage (Archaeological) and legal obligations to support Departmental projects.	<ul style="list-style-type: none"> <li>- Relevant experience (minimum 5 years)</li> <li>- Qualified Archaeologist</li> <li>- ICOMOS member preferable</li> </ul>	<p>Appropriate legislative obligations. Master Specifications. Cultural heritage: <a href="https://www.dit.sa.gov.au/standards/environment">https://www.dit.sa.gov.au/standards/environment</a></p> <p>The International Council on Monuments and Sites (ICOMOS) Standards, Guidelines and Policies including Burra Charter, Department of Environment and</p>	<ul style="list-style-type: none"> <li>- Heritage Impact Assessment and/or Statements</li> <li>- Heritage Significance Assessment</li> <li>- Conservation Management Plans</li> <li>- Asset Management Plans</li> <li>- Dilapidation Surveys</li> <li>- Mapping including shapefiles</li> <li>- Preparation of application documentation to seek</li> </ul>

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			<p>Water (Heritage South Australia) Standards, Guidelines and Policies</p> <p>Department of Environment (Commonwealth) Standards, Guidelines and Policies</p> <p>Department of Environment and Water Standards, Guidelines and Policies</p>	<p>approvals and permits (including, if required, attendance and presentations)</p> <ul style="list-style-type: none"> <li>- Manage and undertake archaeological excavations and/or conservation work</li> <li>- Salvage and/or Conservation Management Reports</li> </ul>
<b>Pavement Engineering</b>				
Pavement Design	Pavement Design	<ul style="list-style-type: none"> <li>- Minimum 5+ years' experience in Pavement Design with a minimum experience in design of projects of similar value.</li> <li>- An appropriate qualifications in Civil Engineering and interfacing with appropriate disciplines.</li> <li>- Conversant with the geotechnical subgrade conditions and their consequences for pavement design performance.</li> <li>- Are capable of integrating the Department and RMS design and construction requirements.</li> <li>- Experienced in applying the Department &amp; RMS joint detailing design guidelines if preparing joint detailing design.</li> </ul>	<ul style="list-style-type: none"> <li>- Familiarity with current Austroads and Standards and Supplements including and not limited to:                             <ul style="list-style-type: none"> <li>- Pavement Investigation Design: "Supplement to the Austroads Guide to Pavement Technology Part 2: Pavement Structural Design" ("Department Design Supplement")</li> <li>- Pavement Investigation and Design: "Supplement to the Austroads Guide to Pavement Technology Part 5: Pavement Evaluation and Treatment Design" ("Department Rehabilitation Supplement")</li> <li>- Guide to Bikeway Pavement Design, Construction and Maintenance for South Australia;</li> <li>- Austroads Guide to Pavement Technology Part 2: Pavement Structural Design, ("AGPT-2");</li> <li>- Austroads Guide to Pavement Technology Part 5: Pavement Evaluation and Treatment Design, ("AGPT-5");</li> <li>- Austroads Guide to Pavement</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Pavement Reports in .pdf format. All survey data in MGA in excel format, groundwater monitoring data in excel format and deliverables outlined by the contract manager as required.</li> <li>- Pavement construction drawings in digital dwg and .pdf format.</li> <li>- Pavement calculations in digital format.</li> <li>- Proof engineering certificate Safety in Design report in digital and .pdf format.</li> <li>- Roads inspection field advice reports</li> <li>- Test pit or borehole investigation logs in gINT format</li> </ul>

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			<p>Technology Part 10: Subsurface Drainage ("AGPT-10");</p> <ul style="list-style-type: none"> <li>- CIRCLY Version 7 or later;</li> <li>-</li> <li>- Master Specification Part RD-PV-D3 Concrete Road Pavements.</li> </ul>	
Consultant Design/Advice including Proof Engineering	Consultant providing Design/Advice including Proof Engineering.	- As per "Pavement Design"	- As per "Pavement Design"	- Proof Engineering certificate Other deliverables as per "Pavement Design", as applicable
Traffic Counts/Counting	Conducting Traffic Counts/Counting in the field & reporting results.	<ul style="list-style-type: none"> <li>- Training and experience in undertaking traffic counts appropriate to the size of the survey being undertaken.</li> <li>- Understanding of relevant Austroads and Department Standards and Supplements.</li> </ul>	<ul style="list-style-type: none"> <li>- Austroads and Department Standards and Supplements</li> <li>- Safety standards for working around traffic</li> </ul>	<ul style="list-style-type: none"> <li>- Notification of site work to the Department's traffic Management Centre</li> <li>- Report of number of vehicles per day (vpd) and % commercial vehicles (cv) , in Department format in terms of Austroads 12 vehicle classes, reporting on vehicle movements where required.</li> <li>- Raw data, in excel format</li> <li>- Where appropriate, identification of reasons for any anomalies in data such as seasonal traffic or local development.</li> </ul>
Geotechnical Pavement Testing	<p>Laboratory testing of pavement and subgrade materials for particle size distribution, CBR, Atterberg limits and other tests</p> <p>Excludes tests listed in "Performance Testing"</p>	- NATA accreditation	<ul style="list-style-type: none"> <li>- Appropriate Department Test Procedures</li> <li>- Australian and Austroads Standards</li> <li>- Other national and international test methods and standards</li> </ul>	<ul style="list-style-type: none"> <li>- Summary Test Reports</li> <li>- Raw data in excel format</li> <li>- Laboratory Test Reports</li> </ul>
Performance Testing – Resilient Modulus, Deflectograph, Skid Resistance	<p>Repeated load testing (RLT) and static triaxial testing</p> <p>Assessment of pavement deflection using the Deflectograph</p> <p>Assessment of skid resistance using</p>	- Minimum two years' experience in providing laboratory or field testing, as applicable, and commensurate to the project	<ul style="list-style-type: none"> <li>- Appropriate Department Test Procedures</li> <li>- Australian and Austroads Standards</li> <li>- Other national and international test methods and standards</li> </ul>	<ul style="list-style-type: none"> <li>- Summary Test Reports</li> <li>- Raw data, in excel format</li> </ul>

