



Low Carbon Inclusions in Transport and Road Agencies Procurement Policies

Academic Report

*A Collaborative Project between the Sustainable Built
Environment National Research Centre (SBEnrc)*

University Research Team

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Contents

Executive Summary.....	4
1. Introduction.....	7
2. Current level of coverage of ‘Low Carbon’ items in the ‘IS rating tool’	9
2.1 Overview of the ‘IS Rating Tool’	9
2.2 List of Low Carbon tendering related credits in the ‘IS rating Tool’	10
3. Summary of Findings for Western Australia.....	12
3.1 Summary of Low Carbon Procurement Policies by WA Government	14
<i>WA Code of Practice for Procurement (2015)</i>	14
<i>WA Sustainable Procurement Policy (2014)</i>	14
<i>Sustainable Procurement Practice Guideline (2014)</i>	15
3.2 Summary of Low Carbon Procurement Policies by WA Transport Agencies	18
<i>Main Roads Sustainability Policy (2006)</i>	18
<i>Main Roads Annual Report (2015)</i>	18
3.3 Projects using IS Rating tool in Western Australia.....	19
<i>The Gateway WA Project</i>	19
<i>Greater Eastern Highway Upgrade</i>	19
4. Summary of Findings for New South Wales	20
4.1 Overview	20
4.2 Summary of Low Carbon Procurement Policies by NSW State Government.....	21
<i>NSW Code of Practice for Procurement (2005)</i>	21
<i>NSW Sustainability Policy (2008)</i>	21
<i>Procurement Policy Framework for NSW Government Agencies (2014)</i>	22
4.3 Summary of Low Carbon Procurement Policies by NSW Transport Agencies.....	25
<i>Roads and Maritime Services ‘Environment Policy Statement’ (2012)</i>	25
<i>Transport for NSW ‘Statement of Business Ethics’ (2012)</i>	25
<i>NSW Long Term Transport Master Plan (2012)</i>	25
<i>NSW RMS ‘Transport Environment and Sustainability Policy Framework’ (2013)</i>	26
<i>Transport for NSW ‘Transport Environment and Sustainability Policy Framework’ (2013)</i>	27
<i>Transport for NSW ‘Environment and Sustainability Policy’ (2015)</i>	27
4.4 Projects using IS Rating tool in New South Wales	28
<i>Sydney Metro Northwest</i>	29
<i>Wynyard Walk</i>	29
<i>North West Rail Link Tunnel and Station</i>	30
<i>Sydney Metro Northwest Early Works</i>	30
5. Summary of Findings for Queensland.....	32

5.1 Summary of Low Carbon Procurement Policies by Queensland Government	33
<i>Queensland Procurement Policy (2013)</i>	33
<i>Queensland State Procurement Plan 2014-2018 (2013)</i>	33
<i>Procurement Guidance - Integrating Sustainability into the Procurement Process (2014)</i>	33
<i>Procurement Guidance – Value for Money (2000)</i>	35
5.2 Summary of Low Carbon Procurement Policies by Queensland Transport Agencies	36
<i>Transport and Main Roads – Sustainability Framework (2008)</i>	36
5.3 Projects using IS Rating tool in Queensland	37
<i>Gold Coast Light Rail</i>	37
References	37

Executive Summary

Overview

The focus of this reports is to present findings of an investigation into Western Australia, New South Wales, and Queensland, regarding the level of low carbon inclusions included in associated procurement policies and supporting documents. The investigation found that each state has a state wide procurement policy and main procurement document which includes to varying degrees, low carbon considerations. Both Western Australia and Queensland had specific guidelines regarding sustainable procurement, for WA ‘Sustainable Procurement Practice Guideline’ for QLD ‘Procurement Guidance: Integrating Sustainability into the Procurement Process’. The NSW government defined sustainable procurement on their website and provide a suite of policies on social procurement, resource efficiency, environmental management system guidelines and examples of sustainable procurement.

The WA and QLD sustainable procurement documents both specify the triple bottom line as the three dimensions to be used in sustainable procurement; social, environmental and economic. The documents have been developed inline with British Standards with the ‘Environmental Overview’ of both documents being very similar along with the ‘Economic Overview’, however the social impacts vary with QLD adapting their social procurement dimensions from the ‘Social Procurement in Australia Guide’. Both the WA and QLD documents have demand analysis, sustainability impact assessments and methods for contract assessment and review, although the specifics for these analysis and assessments differ.

Western Australia

*State Government*_ In 2014 the State Supply Commission and Department of Finance (which have been merged since 2009) released a ‘WA Sustainable Procurement Policy’ specifying the stages of procurement where sustainability should be considered. This document is supported by the ‘Sustainable Procurement Practice Guide’ released in the same year. The document outlines how on a social, environmental and economic level sustainable procurement can be considered and possible positive outcomes, including low carbon living. This guide provides a quantitative assessment for the user and suggests further literature, a ‘Sustainability Impact Scoring Chart’ used to assess the sustainability of a procurement activity, and directs the reader to the ‘Assessing a Supplier’s Suitability Credentials’ located on Australian Procurement and Constructions website.

Main Roads Western Australia (MRWA): In 2006 Main Roads Western Australia released a sustainability policy that outlined a set of associated principles and objectives. More recently the Western Australian Government has explored developing a ‘Transport Portfolio Sustainability Policy Statement’, within the transport portfolio including MRWA, Department of

Transport, and the Public Transport Authority. While not to be publically released this work will help to shape MRWAs refreshed approach to Sustainability.

New South Wales

State Government: In 2005 the New South Wales government released the 'NSW Code of Practice for Procurement', which involved the introduction of sustainable procurement ideas and carbon reduction. The Procurement Policy Framework for NSW government agencies includes policy on pollution control, energy efficiency, waste minimisation and other low carbon related options. In 2014 the NSW government released a 'NSW Government Resource Efficiency Policy' which has a focus on energy, water, waste and clean air. Urban Growth NSW released a 'Sustainability Report' for 2013/2014 which points out the partnership with CRC for low carbon living to 'develop standard best practice sustainability clauses that we can include in procurement in the future'. The NSW Procurement Board has since released in July 2015 a 'Policy Framework for NSW Government Agencies' which again addresses the need for pollution control, waste minimisation recycling and disposal options.

Roads and Maritime Services (RMS): In 2012 Roads and Maritime Services (RMS) released an 'Environmental Policy Statement', outlining the management and accountability of environmental responsibility. The 'Roads and Maritime Strategy and Delivery Plan' was then released in 2013 and contained instruction on the use of the 'environmental impact statement' and further environmentally beneficial systems. In late 2014 RMS released a document 'Environmental Assessment and Decision Making', which outlined a program commitment to environmental performance in contractual arrangements. More recently Roads and Maritime Services have explored the development of an 'Environmental Sustainability Strategy' as well as a 'Technical Guide' to sustainability in infrastructure design and construction. These documents have expanded on the past documents single focus on environment, to a broader sustainable life cycle approach in multiple stages of services.

Queensland

State Government: In 2009 the Queensland's Governments Department of Housing and Public works released 'Procurement Guidance, integrating sustainability into the procurement process' which was later updated in 2014. This document provided graphs to quantify and classify the various positive or negative sustainable impacts of a procurement and supplier, addressing many issues regarding low carbon strategies. The 'Queensland's Procurement Policy' was released in 2013 and updated in 2014, which in its main principles includes the advancement of the governments economic, environmental and social objectives. The 'State Procurement Plan 2014-2018' summarises results so far and a plan to sustain and innovate, although does not specify any action regarding carbon reduction.

Department of Transport and Main Roads (TMR): The TMR 'Environmental Management Policy and Strategy' from 2008-2013 has yet to be updated. Although carbon reduction is a

part of the 'Queensland Cycle Strategy', intended to build safer areas for cycling to support 'protecting the environment and transitioning to a low carbon future.'

1. Introduction

Road agencies face growing pressure to respond to issues related to climate change, resource shortages, and shifting transport mode preferences. A key part of this response will be to reduce the dependency on fossil fuel based energy (and the associated greenhouse gas emissions) of transport infrastructure. As part of the Sustainable Built Environment National Research Centre (SBEnc) the research team from the Curtin University Sustainability Policy Institute developed a project focused on the strategies and solutions for the future of roads, with the following parts:

1. Technologies and Processes for the Future of Roads: The first component responds to the understanding that a number of recent advances in technologies and processes need to be investigated for their sustainability and suitability for Australian road agencies. Building on the previous research findings the first stage of the project focuses on three key areas selected by SBEnc Core Members, namely:¹
 1. The inclusion of onsite renewable energy generation technologies as part of road and transport infrastructure,
 2. The potential for automated motorways to reduce traffic fuel consumption (referred to as 'Smart Roads'), and
 3. The reduction of energy demand of route and signal lighting on main roads.

Given the rapid growth of innovation and commercialisation in these areas it is important to ensure a rigorous investigation is undertaken to inform appropriate consideration as part of current and future projects.