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	the Grip Tester, Micro Grip Tester, SCRIM or British Pendulum			
Traffic Management	Traffic management for pavement investigations	<ul style="list-style-type: none"> <li>- Workzone Traffic Management training course</li> <li>- Minimum two years' company experience in providing traffic management, and commensurate to the project</li> </ul>	<ul style="list-style-type: none"> <li>- SA Standards for Work Zone Traffic Management</li> </ul>	<ul style="list-style-type: none"> <li>- Undertake traffic management</li> <li>- Provide Traffic Management Plan prior to day of fieldwork</li> <li>- Approval from Department Traffic Management Centre</li> </ul>
Granular Pavement Materials Quality	Undertake assessment of material quality for use in pavements, including natural quarry and pit materials, recycled and industrial by-products <i>Excludes Pavement Materials Search and Quarry and Borrow Pit Management</i>	<ul style="list-style-type: none"> <li>- Appropriate qualifications in geology, engineering geology, civil or geotechnical engineering</li> <li>- Appropriate experience commensurate to the project (minimum 5 years)</li> </ul>	<ul style="list-style-type: none"> <li>- Austroads Guide to Pavement Technology Part 4 Series: Pavement Materials</li> <li>- Department and Australian Standards</li> <li>- Department Master Specification</li> </ul>	<ul style="list-style-type: none"> <li>- Summary Reports</li> <li>- Inspection of material</li> <li>- Laboratory test reports</li> </ul>
Pavement Materials Search	Undertake search assessment in geological context Logistical, extraction and processing considerations for material quality	<ul style="list-style-type: none"> <li>- Appropriate qualifications in geology, engineering geology, civil or geotechnical engineering</li> <li>- Appropriate experience in SA local/Outback pavement materials availability and performance, commensurate to the project (minimum 5 years)</li> </ul>	<ul style="list-style-type: none"> <li>- <i>Mining Act 1971</i></li> <li>- <i>Highways Act 1926</i></li> <li>- <i>Local Government Act 1999</i>, Section 294</li> <li>- <i>APY Land Rights Act 1981</i>, Sections 31 and 32</li> <li>- Department and Australian Standards</li> </ul>	<ul style="list-style-type: none"> <li>- Reports</li> <li>- Materials site survey, as required</li> <li>- Map of survey locations from GPS measurement (in UTM UPS WGS84)</li> </ul>
Quarry and Borrow Pit Management	Quarry/pit site investigation Quarry and borrow pit planning / development / management Rehabilitation <i>Excludes Granular Pavement Materials Quality and Pavement Materials Search</i>	<ul style="list-style-type: none"> <li>- Appropriate qualifications in geology, engineering geology, civil or geotechnical engineering or related discipline</li> <li>- Appropriate experience commensurate to the project (minimum 5 years)</li> </ul>	<ul style="list-style-type: none"> <li>- <i>Development Act 1993</i></li> <li>- <i>Mines and Works Inspection Regulations 2013</i></li> <li>- Related environmental and heritage legislation; Department and Australian Standards</li> </ul>	<ul style="list-style-type: none"> <li>- Reports</li> <li>- Test pit or borehole investigation logs in gINT format</li> <li>- Location of test holes recorded from GPS measurement (in UTM UPS WGS84) and shown on a figure relative to site features</li> </ul>

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Rail Professional and Technical Services				
Rail Professional and Technical Services	<p>Rail Technical and Professional Services are required to supplement the in-house Engineering resources of the Rail Infrastructure Management Section.</p> <p>The primary functions will be to provide concept planning, design and design review services across the rail disciplines including but not limited to, Rail geometry, signalling, overhead systems, communications systems, electrical distribution, traction power systems and structures.</p> <p>Resources may be required on a consultative basis or to provide personnel for day to day operations. Under the Pre- qualification agreement individual packages of work will be issued for tender by the principal. Project specific scopes will be detailed as the work is requested. Individual engagements may be let as either a tendered sum or upper limiting fee with a schedule of rates.</p>	<ul style="list-style-type: none"> <li>- is eligible to be a Member of Engineers Australia or Appropriate industry body.</li> <li>- has a minimum of 3 years appropriate project experience to conduct work as a project lead. (Graduates &amp; assistants must operate under direct supervision of a suitably experienced project lead)</li> <li>- Qualifications appropriate to the category of service being application, licences and other appropriate training.</li> </ul>	<ul style="list-style-type: none"> <li>- Comply with the current Department Technical Standards and Guidelines, available at <a href="http://dit.sa.gov.au/standards">http://dit.sa.gov.au/standards</a></li> <li>- Comply with all Department, TransAdelaide and Australian Rail Track Corporation (ARTC) corridor access requirements if applicable; and</li> <li>- Comply with all Department TransAdelaide and ARTC specification requirements and Service Authority standards and regulations if applicable.</li> </ul>	<ul style="list-style-type: none"> <li>- A project methodology plan.</li> <li>- Team resources to be allocated, including key personnel, backup staff and resources and capacity to undertake the package of work in the specified time.</li> <li>- A program of work.</li> <li>- Safety Plan and/or Hazard Management Plan.</li> <li>- Lighting and Ducting Design.</li> <li>- Traffic Signal Design and Ducting.</li> <li>- Safety Audits.</li> <li>- Rail Design which includes; <ul style="list-style-type: none"> <li>- Alignment and Track Infrastructure</li> <li>- Signalling</li> <li>- Electrification</li> <li>- Stations</li> <li>- Depots and Stabling Yards</li> <li>- Crossings</li> <li>- Light and Heavy Passenger Rail</li> <li>- Concept Planning</li> <li>- 3D Visualisations</li> </ul> </li> </ul>
Rail Safety Management System	<p>It is a legislative requirement of accreditation that Rail Transport Operators (RTOs) have an appropriate safety management system (SMS) in place. RTOs are legally obliged to</p>	<ul style="list-style-type: none"> <li>- A person with an appropriate qualification in the required SMS element (dependent on scope).</li> <li>- For example, an appropriate tertiary degree or post graduate</li> </ul>	<ul style="list-style-type: none"> <li>- Safety Management System Guideline (ONRSR)</li> <li>- Fatigue Risk Management Guideline (ONRSR)</li> </ul>	<ul style="list-style-type: none"> <li>- SMS Element Review and Development</li> <li>- Rail Safety Investigations and Report Writing (ICAM)</li> </ul>

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	<p>implement and then comply with their safety management system.</p> <p>A safety management system (SMS) provides a systematic approach to managing safety risks including organisational structures, roles, responsibilities, accountabilities, codes, policies, standards, communication, tools, data, processes, procedures and documents.</p> <p>Therefore, the Rail Commissioner requires specialist expertise with a proven understanding of RSNL and can be utilised to assist with the implementation of SMS elements outlined in Schedule 1 of the RSNL Regulations.</p>	<p>qualification (Junior staff to operate under the direct supervision of Senior Technical Staff).</p>	<ul style="list-style-type: none"> <li>- Identifying Rail Safety Worker under the RSNL Guideline (ONRSR)</li> <li>- Investigation Reports by RTOs Guidelines (ONRSR)</li> <li>- Incident Cause Analysis Method</li> <li>- Rail Safety Investigations (RISSB Code of Practice)</li> <li>- Major Projects Guideline (ONRSR)</li> <li>- Meaning of Duty to Ensure SFAIRP Guideline (ONRSR)</li> <li>- Systems Safety Assurance Guideline (RISSB)</li> <li>- AS7470:2024 Human Factors Integration in Engineering Design</li> <li>- AS31000:2018 Risk Management Guidelines</li> <li>- AS15288:2023 Systems and Software Engineering – Systems Life Cycle Processes</li> <li>- EN 50126 Railway Applications - The Specification and Demonstration of Reliability, Availability, Maintainability, and Safety (RAM)</li> <li>- EN50128 Railway applications - Communication, signalling and processing systems. Software</li> </ul>	<ul style="list-style-type: none"> <li>- Operational Risk Profile review / development</li> <li>- Rail Risk Assessments / SFAIRP Justifications</li> <li>- Safety Assurance Report / Safety Assurance Statement / Safety Case development and/or review</li> <li>- Operational Readiness/Integration support</li> <li>- Human Factors analysis / support</li> <li>- System Engineering support</li> <li>- Requirements development/ management</li> <li>- Emergency and Security Management Analysis</li> </ul>
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			<p>for railway control and protection systems</p> <ul style="list-style-type: none"> <li>- EN50129 Railway Applications - Communication, Signalling and Processing Systems - Safety Related Electronic Systems For Signalling</li> <li>- EN50159 Railway Applications - Safety Communications in railway Systems</li> <li>- CLC/TS5071 Railway Applications - Cyber Security</li> <li>- Internation Engineering Safety Management Volume 0, Volume 1, Volume 2 and support Applications Notes</li> </ul>	
<b>Geospatial Surveying</b>				
Engineering Survey	<p>Engineering Survey is required to facilitate Planning &amp; Design Investigations. Engineering survey may include the provision of work in Road, Rail and Marine environments. Demonstrated experience in detail topographic surveying of road and rail corridors is key to this category.</p> <p>Department Engineering surveys often require the location and surveying of underground services and occasionally depthing of cables. This work will be managed and subcontracted by survey contractor. The deliverables, quality and timeliness of subcontractors shall be the responsibility of the survey contractor to manage.</p>	<ul style="list-style-type: none"> <li>- The Supplier must provide a "Surveyor" who: <ul style="list-style-type: none"> <li>- Is eligible for the grade of Member of the Surveying &amp; Spatial Sciences Institute, Australia.</li> <li>- is accredited by completion of a Work Zone Traffic Management course with a trainer approved by Department</li> <li>- has a minimum of 3 years appropriate project experience to conduct work as a Survey party leader. (Graduates &amp; assistants must operate under direct supervision of a suitably experienced party leader)</li> <li>- has completed White Card safety accreditation</li> </ul> </li> </ul>	<p>Refer: <a href="https://dit.sa.gov.au/standards/survey">https://dit.sa.gov.au/standards/survey</a></p> <p>SUR-CP001 - DEPARTMENT CONSTRUCTION SURVEY STANDARDS</p>	<ul style="list-style-type: none"> <li>- Undertake topographical surveys for design and construction;</li> <li>- Monitoring of structures;</li> <li>- Establishment of primary and secondary control;</li> <li>- Control levelling;</li> <li>- Location and depthing of underground service utilities;</li> <li>- Digital terrain modelling;</li> <li>- Asset data capture.</li> <li>- Contract Deliverables shall include a project report and the digital survey files in either 12d or MX GENIO format with an accompanying .xml file for the surveyed surface.</li> </ul>

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<p>Construction Survey</p>	<p>Construction Survey services will support construction activities including but not limited to Road Construction, Rail Construction, Services Relocations and As-built pick-ups. Works will frequently include setting out of design information and pavement layer conformance. Interpretation of design models and the designing of offset strings for construction purposes will be required.</p> <p>Site specific inductions and night or weekend works will often be required to undertake the work.</p>	<p>The Contractor must engage a person "Surveyor" who:</p> <ul style="list-style-type: none"> <li>- is eligible for the grade of Member of the Surveying &amp; Spatial Sciences Institute, Australia.</li> <li>- is accredited by completion of a Work Zone Traffic Management course with a trainer approved by Department</li> <li>- has a minimum of 3 years appropriate project experience to conduct work as a Survey party leader. (Graduates &amp; assistants must operate under direct supervision of a suitably experienced party leader) has completed White Card safety accreditation</li> </ul>	<p>SUR-CP001 – DEPARTMENT CONSTRUCTION SURVEY STANDARDS</p>	<ul style="list-style-type: none"> <li>- Setting out road works;</li> <li>- Setting out of structures;</li> <li>- Quality Assurance verification of pavement layers; and</li> <li>- Stockpile volume calculations;</li> <li>- Contract Deliverables shall include a project report including set out reports and the digital survey files in either 12d or MX GENIO format of the as set out information</li> </ul>
<p>Cadastral Surveying</p>	<p>Cadastral Surveying services under this pre-qualification will often relate to the modification of road or rail corridor land parcels. Demonstrated experience with Road opening &amp; closing processes, Road widening, land divisions/ acquisitions and creation of easements including stratum allotments are key to this category.</p>	<p>- The Contractor must engage a Surveyor who:</p> <ul style="list-style-type: none"> <li>- is eligible for the grade of Member of the Surveying &amp; Spatial Sciences Institute, Australia.</li> <li>- is accredited by completion of a Work Zone Traffic Management course with a trainer approved by Department</li> <li>- has a minimum of 3 years appropriate project experience to conduct work as a Survey party leader. (Graduates &amp; assistants must operate under direct supervision of a suitably experienced party leader)</li> <li>- has completed White Card safety accreditation</li> <li>- Must be a registered licensed surveyor for the state of South Australia.</li> </ul>	<p>SUR-PS001 - DEPARTMENT CADASTRAL SURVEY STANDARDS Including; Survey Act 1992, Survey Act Regulations 2007, Surveyor General's Directions - (CSG) Cadastral Survey Guidelines &amp;(PPG) Plan Presentation Guidelines</p>	<ul style="list-style-type: none"> <li>- Acquisition and disposal;</li> <li>- Division of land;</li> <li>- Control of access; and</li> <li>- Identification of boundaries.</li> <li>- Contract Deliverables shall include a project report including digital copies of all plans &amp; related pegging reports. Digital survey files shall be provided in either 12d or MX GENIO format for boundary &amp; survey data</li> </ul>

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<p>Aerial Imagery and remote data capture</p>	<p>The Aerial Imagery and remote data capture category covers a diverse range of services that depart from traditional survey techniques for data capture. The provision of Aerial Imagery can include capture from either drone or traditional aircraft and will typically relate to a specific infrastructure project area. Remote data capture may include but is not limited to airborne data capture such as LIDAR and stereo imagery products or laser scanning including both mobile and terrestrial capture methods. Demonstrated experience should relate to application of this technology on road and rail infrastructure projects.</p>	<p>The Contractor must engage a person spatial professional who:</p> <ul style="list-style-type: none"> <li>- Has an appropriate tertiary qualification in Surveying, GIS or related spatial discipline</li> <li>- is eligible for the grade of Member of the Surveying &amp; Spatial Sciences Institute, Australia.</li> <li>- has a minimum of 3 years appropriate project experience to conduct work as a technical lead. (Graduates &amp; assistants must operate under direct supervision of a suitably experienced technical lead)</li> </ul>	<p>ARD-CT001, Aerial and remote data capture standard</p>	<ul style="list-style-type: none"> <li>- Aerial &amp; Remote Data capture</li> <li>- Ortho Aerial photography;</li> <li>- Remote Sensing &amp; Airborne data capture including Lidar</li> <li>- Terrestrial &amp; mobile laser scanning</li> <li>- Contract Deliverables shall include a project report and the digital survey or image files as set out in the standard.</li> </ul>
<p>GIS Services</p>	<p>GIS Services work under this pre-qualification will be intended to support the delivery of infrastructure projects and will often involve spatial data manipulation, spatial data consolidation and cleaning as well as the delivery of traditional and digital mapping products. required. Demonstrated experience should relate to application of GIS services on road and rail infrastructure projects.</p>	<p>The Contractor must engage a spatial professional who:</p> <ul style="list-style-type: none"> <li>- Has a recognised tertiary qualification in Surveying, GIS or related spatial discipline</li> <li>- is eligible for the grade of Member of the Surveying &amp; Spatial Sciences Institute, Australia.</li> <li>- has a minimum of 3 years appropriate project experience to conduct work as a technical lead. (Graduates &amp; assistants must operate under direct supervision of a suitably experienced technical lead)</li> </ul>	<p>GIS-CT001 Department, GIS Services standard</p>	<ul style="list-style-type: none"> <li>- Geographic Information Services</li> <li>- Map production</li> <li>- Digital map &amp; web based GIS Service production</li> <li>- Spatial analysis &amp; modelling</li> <li>- Spatial dataset manipulation</li> <li>- Contract Deliverables shall include a project report and the digital data files as set out in the standard.</li> </ul>