2. Sustainability Reporting and the Future of Roads: The second component investigates sustainability assessment and reporting tools to identify opportunities to provide greater value to road and transport agencies. This area of the project will deliver the following industry outcomes:
 - *Review of Sustainability Reporting Frameworks*: The research team has undertaken a review of existing sustainability assessment and reporting frameworks related to the road and transport sector to identify specific areas of value.²
 - *Identify Tangible Benefits from use of Sustainability Reporting*: The research team has worked with partners to identify the value created by the use of aspects of

¹ SBEnc (2015) 'An Investigation into Strategies and Solutions for the Future of Roads', an Industry Report to the Sustainable Built Environment National Research Centre (SBEnc) by the Curtin University Sustainability Policy Institute (CUSP).

² Wilson, K., Farr, A., Whistler, L., and Matan. A (2014) 'A Literature Review of Sustainability Performance Assessment by Road Agencies', a report to the Sustainable Built Environment National Research Centre (SBEnc) by the Curtin University Sustainability Policy Institute and Queensland University of Technology.

sustainability assessment and reporting frameworks (namely the 'IS Tool') related to specific projects.

3. Low Carbon Tendering informed by Sustainability Performance and Reporting Tools: The third component focuses on the value sustainability performance and rating tools can play in supporting low carbon tendering, in collaboration with the CRC for Low Carbon Living and UrbanGrowth NSW. IN practice the project brings together a SBEnrc project on strategies and solutions for the future of roads (SBEnrc 1.22) and a CRC for Low Carbon Living project on low carbon tendering with UrbanGrowth NSW (CRCLCL RP2010). This area of the project will deliver the following industry outcomes:

- *Current level of low carbon inclusions in procurement systems*: The research team has conducted a desktop review of available procurement policies and documents for each of the states with SBEnrc Core Partners, namely WA, QLD and WA. The review as presented in this document builds on from a review of low carbon inclusions in Federal and NSW government procurement processes with a case study on UrbanGrowth NSW that was undertake as part of CRCLCL RP2010.³
- *ISCA 'Infrastructure Sustainability' Tool and Low Carbon Tendering*: The process will involve participation in the 'IS Rating Tool' training course and meetings with ISCA to identify the value that can be provided by the tool to inform low carbon aspects of project tendering, relevant to both road and transport projects (SBEnrc) and land development projects (CRC). This will include identification of low carbon related items in the 'IS Rating Tool', identification of aspects of the tool to add value to low carbon tendering, client actions related to tool rating and low carbon outcomes, and areas of potential further research.⁴
- *Investigate the 'Low Carbon Readiness' of Supply Chains*: The research team will investigate the level of low carbon readiness of the supply chain through an industry survey. The survey will be based on the evidence requirements related to low carbon outcomes in the 'IS Rating Tool'. Areas of investigation will include: Energy and Carbon, Materials, Procurement, Climate Change Adaptation, and Management Systems. Recommendations will be made as to the consideration of the level of low carbon readiness as part of the tender design and assessment. (Note this item is part of the scope for CRCLCL RP2010).

³ Hargroves, K. (2015) 'Low Carbon Inclusions in Commonwealth and NSW Government Built Environment Sector Procurement', a report to the CRC for Low Carbon Living in collaboration with the Sustainable Built Environment National Research Centre (SBEnrc).

⁴ Hargroves, K (2014) 'ISCA Infrastructure Sustainability Rating Tool and Low Carbon Tendering', a report to the Sustainable Built Environment National Research Centre (SBEnrc) and the CRC for Low Carbon Living by the Curtin University Sustainability Policy Institute (CUSP).

2. Current level of coverage of 'Low Carbon' items in the 'IS rating tool'

2.1 Overview of the 'IS Rating Tool'

Developed and administered by the Infrastructure Sustainability Council of Australia (ISCA), the 'IS rating tool' is designed to be used to evaluate the sustainability of infrastructure across design, construction, and operational phases. The tool can be used for self-assessment as well as being able to be formally certified as 'Commended', 'Excellent', or 'Leading'. Considering specific themes within a range of social, economic and environmental sustainability categories across each project, the users of the rating tool nominate a performance level (1, 2, or 3) that they believe they have achieved for each credit and provide supporting evidence as outlined in the tool's technical manual. An assessment is carried out and based on predetermined weightings designed into the tool, the overall rating is calculated, and compared to a possible level of achievement. For example Figure 1 shows a sample rating across the various performance areas with a score of 6 attained for 'Management Systems' out of a possible 10.5.

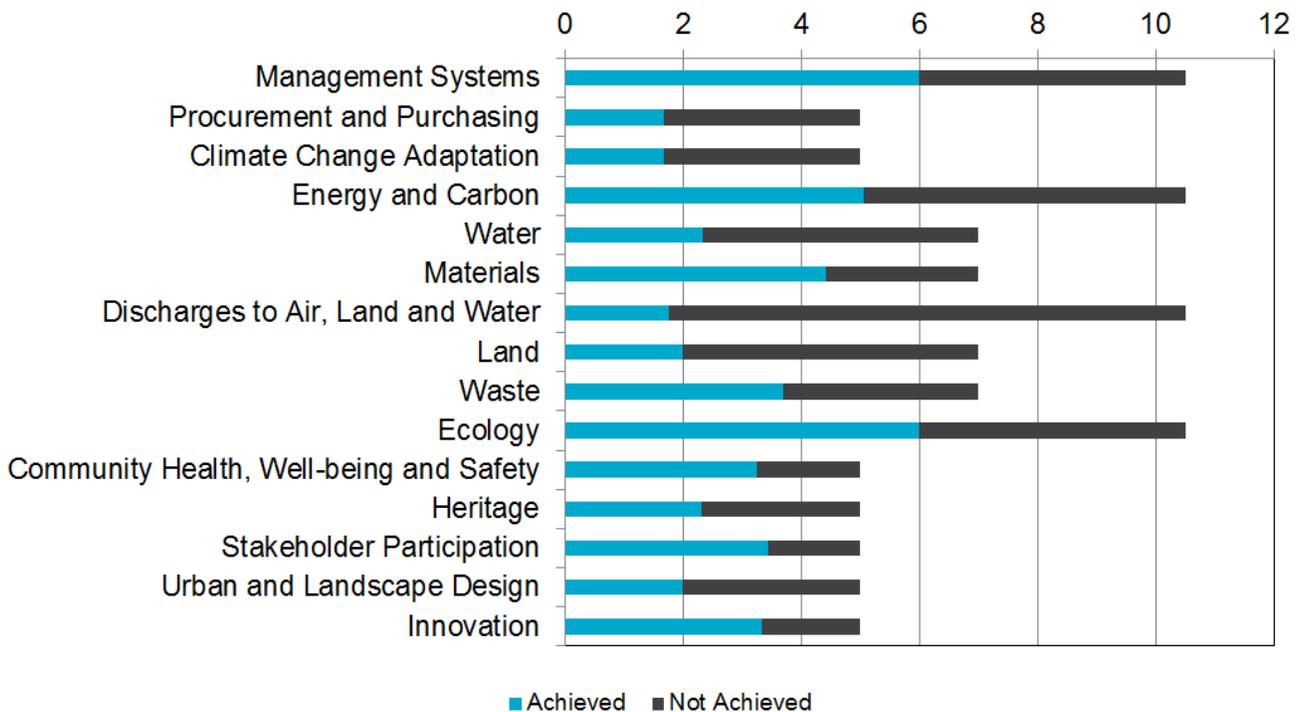
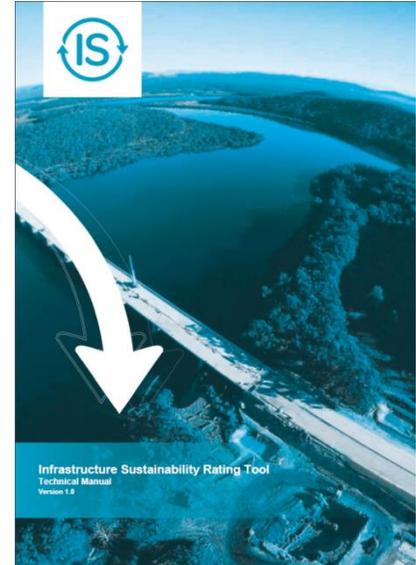


Figure 1: An example of IS rating tool outputs.

Source: ISCA (2014)

2.2 List of Low Carbon tendering related credits in the 'IS rating Tool'

The following is a list of credits that are related to 'low carbon tendering'. The table identifies those credits deemed to be 'directly' related to low carbon living and those that are 'in-directly related'.

Table 1: Summary of 'IS Rating Tool' credits related to Low Carbon Tendering

Code	Credit	Evidence requirements relevance to Low Carbon Tendering
Credits Directly Related to 'Low Carbon Readiness' (27.54 Total Points Possible)		
Energy and Carbon		
Ene-1 4.67	Energy and carbon monitoring and reduction	Evidence of the modelling and monitoring of actions to reduce energy use and greenhouse gas emissions (Scope 1, 2, and 3 emissions).
Ene-2 4.67	Energy and carbon reduction opportunities	Evidence that opportunities to reduce energy use and greenhouse gas emissions are identified and implemented.
Ene-3 1.17	Renewable energy	Evidence that renewable energy opportunities have been investigated and implemented.
Procurement and Purchasing		
Pro-1 1.25	Commitment to sustainable procurement	Evidence of a commitment to sustainable procurement that includes environmental, social and economic considerations.
Pro-2 1.25	Identification of suppliers	Evidence of supplier pre-qualification questionnaires including items related to the presence and implementation of a sustainability policy.
Pro-3 1.25	Supplier evaluation and contract award	Evidence of sustainability consideration in supplier evaluation criteria and contract documentation, including provision for auditing.
Pro-4 1.25	Managing supplier performance	Evidence of the sustainability performance monitoring of suppliers, with active management of non-compliance and rewards available.
Materials		
Mat-1 6.29	Materials lifecycle impact measurement and reduction	Evidence of the modelling and monitoring of materials lifecycle impacts across infrastructure lifecycle, and demonstrated reductions.
Mat-2 0.74	Environmentally labelled products and supply chains	Evidence of the use of major material products with environmental credentials nominated or approved by ISCA.