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<b>Structural Engineering</b>				
Structural Design	Bridge and/or structural design and Proof Engineering services	<ul style="list-style-type: none"> <li>- A Professional Engineer as defined by AS5100.1 (2017)</li> <li>- Demonstrated experience and capability in bridge and/or structural design, preferably relating to road, rail and marine infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>- AS5100 (2017) Bridge Design</li> <li>- ST-SD-D1 - Design of Structures</li> </ul>	<ul style="list-style-type: none"> <li>- Structural drawings in digital dwf, dwg, and pdf format</li> <li>- Structural calculations in digital format</li> <li>- Proof Engineering certificate</li> <li>- Safety-in-design report in digital .pdf format</li> <li>- Design report in digital .pdf format</li> </ul>
Structural Drafting	Structural drafting in CAD, 12D, or other appropriate design package	<ul style="list-style-type: none"> <li>- demonstrated experience and capability in bridge and structural drafting</li> </ul>	<ul style="list-style-type: none"> <li>- (Department) Structures Drafting Guidelines for Consultants</li> </ul>	<ul style="list-style-type: none"> <li>- Structural drawings in digital dwf, dwg, and pdf format</li> </ul>
Bridge inspections/Safety Audits	Bridge and road-infrastructure inspection, condition assessment and auditing	<ul style="list-style-type: none"> <li>- a Professional Engineer as defined by AS5100.1 (2017)</li> <li>- demonstrated experience and capability in bridge inspection, preferably with ARRB Level 2 Bridge Inspection accreditation</li> </ul>	<ul style="list-style-type: none"> <li>- Department BIS standards</li> </ul>	<ul style="list-style-type: none"> <li>- Bridge inspections and field advice reports</li> <li>- Risk assessment reports in digital excel format</li> </ul>
<b>Geotechnical Services</b>				
Geotechnical Sampling and Insitu Testing	Provision of a geotechnical engineer/geologist with appropriate experience and training to undertake site investigations, slope stability, earthworks and retaining designs.	<ul style="list-style-type: none"> <li>- Bachelor of Engineering practicing in the field of Geotechnical, or Bachelor of Geology/Engineering Geology</li> </ul>	<ul style="list-style-type: none"> <li>- Department, Austroads and Australian Standards</li> </ul>	<ul style="list-style-type: none"> <li>- Geotechnical Reports in .pdf format, borehole logs in gINT format, all survey data in MGA in excel format, groundwater monitoring data in excel format</li> </ul>
Foundation and Earthworks Design	Provision of a geotechnical engineer/geologist with appropriate experience and training to undertake site investigations, slope stability, earthworks and retaining designs.	<ul style="list-style-type: none"> <li>- Bachelor of Engineering practicing in the field of Geotechnical, or Bachelor of Geology/Engineering Geology</li> </ul>	<ul style="list-style-type: none"> <li>- Department, Austroads and Australian Standards</li> </ul>	<ul style="list-style-type: none"> <li>- Geotechnical Reports in .pdf format, borehole logs in gINT format, all survey data in MGA in excel format, groundwater monitoring data in excel format</li> </ul>
Slope Stability and Retaining Investigation and Design	Provision of a geotechnical engineer/geologist with appropriate experience and training to undertake site investigations, slope stability, earthworks and retaining designs.	<ul style="list-style-type: none"> <li>- Bachelor of Engineering practicing in the field of Geotechnical; or Bachelor of Geology/Engineering Geology</li> </ul>	<ul style="list-style-type: none"> <li>- Department, Austroads and Australian Standards</li> </ul>	<ul style="list-style-type: none"> <li>- Geotechnical Reports in .pdf format, borehole logs in gINT format, all survey data in MGA in excel format, groundwater monitoring data in excel format</li> </ul>

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Economics				
Cost Benefit Analysis	<p>Cost Benefit Analysis (CBA) is required to accompany funding proposals associated with initiatives with a construction cost in excess of \$4m in alignment with Parliamentary Public Works Committee requirements. CBA is also a key decision-making influence around option appraisal for Program and Project Option Assessment within Business Cases to justify the selection of a preferred option to seek funding for.</p> <p>Key stakeholders requiring CBA as part of option decision making include DIT's PMO, IA, ISA, DITRDCA and DTF.</p>	<p>A person with an appropriate qualification in Economics, Commerce, Accounting, Business or related discipline with a minimum of 3 years' experience in the preparation of CBA is required.</p>	<ul style="list-style-type: none"> <li>- DIT PMO, PPMF, and Business Case documents (Strategic Assessment, Option Analysis, Business Case for higher value higher risk projects, along with Business Case Lite documents for lower value lower risk projects).</li> <li>- ISA Business Case documents (as above) as agreed with the Principle (only by exception, with DIT PMO documents being preferred in most instances)</li> <li>- IA Assessment Framework 2021 (inclusive of IA's Guide to Economic Appraisal) ATAP and Transport for NSW guidelines</li> <li>- DTF Treasurer's Instruction 17 Guidelines for the evaluation of public sector initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>- Cost Benefit Analysis Microsoft Excel file (primary output of Benefit Cost Ratio's for short listed project options).</li> <li>- Integrated assessment inclusive of the combination of Monetised information (CBA and Capital Cost) as well as Non-Monetised information for decision making (Multi Criteria Analysis).</li> </ul>

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Business Case	<p>Business Case documents are required to accompany funding proposals associated with many planning initiatives. These documents are reviewed by a range of key stakeholders including Infrastructure Australia (IA), Infrastructure South Australia (ISA), the Department for Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) and the South Australian Department of Treasury and Finance (DTF).</p> <p>Content requirements are governed by DITs Portfolio Management Office (PMO) and ISA.</p>	<p>Given Business Cases cover a wide range of technical topics, there are no minimum professional qualifications required.</p> <p>However, preference in assessment scoring will be made for higher industry experience with the preparation of business cases relating to transport infrastructure, or other economic / social infrastructure projects, in addition to a desired minimum of 3 years' experience in the preparation of Business Case documents also reflected in assessment scoring.</p>	<p>DIT PMO PPMF and Business Case documents (Strategic Assessment, Option Analysis, Business Case for higher value higher risk projects, along with Business Case documents for lower value lower risk projects).</p> <p>ISA Business Case documents (as above) as agreed with the principle (only by exception, with DIT PMO documents being preferred in most instances).</p> <p>IA Assessment Framework (2021).</p> <p>Australian Transport Assessment and Planning (ATAP) guidelines.</p>	<p>Strategic Assessment</p> <p>Option Analysis</p> <p>Business Case</p> <p>Business Case \$4m-\$15m, or \$15m-\$40m projects</p> <p>Cost Benefit Analysis Microsoft Excel file (primary output of Benefit Cost Ratio's for short listed project options)</p> <p>Integrated assessment inclusive of the combination of Monetised information (BCA and Capital Cost) as well as non-monetised information for decision making (Multi Criteria Analysis).</p>
<b>Transport Planning &amp; Design</b>				
Road Design	<p>Concept through to final geometric detailed design (IFC). Amend existing technical drawings including technical standards (drafting). Independent Design Certification.</p> <p>Tasks such as site visits, attendance at project meetings, communication with stakeholders, assistance with contract management/ administration, and the development of reports, contract documents and other documents may be required as requested by the Principal.</p>	<ul style="list-style-type: none"> <li>- Appropriate Engineering degree/diploma</li> <li>- Shall be delivered by suitably qualified and experienced drafting/design professional(s) with a minimum of 3 years demonstrated experience related to the planning, design and construction of infrastructure projects.</li> <li>- The personnel shall be capable of working independently to assist and advise on a range of planning and design disciplines based on Austroads standards, Department Master</li> </ul>	<ul style="list-style-type: none"> <li>- Department Master Specification and standards, Austroads and Australian Standards.</li> </ul>	<ul style="list-style-type: none"> <li>- Final and amended drawings checked and verified as correct - supplied in .dwg and .pdf format</li> <li>- Design Model in the form of a GENIO file.</li> <li>- Geometric Details Report.</li> <li>- Cross Section Report.</li> <li>- Land acquisition supplementary drawing.</li> <li>- Traffic Impact Statements.</li> <li>- Earthwork volumes.</li> <li>- Supporting evidence of any drainage design including</li> </ul>