Innovation		
Inn-1 5.00	Innovation	Evidence of contribution to broader market transformation towards sustainable development, locally, nationally and internationally.
Credits In-Directly Related to 'Low Carbon Readiness' (15.5 Total Points Possible)		
Management Systems		
Man-1 1.07	Sustainability leadership and commitment	Evidence of a commitment to sustainability through a sustainability policy and inclusion in management plans and project contracts.
Man-2 0.43	Management system accreditation	Evidence of accreditation of asset management systems to ISO14001 standard for environmental management systems.
Man-3 0.86	Risk and opportunity management	Evidence of the assessment of environmental, social, and economic risks and opportunities in a risk register with annual reviews.
Man-4 1.07	Organisational structure, roles and responsibilities	Evidence of a member of the project senior management with central responsibility for managing sustainability, with position description.
Man-5 0.86	Inspection and auditing	Evidence of regular environmental and sustainability inspection of on-site performance and reported auditing of the management system.
Man-6 0.86	Reporting and review	Evidence of sustainability reporting that is reported to senior management and the public and involves community participation.
Man-8 3.21	Decision-making	Evidence of decision making guidelines that evaluate options by considering environmental, social, and economic aspects.
Climate Change Adaptation		
Cli-1 2.50	Climate change risk assessment	Evidence of the assessment of climate change risks, including direct, indirect and flow on risks with system and regional implications.
Cli-2 2.50	Adaptation options	Evidence of the assessment and implementation of climate change adaptation measures for extreme, high and medium risks.

* This is default 'As Built' rating point value including all credits.

3. Summary of Findings for Western Australia

The major documents outlining the procurement requirements in Western Australia include 'Procurement Practice Guide – A Guide to Products and Services Contracting, for Public Authority', which states the importance of *'consider[ing] sustainability issues as part of your decision making process. This means meeting a need for goods and services in a way that achieves value for money...'* Also the 'WA Sustainable Procurement Policy', which discusses the need for sustainability to be considered at all points of procurement, the preparations of procurement plans, request designs, and suggests the inclusion of evaluations and a form to measure the suppliers' contract performance against the agreed commitments.

Guidelines are provided in the 'Sustainable Procurement Practice Guidelines' that reiterate the need to have sustainable considerations incorporated throughout the procurement process. The guide suggests that the procurement should consider the 'triple bottom line' of economic, social, and environmental outcomes, in-line with the British Sustainable Procurement Standards. This document also states that sustainable procurement should be addressed along the whole timeline of the procurement. The document guides the reader to a 'Sustainability Impact Scoring Chart' which is to be used to assess potential suppliers, questions address the users GHG emissions reduction targets and previous achievements (much the same as the IS Rating Tool). According to the related policies procurements with a total value greater than \$5 million are required to develop a procurement plan, within this plan the sustainability issues must be addressed and how the procurement aims to minimise its impact.

Main Roads Western Australia (MRWA) have released a sustainability policy (2006) which addresses the need to 'build awareness' and 'develop a clear understanding' of the sustainable applications in transport. There is currently a Transport Portfolio Sustainability Policy Statement' being developed to be used internally to shape the MRWA approach to sustainability. It is mandatory for MRWA projects of a project value over \$100 million to be given a formal IS Rating score, and for projects over \$20million to use the IS framework in their projects development and evaluation.⁵

The ISCA website listed 10 projects from 5 registrant organisations that Western Australia has registered using the IS rating tool. Main roads website commented that the IS rating tool is *'Australia's only comprehensive rating system for evaluating sustainability across design, construction and operating of infrastructure'*. Another significant quote is from the environmental advisor for Fremantle ports who commented *'Some really simple changes put in place to address IS credits are having a significant impact on project sustainability'*

⁵ Sprigg, A, (N/A), 'Introduction to ISCA and IS rating'
https://www.engineersaustralia.org.au/sites/default/files/anthony_sprigg_presentation.pdf.

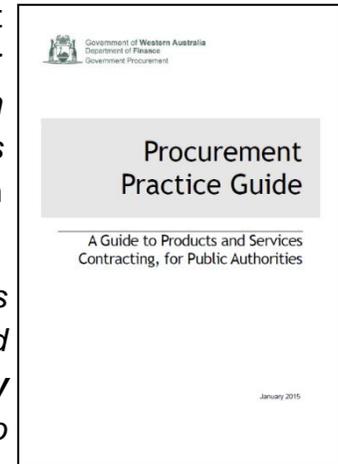
outcomes and project team culture. One of the projects as a result of implementing LED lighting saved 1,400 tCO₂e over the assets lifecycle.

3.1 Summary of Low Carbon Procurement Policies by WA Government

WA Code of Practice for Procurement (2015)

In 2008 the Western Australia government released the 'Procurement Practice Guide – A guide to Products and Services contracting, for Public Authority' ('Guide) in 2015. This Guide defines itself as '*... an effective 'how to' framework for public sector contracting for products and/or services*'⁶. This code of practice includes the following mention of low carbon related considerations:

- The code states '*It is important to consider sustainability issues as part of your decision making process. This means meeting a need for goods and services in a way that achieves **value for money** and generates benefits not only to the organisation, but also to society and the economy, while minimising damage to the environment.*' (Man-8)



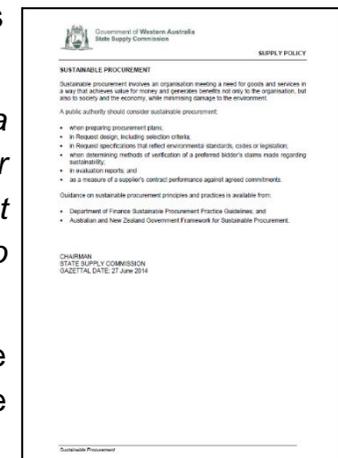
The Guide suggests that once a procurement method has been chosen, potential suppliers should be asked a series of questions, including consideration of 'sustainability issues where appropriate'. Regarding the supply of materials the guide suggests that '*...regional suppliers are given every opportunity to supply for a regional purchase, and that sustainability issues are considered when developing the specification.*'

WA Sustainable Procurement Policy (2014)

Released in 2014 the 'WA Sustainable Procurement Policy' defines sustainable procurement as;

*'Sustainable procurement involves an organisation meeting a need for goods and services in a way that achieves value for money and generates benefits not only to the organisation, but also to society and the economy, while minimising damage to the environment.'*⁷

The procurement policy suggests what stages to consider sustainable procurement, ranging from the initial planning stage through to the evaluation of the procurement.⁸



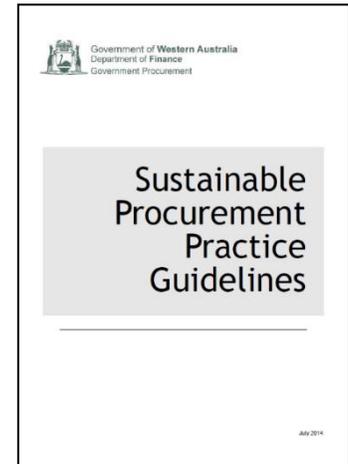
⁶ WA Government (2015) Procurement Practice Guide, Department of Finance, Government Procurement. https://www.finance.wa.gov.au/cms/uploadedFiles/Government_Procurement/Guidelines_and_templates/Goods_and_service_procurement_practice_guide.pdf.

⁷ WA Government (2014) Sustainable Procurement Supply Policy Department of Finance, Government Procurement. Accessed from https://www.finance.wa.gov.au/cms/State_Supply_Commission/Procurement_Policy/Sustainable_Procurement.aspx

⁸ ibid

Sustainable Procurement Practice Guideline (2014)

In 2014 the ‘WA Sustainable Procurement Practice Guidelines’ were released and were, ‘...designed to support the intent of the State Supply Commissions Sustainable Procurement Policy⁹. The guidelines define itself as providing ‘... information and practical advice to Western Australian public authorities and government procurement officers on how to integrate sustainability considerations into the procurement process.’¹⁰ This document states that ‘Sustainability considerations should be incorporated into every stage of the procurement process, including at the forward procurement planning and budget allocation stages.’ (Pro-1)



The guidelines defines preferable goods and services as ‘... those that have a lower impact on the environmental over the life cycle of the good or service, when compared with competing goods or services serving the same purpose.’ The guidelines list a number of ‘Desirable outcomes/benefits’ related to low carbon outcomes, including:

- improved air quality by reducing or eliminating emissions to air (e.g. Greenhouse gases, such as carbon dioxide, and other pollutants);
- reduced demand on raw materials and natural resources (e.g. sustainable forestry, biodiversity);
- reduced use of energy (e.g. energy efficiency, use of renewable energy); (Ene-1, Ene-2)
- reduced waste and by-products (e.g. recycling and waste prevention)
- In the context of whole of life value for money, select products and services which have lower environmental impacts across their life cycle compared with competing products and services; (Pro-2)
- Foster a viable Australia and New Zealand market for sustainable products and services by supporting businesses and industry groups that demonstrate innovation in sustainability; (Inn-1)
- Support suppliers to government who are socially responsible and adopt ethical practices (Hea-1)
- Procuring goods and services that are more efficient to operate and thereby reduce operation costs (including consumables, energy, water and time); (Pro-1, Pro-2)
- Reducing end of life disposal costs and impacts; (Was-1)

⁹ WA Government (2014) *Sustainability Procurement Practice Guidelines*, Department of Finance, Government Procurement.

¹⁰ WA Government (2014) *Sustainability Procurement Practice Guidelines*, Department of Finance, Government Procurement.

Following on from the guide's suggestions on how to address and assess the sustainability of a procurement from three dimensions, environmental, social and economic, and the possible positive outcomes from doing so, the guide then addresses how to plan for sustainability. This looks at the demand management and analysis strategies along with sustainability impact assessment.

1. Demand Management & Analysis Strategies

The document discusses sustainable procurement throughout the complete procurement process and points out that, '*... public authorities are encouraged to consider relevant demand management strategies that can potentially reduce overall consumption levels, identify more sustainable alternatives, or in some cases negate the need to undertake the procurement.*' The guidelines stresses the need for end users and stakeholders to be involved in the discussion regarding sustainability issues.

2. Sustainability Impact Assessment

The guide provides a 'Sustainability Impact Scoring Chart' (SISC), a tool to be used to assess the potential client. The chart contains 8 Criteria/Questions which each have a Rating/Score from 1 to 3, the guide states '*A score of 24 on the Sustainability Impact Scoring Chart included below indicates a procurement activity for a good or services with high sustainability impacts.*' The SISC is not compulsory but suggested '*... in order to better understand the sustainability aspects and implications.*'

The guide suggests the use of the Australian Procurement and Construction Council (APCC) document on '*Assessing a Supplier's Sustainability Credentials*'¹¹ in conjunction with the SISC. This document provides suggestions for questions for potential suppliers regarding their environmental management, employment practices, corporate social responsibility, greenhouse gas emissions, and commitment to sustainability and demonstrated sustainability improvements. Considerations and requirements that are directly or indirectly related to low carbon inclusions are listed below:

'What steps does your organisation take to reduce its greenhouse gas emissions?'

Criteria to be commented on in responding to this requirement include:

- Initiatives that the organisation has undertaken to calculate its GHG emissions, indicating whether these calculations are based on recognised guidelines. (IS Tool Ene-1)
- An endorsed policy with respect to reduction of GHGs indicating the management systems and processes in place to support the endorsed policy. (Man-1, Man-2)

¹¹ Australian Procurement and Construction Council (2007) *Assessing a Supplier's Sustainability Credentials* Australian Government Accessed From: http://www.apcc.gov.au/ALLAPCC/APCC%20PUB_Assessing%20A%20Supplier's%20Sustainability%20Credentials.pdf

- GHG reduction targets and proposed actions to achieve GHG reductions. (Ene-1, Man-1)
- Demonstrated GHG emissions reductions achieved. (Ene-1)
- Public reporting of GHG emissions, and/or targets and actions for reduction. (Man-6)

Describe initiatives that the organisation has implemented to reduce the environmental impacts directly associated with the transportation of raw materials/component parts and/or finished products.

Criteria that are to be commented on in responding to this requirement include:

- Initiatives in place to improve efficiencies in delivery, e.g. reduced travel distances and/or frequency of travel associated with distribution of products, or transport logistics software that incorporates sustainability considerations. (Mat-1)
- Initiatives in place to reduce the environmental impacts of travel, e.g. fuel efficiency, reduced air and noise pollution, or reduced carbon emissions. This could be demonstrated, for example, by utilising vehicles that rate 4 stars or more in the Australian Government’s Green Vehicle Guide. Please provide evidence. (Ene-1, Ene-2)
- Compliance with or working towards an eco-label or other credible sustainability credential relevant to transport and logistics.’ (Mat-2)

Although this SISC is not compulsory, it is required that ‘... *all procurements with a total estimated price of \$5 million or more require the development of a procurement plan. Procurement plans are also often developed for procurements values at less than \$5 million, particularly if the procurement has high risk, sensitivity or complexity elements*’¹²

Procurement Plan

The procurement plan template is accessible from the Department of Finance Procurement Practice guide. In the template taken from the website, under section 6.5 Sustainability Issues it is stated that ‘*The plan should identify and address sustainability issues – the level of effort expended to minimise the impact of procurement should be commensurate with the nature of the purchase. The sustainability issues may include:*

- Use of recycled or recovered materials;
- Product reusability and/or recyclability;
- Durability;
- Energy efficiency and consumption;
- Waster Prevention;
- Environmental health issues’

¹² WA Government (2014) *Sustainability Procurement Practice Guidelines*, Department of Finance, Government Procurement.

The guide continues onto contract formation, management and review and states that, ‘as a minimum, a procurement plan should identify the likely sustainability impacts of a proposed procurement, the associated sustainability objectives and priorities, and sustainability approach options’.¹³

3.2 Summary of Low Carbon Procurement Policies by WA Transport Agencies

Main Roads Sustainability Policy (2006)

In 2006 Main Roads Western Australia (MRWA) released a sustainability policy that outlined a set of their principles and objectives. More recently the Western Australian Government has explored developing a ‘Transport Portfolio Sustainability Policy Statement’, within the transport portfolio including MRWA, Department of Transport, and the Public Transport Authority.

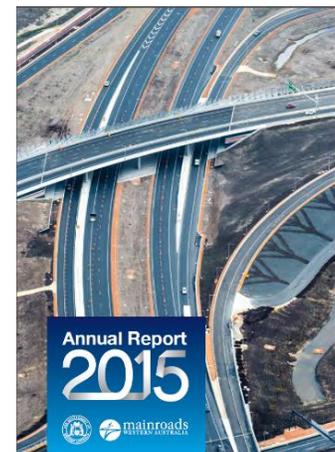
The following is listed as a ‘principle’ of the policy, ‘Management, operation and development of the road transport system is undertaken in a way that meets the needs of today without compromising the natural human and financial capital on which future generations depend’¹⁴

The policy also lists the following objectives related to low carbon outcomes, namely: build awareness of sustainability principles and their application to our business; develop a clear understanding of our role in a sustainable transport system; and promote an approach to decision-making that seeks to achieve advancement across each of the economic, social and environmental areas.



Main Roads Annual Report (2015)

The Main Roads Western Australia Annual Report 2015 contains a summary of the main roads works during the year. Contained in this report is the ‘Sustainability Assessment in Projects and Operations’, where it is stated that “All major infrastructure projects with a value over \$20 million utilise the IS framework as part of project development and evaluation.... We have introduced annual sustainability reporting for our projects with IS obligations.”¹⁵ It is also mandate for Main Roads WA that for and project over \$100 million



¹³ WA Government (2014) *Sustainability Procurement Practice Guidelines*, Department of Finance, Government Procurement

¹⁴ Mainroads Western Australia, (2006) *Sustainability Policy*, Commissioner of Main Roads, WA Government

¹⁵ Mainroads WA (2015) ‘Annual Report 2015’, Main Roads Western Australia.

dollars the IS rating must be used and assessed externally, and a formal score be given.¹⁶

3.3 Projects using IS Rating tool in Western Australia

The ISCA website listed 10 projects from 5 registrant organisations that Western Australia has registered using the IS rating tool.

Table 2: IS Ratings for a selection of Transport for WA projects

Project Name	Value	Rating Type	Status
Gateway WA	\$1 billion	Design V1	'Excellent'
Forrestfield-Airport Link	\$2 billion	Design V1	Registered
NorthLink WA	\$1,12 billion	Design V1	Registered
Great Eastern Highway Upgrade	\$350 million	As Built V1	'Commended'
Great Northern Highway, Muchea to Wubin	\$320 million	Design V1	Registered
Mitchell Freeway Extension – Burns Beach Road to Hester Avenue	\$209 million	Design V1	'Commended'

The Gateway WA Project

The ISCA website lists a number of highlights of the sustainability performance of the 'Gateway WA' project, which received an 'Excellent' rating for its design. For instance requirements were negotiated to allow 'an altered design that reduced the depth of excavation for some sections of the road, along with the use of 'C600 binders which reduced the quantity of asphalt by 10 percent'.

Greater Eastern Highway Upgrade

The ISCA website lists number of highlights of the sustainability performance of the 'Greater Eastern Highway Upgrade' which received a rating level of 'Commended' for its rating type 'As Built'. For instance the project achieved a score of 6.2/7.0 for the materials category by achieving a 'Significant reduction in materials lifecycle impacts through extensive use of recycled materials, reducing the use of non-renewable resources of limestone, sand and bitumen... the highway now has the largest use of recycled material on any WA state road with 43 per cent of imported material being recycled.