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		<p>Specification and Departmental policies and guidelines, and other necessary requirements.</p>		<p>flow diagrams and calculations.</p> <ul style="list-style-type: none"> <li>- Drainage cost sharing.</li> <li>- Estimating requirements as per Design Output for Estimate document.</li> <li>- Design surface DTM.</li> <li>- Cad Matrix Excel file with coordinate information.</li> <li>- Evidence that a model check has been completed including, but not limited to:             <ul style="list-style-type: none"> <li>- Null levels;</li> <li>- Single point strings;</li> <li>- Intersecting strings; and Flat spots.</li> </ul> </li> </ul> <p>The following completed forms available at:</p> <p><a href="http://dit.sa.gov.au/standards/roads-all#roaddesignoutputs">http://dit.sa.gov.au/standards/roads-all#roaddesignoutputs</a></p> <ul style="list-style-type: none"> <li>- Design Certificate (Level 1) forwarded with final design drawings, certifying that the Contractor's design satisfies all requirements outlined in this Statement of Requirements.</li> <li>- Completed Presentation Review Checklist – 2 when submitting the final drawings for approval, verifying compliance with the Department's minimum requirements.</li> <li>- Completed Design to Survey Compliance Checklist when submitting</li> </ul>
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				<p>the genio file of the design model, verifying compliance with Departmental requirements.</p> <ul style="list-style-type: none"> <li>- Design Report.</li> </ul>
<p>Transport Planning Studies &amp; Concept Design</p>	<p>Completion of Transport Planning Studies and Investigations in accordance with relevant standards, guidelines and specification (listed), including Concept Design Development and management of multidisciplinary disciplines and/or sub-consultants</p>	<ul style="list-style-type: none"> <li>- Appropriate Engineering, Science and/or Finance degree.</li> <li>- Suitably qualified and experienced professional(s) with experience commensurate with the task requirements</li> <li>- The personnel shall be capable of working independently to assist and advise on a range of planning and design disciplines</li> </ul>	<ul style="list-style-type: none"> <li>- Transport Planning parts of the Master Specification (PC-PL 1 to 5).</li> <li>- Infrastructure Australia's Assessment Framework for Initiatives and Projects to be included in the Infrastructure Priority List, March 2018 (the IA Assessment Framework).</li> <li>- The Australian Transport Assessment and Planning (ATAP) Guidelines</li> <li>- SA Department of Treasury and Finance Treasurer's Instruction 17 on Evaluation of and Approvals to Proceed with Public Sector Initiatives (TI17).</li> </ul>	<p>As per Master Specification and contract scope, could include:</p> <ul style="list-style-type: none"> <li>- Development of preliminary design options into Concept and Reference Designs Concept Design Reports and Reference Design Reports</li> <li>- Constructability assessments</li> <li>- Multi-Criteria analysis &amp; Cost Benefit Analysis</li> <li>- Technical investigation and site assessment reports</li> <li>- Transport Planning Study Reports</li> <li>- Preparation of Business Cases and associated documentation required for release of funding from State and Federal government and Gateway review processes</li> <li>- Cost Estimates Other contract-specific requirements</li> </ul>
<p>Lighting Design</p>	<p>Road Lighting design shall deliver a compliant road and public space lighting and underground conduit design to facilitate safe and comfortable movement of vehicles and pedestrian traffic at night with minimum light spill and glare.</p>	<ul style="list-style-type: none"> <li>- Appropriate Engineering degree/diploma</li> <li>- Shall be delivered by suitably qualified and experienced drafting/design professional(s) with a minimum of 3 years demonstrated experience in</li> </ul>	<p>Completed designs shall comply with the requirements of the <i>Electricity Act 1996</i> and its associated regulations and standards, ACMA requirements, associated Codes of Practice and the following standards and others</p>	<ul style="list-style-type: none"> <li>- Design Certificate (Level 1) forwarded with final design drawings, certifying that the Contractor's design satisfies all requirements outlined</li> </ul>



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	<p>Road lighting designs are to be completed considering the initial installation cost (reduced number of luminaires spaced optimally) and the subsequent maintenance and operational costs (lowest lamp wattage possible).</p> <p>Road lighting designers should be capable of providing concept initiation and recommendation, independent design review and on-site verification/surveillance to verify the compliance of road lighting design or construction work.</p>	<p>relation to road lighting design</p>	<p>as appropriate:</p> <ul style="list-style-type: none"> <li>- AS/NZS 1158 Lighting for Roads and Public Spaces;</li> <li>- AS/NZS 3000 Electrical installations (known as the Australian / New Zealand Wiring Rules);</li> <li>- Department Master Specification; and</li> <li>- Department Standard Guidelines and Drawings</li> </ul>	<p>in the scope of the contract document.</p> <ul style="list-style-type: none"> <li>- Road Lighting Design Report in accordance with Department Master Specification Part RD-EL-D1 and presented as per Design Report Electrical Services available from <a href="https://dit.sa.gov.au/standards/roads-all#roaddesignoutputs">https://dit.sa.gov.au/standards/roads-all#roaddesignoutputs</a></li> <li>- The design shall be documented in accordance with the Design Presentation- DP001 General Requirements and DP013 – Lighting</li> <li>- New or modified drawings checked and verified as correct – supplied in .dwg and .pdf format</li> <li>- Isolux contour drawings</li> <li>- Straight Road Spacing Tables</li> <li>- CAD Matrix Excel file with coordinate information</li> <li>- Design verification/auditing report</li> </ul>
<p>Traffic Signal Design</p>	<p>Traffic Signals should be designed to South Australian conventions for Phasing and Phase Sequencing, and SCATS operation. A systems approach should be adopted for all traffic signal designs so that all the implications to fully coordinated traffic signal system are taken into account.</p>	<ul style="list-style-type: none"> <li>- Appropriate Engineering degree/diploma</li> <li>- Shall be delivered by suitably qualified and experienced drafting/design professional(s) with a minimum of 3 years demonstrated experience in related to traffic signal design</li> </ul>	<p>Completed designs shall comply with the requirements of the Electricity Act 1996 and its associated regulations and standards, ACMA requirements, associated Codes of Practice and the following standards and others as appropriate:</p>	<ul style="list-style-type: none"> <li>- Design Certificate (Level 1) forwarded with final design drawings, certifying that the Contractor's design satisfies all requirements outlined in the scope of the contract document.</li> <li>- Traffic Signal Design Report</li> </ul>