¹⁶ Sprigg, A. (N/A) 'Introduction to ISCA and IS rating', Presentation by Antony Sprigg to Engineers Australia.

4. Summary of Findings for New South Wales

4.1 Overview

The main procurement policy documents for the New South Wales government include the 'Code of Practice for Procurement', 'Procurement Policy Framework for NSW Government Agencies' (which includes '*Pollution control, waste minimisation, recycling and disposal options... Energy efficiency and resource consumption.*'). The 'NSW Government Resource Efficiency Policy' contains minimum requirements for the tendering of engines based on emissions levels, along with quantifying requirements.¹⁷ Transport for NSW (TfNSW) is the lead agency for procuring transport services and has issued an '*Environmental Policy Statement*', an '*Environment and Sustainability Policy*', and a '*Transport Environment and Sustainability Policy Framework*', in line with the NSW Government Resource Efficiency Policy.

In May 2015 NSW Roads and Maritime Services released a report on '*Environmental Assessment and Decision-Making by NSW and Maritime Services*' and announced plans to release an '*Environmental Sustainability Strategy and Technical Guide*'. 'NSW Long Term Transport Plan' was developed to be a supporting document for the NSW 2021, a NSW government initiative to improve NSW across economy, infrastructure, and local environment and communities. This plan supports the goals of the NSW 2021 and addresses the need to reduce greenhouse gas emissions from transport, sets out necessary documents which need to be adopted (e.g. Sustainability in Procurement Policy'), and states the need to set minimum demands for sustainable design, construction and delivery of transport infrastructure and services, and to adopt '*rigorous procurement analysis, including expert advice, to ensure the most appropriate procurement methodology is applied to each particular project*' this could include sustainability measures.

By early 2016 the ISCA IS Rating Tool had been applied in 21 projects across NSW, Transport for NSW has a mandate to receive an IS rating score for projects over \$50 million. Projects which achieved direct carbon reductions due to the employment of the tool were ACTEW Water, which reduced its carbon by 275tCO₂e, Tennix Whitsunday STP upgrade which avoided 14,000 tCO₂e over its lifecycle and by using B20 biodiesel avoided and additional 272 tCO₂e (cost neutral), other projects had indirect carbon savings by recycling or avoiding the use of steel.

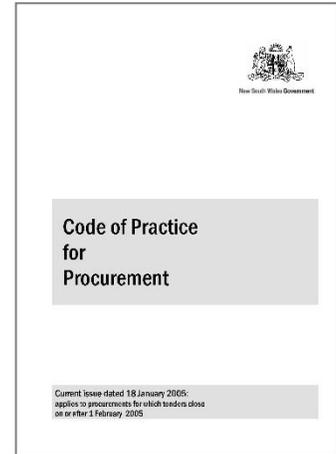
¹⁷ Rees N. (2008) *Sustainability Policy for NSW Government* Premier & Cabinet, NSW Government

4.2 Summary of Low Carbon Procurement Policies by NSW State Government

NSW Code of Practice for Procurement (2005)

The NSW Code of Practice for Procurement ('Code') (NSW Government, 2005) includes the following mention of low carbon related considerations:

- The Code states that '*Commitment to continuous improvement and best practice performance is expected of all those involved in government procurement*', and suggests a number of areas '*where this commitment may be demonstrated*' including '*environmental management*'.
- The Code states that, '*In addition to prices tendered, evaluation criteria shall contain the critical factors to be used in the evaluation of tenders*', and lists the following related to low carbon tendering:
 - Tenderer's environmental management practices and performance, and
 - Value adding components such as economic, social and environmental development initiatives, if appropriate and relevant to the procurement.



The Code has an Appendix related to Environmental Management that states that, '*the Government expects government agencies and all other parties to identify the potential environmental opportunities, risks and impacts of their activities and to adopt measures to:*

- *Realise those opportunities, manage those risks, and enhance and protect the environment,*
- *Encourage recycling and re-use of materials and minimise waste, and*
- *Support effective use of scarce resources - including energy, water and materials*'.

NSW Sustainability Policy (2008)

In 2008 the Department of Premier and Cabinet published a Sustainability Policy for NSW government which is an important document to support the NSW Government's commitment to become carbon neutral by 2020.¹⁸ '*The implementation of the Sustainability Policy will ensure Government agencies:*

- *Consider sustainability in all relevant decision making,*
- *Reduce their greenhouse gas emissions,*

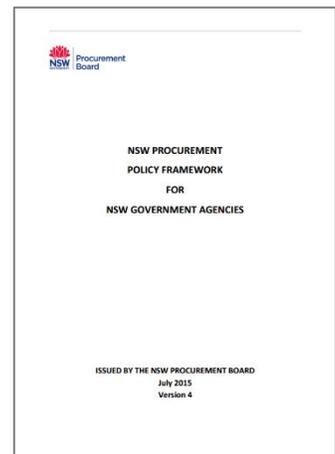
¹⁸ Rees N. (2008) *Sustainability Policy for NSW Government* Premier & Cabinet, NSW Government <http://arp.nsw.gov.au/m2008-28-sustainability-policy-nsw-government>

- *Are more efficient in their use of energy and water,*
- *Reduce wider environmental impacts associated with water and energy use,*
- *Meet the challenge of rising prices expected for energy, fuel, water and waste management,*
- *Are more efficient in their use of vehicles,*
- *Produce less waste and increase recycling in Government activities, and*
- *Use purchasing power to drive efficiency and environmental sustainability.’*

The overarching low carbon considerations are contained in the first five dot points for all government agencies, the final requirement specifically addresses the need for government purchasing power to drive efficiency and environmental sustainability. A sentiment parallel with the Commonwealth Sustainable Procurement Guides statement to use ‘... *purchasing power to achieve environmental and social benefits and, at the same time, reduce its costs.*’¹⁹

Procurement Policy Framework for NSW Government Agencies (2014)

The NSW Procurement Policy Framework (‘Framework’) sets out the ‘*policy and operating framework for the NSW public sector procurement system and provides a single source of guidance on the rules for procurement*’. (NSW Government, 2014a) As part of the ‘Procurement Practice Checklist - Stage 3: Project Procurement Plan’ the Framework suggests that procurement strategies embed a number of other requirements, including that of the ‘NSW Government Resource Efficiency Policy’ (which replaces the NSW Government Sustainability Policy’) which delivers actions from the ‘NSW Energy Efficiency Action Plan’.



The Framework reiterates the need for ‘value for money’ from procurement as outlined in the Commonwealth Procurement Rules however unlike the CPRs it does not include specific mention of the financial and non-financial costs and benefits of the ‘*environmental sustainability of the proposed goods and services (such as energy efficiency and environmental impact)*’ (DSEWPC, 2013b). However the Framework includes an element on ‘Sustainable Procurement’, stating that ‘*Sustainable procurement achieves the Government’s commitment to spend public money efficiently, economically and ethically*’, and requires that as part of the consideration of sustainable procurement the procurement process obtains ‘value for money’.

¹⁹ DSEWPC (2013) *Sustainable Procurement Guide*, Department of Sustainability, Environment, Water, Population and Communities, Canberra, Commonwealth of Australia.

The procurement policy framework suggests that *'Principles guiding sustainable procurement can be used by agencies to develop sustainable procurement strategies, policies, guidance material, training and tools by:*

- *Incorporating sustainability practices into every aspect of the business management from planning through the procurement process to measurement of results,*
- *Adopting strategies to avoid unnecessary consumption and managing demand,*
- *Selecting products and services with lower environmental impact across their life cycle, and*
- *Fostering a viable market for sustainable products and services by supporting businesses that support socially responsible suppliers, adopt ethical practices and demonstrate innovation in sustainability'.*

Each of these items provides the potential for reducing fossil energy demand and encouraging renewable energy generation. In particular, the avoidance of *'unnecessary consumption and management of the demand of energy provides'* opportunities to both reduce energy costs and reduce greenhouse gas emissions. The Framework concludes by stating that *'Adoption of sustainable procurement can be achieved through partnerships between governments, industry, business, education centres and the not-for-profit sector'.*

A number of other elements of the Framework support low carbon tendering, such as:

- *Innovation:* The Framework suggests that innovation can be *'sought and encouraged at three levels of market engagement'*, namely State economic level, the sourcing level and the contract management level. Each of these levels provides an opportunity for creative approaches to harness new innovations to deliver low carbon outcomes. In particular:
 - At the State economic level the Framework suggests that *'through effective, early, structured and open communication of needs to the market to encourage appropriate research and development and attract the right suppliers for the government customer base'.*
 - At the sourcing level through pre-qualification criteria and request for tender inclusions.
 - At the contract management level where the Framework suggests the adoption of performance based contracts KPIs that measure innovation (such as those provided by the ISCA 'IS Rating Tool').
- *Market Engagement:* Given the transition to low carbon operation will require changes across the build environment sector (along with all other sectors) it is important that low carbon procurement is enhanced by strong industry engagement. The Framework suggests that *'With effective industry engagement, sourcing strategies can be better*

aligned with market structure and dynamics, and provide government with knowledge about new and innovative approaches, leading to improved procurement outcomes’.

4.3 Summary of Low Carbon Procurement Policies by NSW Transport Agencies

Transport for New South Wales (TfNSW) is responsible for ‘...customer experience, planning, program administration, policy, regulation, **procuring transport services, infrastructure and freight. Transport operating agencies have been freed up to focus on service delivery – providing safe, reliable, clean and efficient transport services.**’²⁰ The following part outlines the low carbon inclusions in current TfNSW and NSW Roads and Maritime Services procurement documents and policies.

Roads and Maritime Services ‘Environment Policy Statement’ (2012)

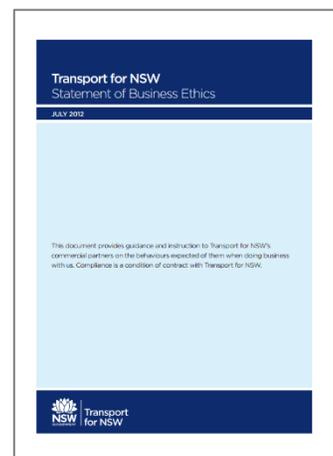
In 2012 the NSW Roads and Maritime Services (RMS) released an ‘Environmental Policy Statement’,²¹ The accountability section states that ‘Senior executive management is accountable for RMS’ overall environmental performance. This includes providing leadership, direction, resources and support to ensure RMS’ activities are carried out in a manner which at all times considers and effectively manages potential environmental risks and always strives for environmental performance improvement.’ Although the statement does not mention greenhouse gas emissions it states that ‘... promoting the efficient use, reuse and recycling of resources’ that can lead to such reductions.



Transport for NSW ‘Statement of Business Ethics’ (2012)

Transport for NSW released a ‘Statement of Business Ethics’²² which ‘provides guidance and instruction to Transport for NSW’s commercial partners on the behaviours expected of them when doing business with us. Compliance is a condition of contract with Transport for NSW’. This document calls for:

- Energy-efficient equipment, products containing recycled materials and environmentally friendly products will be purchased wherever reasonably possible.
- Where possible the use of local businesses and locally made products will be encouraged.

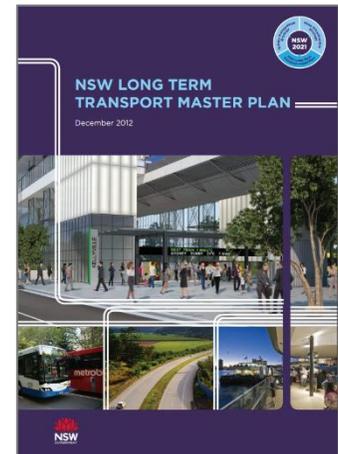


NSW Long Term Transport Master Plan (2012)

²⁰ Transport for NSW (2015), “Transport for NSW” accessed from: <http://www.transport.nsw.gov.au/about>.
²¹ Duncan. P (2012) Environment Policy Statement, <http://www.rms.nsw.gov.au/documents/about/environment/environment-policy-statement-2012.pdf>.
²² NSW Government (2012) Transport for NSW Statement of Business Ethics Transport for NSW Government, NSW Government.

The NSW Long Term Transport Plan was developed as a guide for transport planning and policy to support ‘*NSW 2021: A plan to make NSW Number One*’, which includes a number of goals that are directly and indirectly related to low carbon inclusions in procurement policies.

For instance the plan includes targets to reduce travel times during peak times (and associated greenhouse gas emissions from vehicles) and increasing the patronage of public transport (decreasing the number of private vehicles being used on the road network). The plan states ‘*Efficient use of energy can conserve depleting resources, drive down greenhouse gases and reduce air pollutants*’.



In the section on ‘Why Transport Matters’ the NSW Long Term Transport Plan states, “*Currently, around 14 percent of greenhouse gas (GHG) emissions produced in NSW come from the transport sector, making it the States second highest source of emissions. In the context of population growth and increasing travel demand, mitigating GHG emissions is a major challenge for the future... The cost and availability of oil and the rising cost of electricity will also have a direct influence on the choices we make in procuring the most environmental and energy efficient technologies to power transport fleets*”. Throughout the NSW Long Term Transport Plan, the procurement of transport and roads is addressed and those directly and in-directly related to low carbon procurement are listed below;

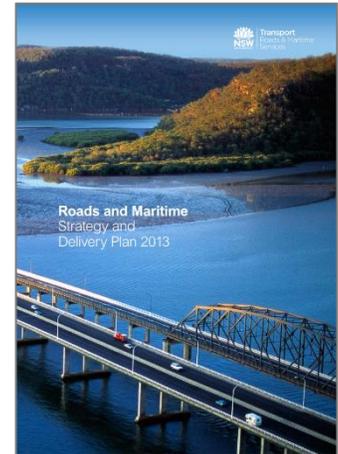
“8.8.1: Enhancing environmental and sustainability outcomes:²³

- Develop a co-ordinated Transport Environment & Sustainability Policy Framework.
- Develop and implement an Environment & Sustainability Plan for Transport.
- Develop and promote Transport Infrastructure Sustainable Design Guidance.
- Incorporate Sustainability principles in procurement policy.
 - *We will adopt a Sustainability in Procurement Policy to incorporate sustainability criteria into calls for tenders and general transport procurement, and to set minimum standards for the sustainable design, construction and delivery of transport infrastructure and services. This will improve environmental performance and energy efficiency of the public transport fleet.*”

NSW RMS ‘Transport Environment and Sustainability Policy Framework’ (2013)

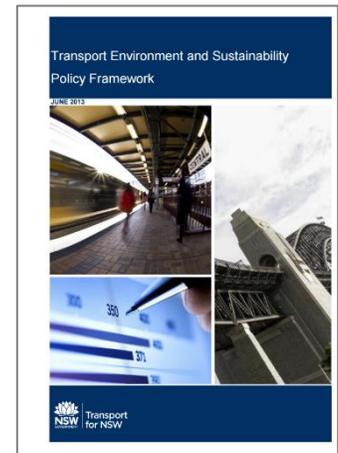
²³ Transport for NSW (TfNSW) 2012 NSW Long Term Transport Master Plan, State of New South Wales, Director General of Transport for NSW, Transport for NSW accessed from <http://www.transport.nsw.gov.au/content/nsw-long-term-transport-master-plan>

In 2013 NSW RMS released the ‘Roads and Maritime Strategy and Delivery Plan’ which included a vision to ‘deliver sustainable and innovative solutions to NSW’s transport needs’.²⁴ One of the objectives of the delivery plan was to ‘Minimise the environmental impact of Roads and Maritime operations and work to engage with our staff and industry partners to improve environmental management skills’. Although the plan does not directly mention greenhouse gas emissions reductions or responding to climate change risk (possibly as this was written in late 2012) the plan commits to ‘Revise and implement the Roads and Maritime Sustainability Strategy in line with the transport for NSW Sustainability Framework’.



Transport for NSW ‘Transport Environment and Sustainability Policy Framework’ (2013)

In 2013 TfNSW released the ‘Transport Environment and Sustainability Policy Framework’. which sought to address ‘...environmental issues at all levels of planning, policy development and project delivery – leading to better environmental sustainability outcomes and reduced environmental impacts across our cities, towns and suburbs.’ The framework points out that, ‘Greenhouse gases contribute to climate change, which is projected to cause more extreme weather with higher temperatures, changing rainfall patterns, greater storm frequency and rising sea levels’, and calls for ‘sustainable procurement and supply chain management’.²⁵



Transport for NSW ‘Environment and Sustainability Policy’ (2015)

In 2015 Transport for NSW released its ‘Environment and Sustainability Policy’²⁶ which builds on the 1988 Transport Administration Act that calls for ‘the delivery of transport services in an environmentally sustainable manner’. The ‘Environment and Sustainability Policy’ states a commitment to ‘delivering transport services, projects, operations and programs in a manner that balances economic, environmental and social issues to ensure a sustainable transport system for NSW’ - achieved through measures such as ‘Procuring, delivering and promoting sustainable transport options that promote value for money’.



²⁴ NSW Government (2013) Roads and Maritime Strategy and Delivery Plan 2013, Roads and Maritime Services, NSW Government.

²⁵ NSW Government (2013) Transport Environment and Sustainability Policy Framework, Transport for NSW, NSW Government.

²⁶ NSW Government (2015) Environment and Sustainability Policy, Transport for NSW, Sydney.

4.4 Projects using IS Rating tool in New South Wales

Transport for NSW has a mandate that projects over \$50 million are to receive an 'IS Rating' and the table below provides the details for some of the early projects.²⁷ New South Wales has 21 projects which have committed to using the IS rating tool. Of those, six have been certified, five at rating type 'Design V1' and one 'As Built V1', receiving three commended, one 'Excellent', and two 'Leading' rating levels.²⁸

Table 1: IS Ratings for a selection of Transport for NSW projects

Project Name	Value	Rating Type	Status as of March 2016
CBD and South East Light Rail	\$1. 6 billion	Design V1	Registered
Sydney Metro Northwest - Operations, Trains and Systems.	\$2.5 billion	Design V1	Registered
Northconnex	\$2.65 billion	Design V1	Registered
Sydney Metro Northwest - Tunnel and Station	\$1.15 billion	Design V1	'Leading'
Northern Beaches Hospital Connectivity and Network Enhancement Project	\$380 million	Design V1	Registered
Sydney Metro Northwest - Surface and Viaduct	\$340 million	Design V1	'Leading'
Westconnex M4 Widening	\$310 million	Design V1	Registered
Wynyard Walk	\$154 million	Design V1	'Commended'
		As Built V1	Registered
Sydney Metro Northwest - Early Works	\$80 million	As Built V1	'Commended'
Wickham Transport Interchange Project	\$68 million	Design V1	Registered

²⁷ Sprigg, A, (N/A), 'Introduction to ISCA and IS rating' https://www.engineersaustralia.org.au/sites/default/files/anthony_sprigg_presentation.pdf.