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	<p>Detail traffic signal design should include compliant traffic signals and underground traffic signal conduit system.</p> <p>Traffic Signal designers should be capable of providing concept initiation and recommendation, independent design review and on-site verification/surveillance to verify the compliance of traffic signal design or construction work.</p>		<ul style="list-style-type: none"> <li>- Department Master Specification</li> <li>- Department Standard Guidelines and Drawings</li> <li>- Australian Standards; and</li> <li>- Austroads Publications.</li> </ul>	<p>in accordance with Department Master Specification Part RD-EL-D2 Section 4</p> <ul style="list-style-type: none"> <li>- The design shall be documented in accordance with the Design Presentation DP001 – General Requirements, DP011 – Traffic Signals and DP012 – Traffic Signal Conduit</li> <li>- New or modified drawings checked and verified as correct – supplied in .dwg and .pdf format</li> <li>- CAD Matrix Excel file with coordinate information</li> <li>- Design verification/auditing report</li> </ul>
<p>ITS (Intelligent Transport System)</p>	<p>ITS design shall fulfil the operational functional requirements of ITS devices and communications network, maximise the value and delivery of the infrastructure and assets over their whole of life, including ITS, Electrical and Mechanical control, communications network and tunnel engineering areas.</p> <p>ITS field equipment and systems provided shall form a wholly integrated part, ensuring commonality in operational management capability, a homogenous driver experience and continuity in ITS service level provision.</p> <p>ITS designers should be capable of provide concept initiation and</p>	<ul style="list-style-type: none"> <li>- Appropriate Engineering degree/diploma</li> <li>- Shall be delivered by suitably qualified and experienced drafting/design professional(s) with a minimum of 3 years demonstrated experience in related to ITS design.</li> <li>- The personnel shall be capable of working independently to assist and advise on a range of planning and design disciplines based on Australian Standards, Austroads Guides, Department standard and guidelines and other relevant requirements.</li> </ul>	<p>Completed designs shall comply with the requirements of the Electricity Act 1996 and its associated regulations and standards, ACMA requirements, associated Codes of Practice and the following standards and others as appropriate:</p> <ul style="list-style-type: none"> <li>- Department Master Specification</li> <li>- Department Standard Guidelines and Drawings</li> <li>- Australian Standards; and</li> <li>- Austroads Publications.</li> </ul>	<ul style="list-style-type: none"> <li>- Design Certificate (Level 1) forwarded with final design drawings, certifying that the Contractor's design satisfies all requirements outlined in the scope of the contract document.</li> <li>- ITS Design Report and drawing presentation in accordance with Department Master Specification Part RD-ITS-D1 Clause 18</li> <li>- New or modified drawings checked and verified as correct – supplied in .dwg and .pdf format</li> <li>- CAD Matrix Excel file with coordinate information</li> </ul>

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	recommendation, independent design review and on-site verification/surveillance to verify the compliance of ITS design or construction work.			- Design verification/auditing report
<b>Transport Modelling and Analysis</b>				
Strategic and Tactical Transport Modelling	Undertake Macroscopic, Mesoscopic, Microscopic Simulation and Hybrid transport modelling	<ul style="list-style-type: none"> <li>- Appropriate qualification and/or experience in Transport Modelling</li> <li>- Shall be delivered by suitably qualified and experienced modeller(s) with a minimum of 3 years demonstrated experience in transport modelling</li> <li>- The personnel shall be capable of working independently to assist and advise on a range of transport modelling areas</li> <li>- Demonstrated familiarity with Departmental guidelines and policies, ATAP Tools and Techniques, AITPM Transport Modelling Code of Conduct, and in accordance with best practice</li> </ul>	<ul style="list-style-type: none"> <li>- MASTEM Guidelines</li> <li>- MATSAM Guidelines</li> <li>- Department Master Specification Part PC-PL2, Section 7 Transport Modelling</li> <li>- Australian Transport Assessment and Planning (ATAP) – Tools and Techniques</li> <li>- AITPM Transport Modelling Code of Conduct</li> </ul> <p>Required guidelines, standards, code of conducts, tools and techniques are consolidated at the following links:</p> <ul style="list-style-type: none"> <li>- <a href="https://dit.sa.gov.au/standards/transport_modelling_and_analysis">https://dit.sa.gov.au/standards/transport_modelling_and_analysis</a></li> <li>- <a href="https://dit.sa.gov.au/content/documents/masterspecifications/Transport_Planning">https://dit.sa.gov.au/content/documents/masterspecifications/Transport_Planning</a></li> </ul>	<ul style="list-style-type: none"> <li>- Models in their native files</li> <li>- Model Outputs, Analysis, Documentation and Visualisation</li> </ul>
Traffic Modelling	Undertake traffic modelling (Analytical and Microscopic Simulation)	<ul style="list-style-type: none"> <li>- Appropriate qualification and/or experience in Traffic Modelling</li> <li>- Shall be delivered by suitably qualified and experienced modeller(s) with a minimum of 3 years demonstrated experience in traffic modelling</li> <li>- The personnel shall be capable of working independently to assist and advise on a range of</li> </ul>	<ul style="list-style-type: none"> <li>- Relevant Department Master Specification Parts (in particular RD-GM-D4 Traffic Analysis and Modelling, and RD-EL-D2 Traffic Signals Design)</li> <li>- Traffic Modelling Guidelines (SIDRA INTERSECTION)</li> <li>- Traffic Modelling Guidelines (TRANSYT 15)</li> </ul>	<ul style="list-style-type: none"> <li>- Models in their native files</li> <li>- Model Outputs, Analysis, Documentation and Visualisation</li> </ul>