²⁸ ISCA. 2014. *Sydney Metro Northwest*. [ONLINE] Available at: <http://www.isca.org.au/is-rating-scheme/ratings/rating-directory/item/49-sydney-metro-northwest>. [Accessed 22 March 2016].

Sydney Metro Northwest

The overall operation is an 8.3 billion project, and is ‘... *Australia’s biggest public transport project, and a priority infrastructure investment for the NSW Government.*’ The same project has been registered under four packages of work: early works; tunnel & station civils; surface & viaducts civils; and operations, trains and systems. Three of these packages have been certified, with tunnel and station civils and surface and viaduct civils receiving a rating of ‘Leading’, the highest ISCA rating a project can receive. The certification was given sept 2015 and job highlights include;

‘The TJHD team has excelled in sustainability management and systems, achieving maximum scores in five management systems credits: Sustainability leadership and commitment, Management system accreditation, Risk and opportunity management, Organisational structure roles and responsibilities as well as Inspection and auditing. TJHD reduced emissions by 24 per cent through initiatives including the use of B5 blended fuel, hybrid excavators, fuel efficient training and awareness programs, design optimisation and reduced electricity consumption. Closed-loop recirculation networks reduced water use by 37 per cent from the reference footprint. The TJHD design substituted more sustainable components enabling a 45 per cent reduction in ecopoints for its materials score. The design also provided best practice flood immunity to protect station evacuations from the probable maximum flood event through a flood management protocol, barriers, pumps and sumps.’²⁹

Wynyard Walk

The Wynyard Walk was registered twice, by Transport for NSW and Thiess. The project received a rating level at stages ‘Design V1’ and ‘As Built V1’, both times its rating level was ‘Commended’. Thiess’s project Director is quoted to say “*Thiess appreciates the importance of this high-profile project and has decided to pursue an IS rating to promote and achieve recognition of excellence in sustainable design and construction.*”³⁰ Key features listed on TfNSW website include the reuse or recycling of more than 90% of the materials from the demolition of 30 and 36-38 Clarence Street.³¹

²⁹ISCA (2014) IS Ratings Directory Advanced Search Infrastructure Sustainability Council of Australia, <http://www.isca.org.au/resources/news/item/565-2015-sustainability-in-infrastructure-award-winners-announced>

³⁰ISCA (2014) IS Ratings Directory Advanced Search Infrastructure Sustainability Council of Australia, <http://www.isca.org.au/is-rating-scheme/ratings/rating-directory/item/530-wynyard-walk-asbuilt>

³¹ Transport for NSW (2015) ‘Wynyard Walk’ http://www.barangaroo.com/media/226903/wynyard%20walk_project_update_june_2015.pdf.

North West Rail Link Tunnel and Station

The civil work on the North West Rail Link Tunnel and Station was registered by Thiess John Holland Dragados, its other key stakeholder is TfNSW, this project will deliver Australia's longest railway tunnel. Quotes from TfNSW regarding the importance of the IS rating tool were taken from ISCA's:

*'Transport for New South Wales is committed to integrating sustainability into the development of the CBD and South East Light Rail (CSELR) project. The CBD and South East Light Rail project is expected to deliver environmental and social benefits worth \$308 million including reductions in air and noise pollution, a reduction in greenhouse gas emissions and increased levels of active travel. TfNSW recognises the importance of the IS rating tool. The IS rating scheme provides the opportunity to benchmark sustainability performance against other infrastructure projects and facilitates thorough stakeholder engagement to ensure a project has a positive impact on local communities.'*³²

*'TfNSW requires its contractors to register with the ISCA IS rating scheme and achieve a high rating using the IS rating tool. Adoption of the tool enables NWRL to holistically collate the environmental and social outcomes of its three major contracts and early works package within a nationally recognised and measurable framework. The processes and outcomes embedded in the tool support the NWRL sustainability objectives, while promoting innovation within each of the contracts.'*³³

A significant quote comes from the Deputy Project Director of Customer Strategy and Planning for the North West Rail Link who is quoted on the ISCA website **'TfNSW requires its contractors to register with the ISCA IS rating scheme and achieve a high rating using the IS rating tool.'**³⁴

Sydney Metro Northwest Early Works

The 'Sydney Metro Northwest Early Works' project has been certified and given a rating level 'Commended' for the rating type 'As Built V1'. There were no rating highlights provided on the ISCA website, although in the project description it was specified that *'Areas of focus for the project in relation to sustainability management and enhancement included procurement, waste management, heritage protection and stakeholder participation'*.³⁵

³² ISCA (2014) IS Ratings Directory Advanced Search Infrastructure Sustainability Council of Australia, <http://www.isca.org.au/is-rating-scheme/ratings/rating-directory/item/292-cbd-and-south-east-light-rail>

³³ ISCA (2014) IS Ratings Directory Advanced Search Infrastructure Sustainability Council of Australia, <http://www.isca.org.au/is-rating-scheme/ratings/rating-directory/item/49-sydney-metro-northwest>

³⁴ ISCA. 2014. Sydney Metro Northwest Early Works. Available at: <http://www.isca.org.au/is-rating-scheme/ratings/rating-directory/item/398-sydney-metro-northwest-ew>. [Accessed 22 March 2016].

³⁵ ISCA. 2014. Sydney Metro Northwest Early Works. Available at: <http://www.isca.org.au/is-rating-scheme/ratings/rating-directory/item/398-sydney-metro-northwest-ew>. [Accessed 22 March 2016].

5. Summary of Findings for Queensland

The overarching policy released by the Queensland government is the 'Queensland Procurement Policy', the first principle is 'We drive value for money in our procurement...' in which agencies would consider the 'non-cost factors such as fitness for purpose, quality, delivery, service, support and sustainability impacts.' Also the need for 'procurement to advance the government's economic, environmental and social objectives...', using their purchasing power to drive efficiency. There is a 'State Procurement Plan 2014-2018' which is a forward from the minister, no specific targets or plans are specified but states that procurement aims to 'sustain and innovate'. Another guideline is the 'Sustainable Procurement Practice Guidelines' which is based on the British Standards and utilising the 'triple bottom line' as their sustainable procurement dimensions. Within the document is a table of 'Questions to consider' which addresses the necessity of the project being procured and questions for the contractor to consider in the pre-procurement stage. There are other supporting tables/questions regarding the impact of energy, climate change, and waste.

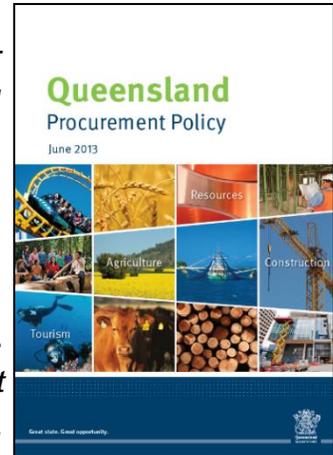
Transport and Main Roads (TMR) has an 'Environmental and Heritage Policy & Strategy 2008-2013' which aims to 'avoid, minimise and mitigate' in a way that is financially feasible, again retreating the 'value for money'. A Sustainability framework has been released, this report suggests considering a variety of options such as, the use of alternatives to non-renewable resources, reducing greenhouse gas emissions, looking for efficiencies in transport.

Queensland's had five projects involved with IS rating tools. Two have been certified and both received a rating score of Excellent, the environmental and sustainability manager for McConnell Dowell used the IS rating scheme a mechanism to 'ensure sustainability targets are realistic and achievable.' For one of Gold Coast Light Rail projects, 104000 tCO₂e was reduced through embodied carbon reductions. On the same Tenix project, 20,700 tCO₂e was reduced through the implementation of carbon and energy reduction strategies, and 3,149 tCO₂e was saved through optimised design and use of recycled aggregates.

5.1 Summary of Low Carbon Procurement Policies by Queensland Government

Queensland Procurement Policy (2013)

The *Queensland Procurement Policy* released in 2013 by the Department of Housing and Public Works is an ‘overarching policy for the procurement of goods and services, including construction... All agency employees are required to be aware of, and comply with this policy.’³⁶ The Policy is set out under six principles for the procurement of goods and services. The principle relating to low carbon is listed below;



- *Principle One: We drive value for money in our procurement. (recommending that agencies should consider the ‘Non-cost factors such as fitness for purpose, quality, delivery, service, support and sustainability impacts’.)*
- *Principle Three: We are leaders in procurement practice – we understand our needs, the market, our suppliers and have the capability to deliver better outcomes, and We ensure efficient and effective use of valuable resources.*
- *Principle Four: We use our procurement to advance the government’s economic, environmental and social objectives and support the long-term wellbeing of our community’ (requesting that agencies ‘use their best endeavours to do business with ethical and social responsible suppliers, and seek to influence the supply chain in this regard. This may include considering the sustainability credentials of suppliers, to ensure they are ethically and socially responsible’.)*

Queensland State Procurement Plan 2014-2018 (2013)

The ‘State Procurement Plan 2014-2018’³⁷ defines itself as ‘... a succinct plan and brings the *Queensland Procurement Policy 2013 (and its principles)* to life.’ The procurement plan specifies that years 2016-2018 aim to ‘*sustain and innovate*’ although there is no specifications regarding sustainable procurement or the reduction of carbon.