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		<p>traffic modelling areas</p> <ul style="list-style-type: none"> <li>- Demonstrated familiarity with Departmental guidelines and policies, ATAP Tools and Techniques, AITPM Transport Modelling Code of Conduct, and in accordance with best practice</li> </ul>	<ul style="list-style-type: none"> <li>- Australian Transport Assessment and Planning (ATAP) – Tools and Techniques</li> <li>- AITPM Transport Modelling Code of Conduct</li> <li>- Other required guidelines, standards, code of conducts, tools and techniques are consolidated at the following link: <a href="https://dit.sa.gov.au/standards/transport_modelling_and_analysis">https://dit.sa.gov.au/standards/transport_modelling_and_analysis</a></li> </ul>	
<b>Stormwater</b>				
Stormwater Design and Modelling	<p>There are a broad range of stormwater and hydrology related tasks that may be required. These include Urban Drainage Design including Road Drainage, Aquaplaning and cost share calculations between Department and councils, Water Sensitive Road Design, Rural hydrology including Bridge, Culvert and Floodway Waterway Determinations, and 2D Flood Modelling.</p> <p>Stormwater design requires specialist knowledge and skills in water quality modelling, water reuse project planning and design, 2D hydraulic modelling, and floodplain management.</p> <p>A comprehensive knowledge and understanding of Austroads Guide to Road Design in general and specifically Drainage 5, 5A, and 5B, and Department Road Design Standard &amp; Guide to Stormwater Design DD 300 will be essential to undertake this work.</p>	<p>Must be an Engineer who is eligible for the grade of Member of the Institution of Engineers, Australia with a recognised tertiary qualification in Civil Engineering (or variations such as Civil and Environmental Engineering or Civil and Water Engineering etc.).</p> <p>Senior staff should have more than 10 years' specific stormwater engineering experience in South Australia. Eligible stormwater experience includes preparing stormwater management plans for catchments, regions or subdivisions larger than 100 lots, detailed design of stormwater engineering works associated with such plans, and stormwater engineering associated with road design.</p> <p>All staff have a demonstrated understanding of urban and rural hydrology, open channel, culvert and bridge hydraulics. Senior staff have a minimum of three years' experience with the use of urban and rural hydrology software, one</p>	<ul style="list-style-type: none"> <li>- Austroads Guide to Road Design – Drainage - Parts 5, 5A and 5B. This is the primary reference / guideline document.</li> <li>- Australian Rainfall and Runoff (ARR), various editions as quoted.</li> <li>- Austroads Waterway Design Guide (1994).</li> <li>- Austroads Guide to Pavement Technology Part 10: Subsurface Drainage.</li> <li>- Environmental Protection Authority "Stormwater Pollution Prevention – Code of Practice for Local, State and Federal Government".</li> <li>- Department Protecting Waterways Manual.</li> <li>- Department Stormwater Treatment Infrastructure Manual.</li> <li>- EPA Environment Protection Water Quality Policy.</li> </ul>	<p>Deliverables include:</p> <ul style="list-style-type: none"> <li>- Stormwater design reports</li> <li>- DRAINS, 12D, Tuflow,</li> <li>- MUSIC, XP model files</li> <li>- deliverables as specified in DD300, and other specific deliverables as outlined by the contract manager as required.</li> </ul>

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		<p>dimensional open channel hydraulics software, and 2D flood modelling software such as Tuflow, Mike21 or equivalent.</p> <p>All staff have demonstrated understanding of water sensitive urban design. Senior staff have a minimum of three years' experience with the use of urban hydrology software including DRAINS, 12d drainage, XPstorm and MUSIC or equivalent.</p> <p>Note that suitably qualified graduates may also be engaged on such work but must operate under the direct supervision of a suitably qualified and experienced engineer as specified above.</p>	<ul style="list-style-type: none"> <li>- Australian Runoff Quality, A Guide to Water Sensitive Urban Design, Engineers Australia.</li> <li>- Department - Easements Across Departmental Land Instructions to Engineers – Amendment No. 13</li> <li>- Department – Care, Control and Management of Roads (Highways) by the Commissioner of Highways (Section 26 of the Highways Act) – Operational Instruction 20.1.</li> <li>Department – Instruction to Engineers SAI 24 – DD302 (Department Policies on Assistance to Councils for Stormwater Drainage). ARRB Unsealed Road Manual Guidelines to Good Practice 2000.</li> <li>Other reference documents for design guidance specified in DD300</li> <li>Materials specified must be in accordance with standards outlined in DD300</li> <li>- Designs must use stormwater infrastructure and Department standard drawings identified in DD300</li> </ul>	
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Disability Discrimination Act 1992 (DDA) Compliance					
Transport DDA Compliance	Conducting Transport Access Compliance Audits	5 years of Industry experience	<ul style="list-style-type: none"> <li>- Disability Discrimination Act 1992</li> <li>- Disability Standards for Accessible Public Transport 2004 and Disability Standards for Accessible Public Transport Guidelines 2004 (No.3)</li> <li>- Disability (Access to Premises - Buildings) Standards 2010 and Australian Human Rights Commission (AHRC) guidelines on the application</li> <li>- Current exemptions issued by the AHRC to the Australasian Rail Association</li> <li>- Australian Design Rule 58/00</li> <li>- Australian Design Rule 43/04</li> <li>- AS1428 suite - Design for access and mobility</li> <li>- AS1735.12 Lifts, escalators and moving walks</li> <li>- AS/NZS 1158.0 Lighting for roads and public spaces</li> <li>- AS/NZS 2890.6 Off-street parking for people with disabilities</li> <li>- AS1742.7 Manual and uniform traffic control devices</li> <li>- Department Station Specifications, Station Standards and Drawings relating to Public Transport</li> </ul>	<p>Access Audit reports in required format including, but not limited to;</p> <ul style="list-style-type: none"> <li>- photos</li> <li>- Industry best practice advice/recommendations</li> <li>- compliance with standards and/or legislation.</li> </ul>	
Premises DDA Compliance	Conducting Premises Access Compliance Audits	5 years of Industry experience	<ul style="list-style-type: none"> <li>- Disability Discrimination Act 1992</li> <li>- Disability Standards for Accessible Public Transport 2004 and Disability Standards for Accessible Public Transport Guidelines 2004 (No.3)</li> <li>- Disability (Access to Premises</li> </ul>	<p>Premises Audit reports in required format including, but not limited to;</p> <ul style="list-style-type: none"> <li>- photos</li> <li>- Industry best practice advice/recommendation s</li> </ul>	

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			<ul style="list-style-type: none"><li>- Buildings) Standards 2010 and Australian Human Rights Commission (AHRC) guidelines on the application</li><li>- Current exemptions issued by the AHRC to the Australasian Rail Association</li><li>- Australian Design Rule 58/00</li><li>- Australian Design Rule 43/04</li><li>- AS1428 suite - Design for access and mobility</li><li>- AS1735.12 Lifts, escalators and moving walks</li><li>- AS/NZS 1158.0 Lighting for roads and public spaces</li><li>- AS/NZS 2890.6 Off-street parking for people with disabilities</li><li>- AS1742.7 Manual and uniform traffic control devices</li><li>- Department Station Specifications, Station Standards and Drawings relating to Public Transport</li></ul>	<ul style="list-style-type: none"><li>- compliance with standards and/or legislation.</li></ul>
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### 3.2 Performance

Removal of suppliers from the pre-qualification will be affected using the following methodology:

1. If any supplier does not respond to a request for quote for one year having been offered at least three opportunities to tender, or
2. Three consecutive non-conformances or three non-conformances within 1 calendar year, or
3. Failure to maintain a demonstrated ability to meet the minimum assessment requirements for the appropriate disciplines due to staff changes.

Suppliers demonstrating poor performance may also be reduced to low value/ low risk engagements of <\$33 000 Inc. GST subject to the following methodology:

1. Three suggested improvements within one calendar year, or
2. Two consecutive non-conformances or, two non-conformances within one calendar year.

### 3.3 Contract Sites/Delivery Locations

Packages of work may be tendered as individual projects or bundles of multiple or multi discipline contracts. Locations will be both local and rural covering the state of South Australia. Work may be required across a range of environments including Road, Rail and Marine some of which may require specific conditions of entry such as rail corridors, traditional owned lands (e.g. APY Lands) and active construction sites. The contractor is obligated to comply with all site entry prerequisites.

## 4 CONSORTIA AND SUB-CONTRACTING

### 4.1 Consortia

If You are a member of a consortium then your Application must stipulate which part(s) of the Government Agency's Requirements that each entity comprising the consortium would provide and how the entities would relate with each other to ensure full provision of the Government Agency's Requirements. All consortium members that are not natural persons are to provide details relating to their legal nature and any relevant corporate structure.

The Government Agency will treat You as the preferred contact person for any consortium Application.



## 4.2 Sub-contracting

If Your Application relies on a sub-contracting arrangement, then You must stipulate in Your Application the tasks that the proposed sub-contractor(s) would undertake. You remain legally responsible for meeting the Government Agency Requirements.

## 5 PROCUREMENT PROCESS CONDUCT

### 5.1 Your Conduct

You must:

- a) ensure all communications are undertaken via the Contact Person nominated in the tender documentation?
- b) declare any actual or potential conflict of interest
- c) not employ or engage the services of any person who has a duty to the Government Agency as an adviser, consultant or employee (or former adviser, consultant or employee)
- d) not apply any incentive to, or otherwise attempt to influence, any employee of the Government Agency or any member of an evaluation team at any time
- e) not engage in any collusive or anti-competitive conduct with any Supplier
- f) comply with all laws in force in South Australia applicable to this Procurement Process
- g) disclose whether You are acting as agent, nominee or jointly with another person(s) and disclose the identity of the other person(s)
- h) not issue any news releases or responses to media enquiries and questions regarding these guidelines without the Government Agency's written approval.

If You act contrary to the expectations outlined above, the Government Agency reserves the right (regardless of any subsequent dealings) to exclude Your Application from further consideration.

### 5.2 Government Agency Conduct

The Government Agency will:

- a) preserve the confidentiality of any information marked as confidential (subject to conditions concerning confidentiality)
- b) give Suppliers the opportunity to compete fairly.

### 5.3 Confidentiality

You must identify any aspect of Your Application that You consider should be kept confidential including reasons. The Government Agency is not obliged to treat information as confidential and in the absence of any agreement to do so, You acknowledge that the Government Agency has the right to publicly disclose the information.

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Any condition in Your Application that seeks to prohibit or restrict the Government Agency's right to disclose will not be accepted.

Notwithstanding any undertaking regarding confidentiality, by submitting an Application, You agree that the Government Agency may forward information relating to You or Your Application to the Australian Competition and Consumer Commission (ACCC) if the Government Agency reasonably suspects, or is notified by the ACCC that it reasonably suspects, that there is cartel conduct or unlawful collusion in relation to this Procurement Process (whether or not the suspicion relates to Your Application).

Information supplied by or on behalf of the Government Agency is confidential to the Government Agency and You are obliged to maintain its confidentiality. You may disclose confidential information to any person that has a need to know the information for the purposes of submitting Your Application.

## 6 EVALUATION PROCESS

### 6.1 Evaluation

In evaluating Applications the Government Agency will consider:

- a) the Evaluation Criteria
- b) the overall value for money of the Application
- c) compliance with applicable Government Policies
- d) any other information that the Government Agency considers relevant.

Where mandatory criteria are specified in the Reference Schedule provided in Section 3.1 and Your Application does not comply with these criteria the Government Agency may choose not to further evaluate Your Application.

The Government Agency may in its absolute discretion:

- a) take into account any relevant consideration when evaluating Applications
- b) invite any person or entity to lodge an Application
- c) allow a Supplier to change its Application
- d) consider, decline to consider, or accept (at the Government Agency's sole discretion) an Application lodged other than in accordance with these guidelines.
- e) seek further information from You regarding Your Application including but not limited to requests for additional information or presentations by, or interviews with You or Your key personnel
- f) seek and evaluate relevant financial viability data concerning any Suppliers' business and related entities including seeking any assistance from third party providers
- g) make enquiries of any person or entity to obtain information about any Supplier and its Application (including but not limited to the referees)
- h) visit facilities operated by any Supplier, proposed subcontractors of any Supplier and/or by their customers in order to assess their capabilities and performance (at a mutually convenient time).

## 6.2 Schedule of Rates (Rate Cards)

The Schedule of Rates submitted with this Pre-qualification will apply for a period of 24 months after the Execution Date. The cost for all equipment shall be included in the rates.

The Schedule of Rates will be used:

- (a) For estimating projects; and
- (b) As the maximum Rates charged by the Contractor.

## 6.3 Performance Evaluation

The Principal's Representative will provide performance evaluation feedback to the Contractor on the following criteria at the completion of a contract by completing a "Contract Review":

- (a) Quality of documentation, including clear objectives and scope, complete, concise, accurate and realistic description of requirements, issues and risks addressed.
- (b) Contract management performance including timeliness and adequacy of response to requests, practicality and reasonableness of specification interpretations, cooperation and communication.

The Contractor may provide comment on this evaluation and provide performance evaluation feedback to the Principal's Representative on the following criteria:

- (a) Project Deliverables/Requirements, including technical capacity, methodology and communication, compliance with appropriate standards, guidelines and procedures, standard of deliverables.
- (b) Timeliness, including milestone dates achieved and service completed on time, timeliness in communicating issues and concerns, timely and adequate response to additional client requirements.

The results will be taken into consideration when allocating future work packages.

The Principal's Representative may evaluate and review Contractor performance and quality of work at any stage during the course of the Pre-qualification.

## 6.4 Negotiation

The Government Agency may choose to:

- a) enter into negotiations with You or any Supplier (including parallel negotiations with more than one Supplier) in order to vary its Application on grounds of capability / capacity, technical issues, cost, effectiveness, to finalise agreement on the terms of the contract, or any other matters
- b) re-evaluate Applications generally after any negotiation
- c) suspend, discontinue or terminate at any time negotiations with You or any Supplier or any other person or organisation

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- d) negotiate with You or any Supplier for the provision of any part of the Government Agency's Requirement and negotiate with any other Supplier with respect to the same or other parts of the Government Agency Requirement and to enter into one or more contracts for part or parts of the Government Agency's Requirement
- e) negotiate at any time with any organisation that is not a Supplier and enter into a contract in relation to the Government Agency Requirement or any part of the Government Agency's Requirement with that organisation on such terms as the Government Agency, at its absolute discretion, considers appropriate
- f) seek best and final applications from all or some of the Suppliers. Irrespective of the Government Agency's right to negotiate and/or seek a best and final application, You are bound by Your Application, and if selected, You must be willing to enter into a contract on the basis of Your Application.

## 7 GOVERNMENT POLICIES

South Australian Government policies apply to all South Australian Government purchasing and related activities.

### 7.1 Employment of Ex-Government Employees

Unless an exemption has been granted by the Treasurer, the Government Agency will not accept the services of any former public sector employee who has accepted a targeted voluntary separation package, either directly or through a third party, for a period that corresponds with the number of weeks of a targeted voluntary separation package received from the South Australian Government, where such engagement may breach the conditions under which the separation package was paid to the former public sector employee.

### 7.2 Disclosure of Government Contracts

If a contract is entered into, the Government Agency may disclose that contract and/or information in relation to it in either printed or electronic form and either generally to the public or to a particular person as a result of a specific request.

### 7.3 Allocation of Risk - Liability

On 25 July 2016 the South Australian Cabinet approved a policy that for low to medium risk standard government procurement contracts, a supplier's liability will be capped at a multiple of between 1 and 5 of the total contract value with the multiple to be based on a risk assessment conducted by the procuring government agency.

For high risk government procurement contracts, the procuring government agency will conduct a risk assessment and in consultation with SAICORP and the Crown Solicitor's Office, include appropriate clauses dealing with risk and liability based on that risk assessment.