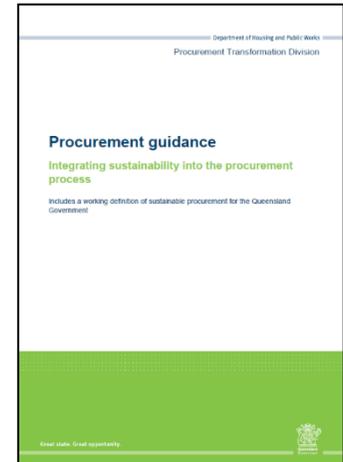


Procurement Guidance - Integrating Sustainability into the Procurement Process (2014)

³⁶ Queensland Government (2013) ‘Queensland Procurement Policy’ <https://www.qld.gov.au/gov/procurement-policy>

³⁷ Mander, T. (2014) *State Procurement Plan 2014-2018*, Queensland Government accessed from: <http://www.hpw.qld.gov.au/SiteCollectionDocuments/StateProcurementPlanJune2014.pdf>

The 'Procurement Guidance – integrating sustainability into the procurement process'³⁸ was released, and there are similarities between this and Western Australia's document 'Sustainable Procurement Practice Guidelines' with both have been developed inline with the British Standards. The Queensland procurement guidelines introduces the sustainable procurement dimensions; social, economic and environmental. For each it provides an overview and desirable outcome/benefits. Those relating to carbon reduction have be summarised below.



Environmental

- Energy use, and type of energy utilised; (Ene-1, Ene-2, Ene-3)
- Volume and type of waste; (Was-1)
- End-of-life options, e.g. recyclability, resource recovery (Was-2)
- Level of toxic and hazardous substances/waste; and (Mat-1, Was-1)
- Noise, pollutants and emissions. (Dis-1, Dis-2, Dis-4)
- improved air quality by reducing or eliminating emissions to air (e.g. Greenhouse gases, such as carbon dioxide, and other pollutants);
- reduced demand on raw materials and natural resources (e.g. sustainable forestry, biodiversity);
- reduced use of energy (e.g. energy efficiency, use of renewable energy); (Ene-1, Ene-2)
- reduced waste and by-products (e.g. recycling and waste prevention)

Procurement Planning

The Queensland procurement guidelines state that '*sustainable procurement should be integrated into the overall procurement planning process. It is essential that sustainability is considered early in the procurement process, as later in the procurement cycle there is progressively less scope to add value through improved sustainability outcomes.*'³⁹ The document divides the process into three areas, demand analysis, sustainably impact analysis and supply market analysis. Instruction relating to carbon reduction in these areas are summarised below and in a table accessed on page 11 of the document⁴⁰;

Demand Analysis

³⁸ The State of Queensland (2014) 'Integrating sustainability into the procurement process' Department of Housing and Public Works <http://www.hpw.qld.gov.au/SiteCollectionDocuments/ProcurementGuideIntegratingSustainability.pdf>

³⁹ *ibid.*

⁴⁰ *Ibid.*

- Avoid or reduce consumption, by finding other alternatives.
- Identify whether there is a more sustainable alternative readily available (Mat-2)

Table 2: Demand analysis

Questions to consider
<p>1. Do we really need to purchase this good or service, or can the need be met in another way?</p> <ul style="list-style-type: none"> • Is a suitable good/service already available within the organisation? • Can existing assets be refurbished, repaired or upgraded to meet the need? • Are there other options for meeting this need (e.g. reuse, borrow, swap)? • Can the need be met in partnership with another organisation? • What would avoid the need for this good/service?
<p>2. Can we reduce the quantity or scale of the goods or service whilst achieving the same service delivery?</p> <ul style="list-style-type: none"> • How do the goods or services contribute to service delivery? Are we automatically replacing based on past procurement patterns? • Are specifications based on actual requirements, ensuring that they are not over-specified? • Are improved technology options available? • Are there options for behaviour change in relation to consumption of this goods or service?
<p>3. Can alternative goods or service be used to meet this need?</p> <ul style="list-style-type: none"> • Is there another more sustainable good or service available that can serve the same purpose? Have there been any technology improvements? • Could a service be used to meet the need instead of a good?
<p>4. Can the goods/service be specified to have improved sustainability outcomes, including being able to serve a useful purpose after its initial use?</p> <ul style="list-style-type: none"> • Can the goods or its key components be reused, refurbished, repaired, recycled, composted? • What specifications could be included to reduce the use of resources (such as energy, water or consumables) during the useful life of the goods?
<p>5. What information is available regarding sustainably-preferable options for this purchasing requirement? Where can more information be obtained about suitable alternatives?</p> <ul style="list-style-type: none"> • Is there an environmental officer/sustainable procurement expert within the organisation? • What information is provided by suppliers? • What external sources of information are available, (e.g. other government bodies, trade organisations, NGOs, research institutes)?

Procurement Guidance – Value for Money (2000)

The ‘*Procurement Guidance – Value for Money*’⁴¹ was released by the procurement transformation division in 2000 with updates made in 2014, it is a guide to considering value for money in procurement. One of the three factors to be considered when assessing a



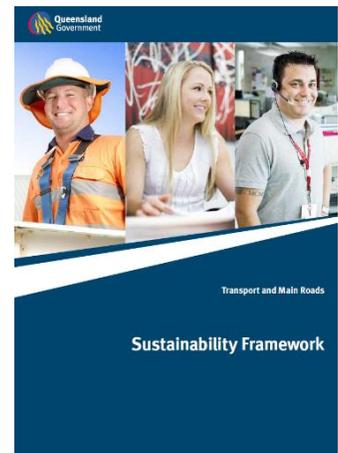
⁴¹ Department of Housing and Public Works (2014) ‘Procurement guidance, Value for Money’ Queensland Government <http://www.hpw.qld.gov.au/SiteCollectionDocuments/ProcurementGuideValueForMoney.pdf>

procurements value for money is the ‘*Non-cost factors such as fitness for purpose, quality, deliver, service, support and **sustainability impacts***’. There is no guidance specifically on what the non-cost factors of sustainability impacts are.

5.2 Summary of Low Carbon Procurement Policies by Queensland Transport Agencies

Transport and Main Roads – Sustainability Framework (2008)

The Queensland Department of Transport and Main Roads (TMR) has an ‘*Environment and Heritage Policy & Strategy 2008-2013*’⁴² which aimed to ‘*avoid, minimise and mitigate*’ in a way that was financially feasible (reiterating the commonwealth requirement of ‘value for money’). A second strategy ‘*Transport and Main Roads Strategic Plan 2014-2018*’⁴³, and another ‘*Transport and Main Roads Strategic Plan 2015-2019*’⁴⁴ was also available. Neither of the current plans (2014-2018, 2015-2019) provided low carbon requirements for procurement.



The ‘Sustainability Framework’ has been recently update, its self-defined purpose is to achieve sustainability as an organisation within industry and community. The sustainability framework aims to bring about a positive change in five dimensions, namely: society, environment, business, stakeholders and TMR people. Those specific to a low carbon lifestyle are specified below.

The report suggests considering:

- the use of alternatives to non-renewable resources
- the interaction of the transport system and human health impacts
- minimising transports contribution to global climate change.
- limiting pollution and waste consumption of resources
- looking for efficiencies in our transport operations

⁴² Department of Main Roads (2008) Environment and Heritage Policy % Strategy 2008-2013 Queensland Government <http://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Environment-management/Main-Roads-Environmental-Management-Policy/mr-ehps-2008-13.pdf?la=en>

⁴³ Transport and Main Roads (2014) Transport and Main Roads Strategic Plan 2014-2018 Queensland Government <http://www.tmr.qld.gov.au/-/media/aboutus/corpinfo/Publications/stratplan/strategicplan201418.pdf?la=en>

⁴⁴ Transport and Main Roads (2015) Strategic Plan 2015-2019 Queensland Government <http://www.tmr.qld.gov.au/-/media/aboutus/corpinfo/Publications/stratplan/strategicplan201519.pdf?la=en>

- reducing greenhouse gas emissions
- building a transport system that is resilient in face of long term environment and resource impacts, such as oil vulnerability and climate change.

5.3 Projects using IS Rating tool in Queensland

Queensland's had five projects involved with IS rating tools. Two have been certified and both received a rating score of Excellent, the environmental and sustainability manager for McConnell Dowell used the IS rating scheme a mechanism to 'ensure sustainability targets are realistic and achievable.'

Table 3: IS Ratings for a selection of Transport for Qld projects

Project Name	Value	Rating Type	Status
Gateway Upgrade North	\$1,16 billion	Design V1	Registered
Gold Coast Light Rail	\$437 million	As Built V1	'Excellent'
Gold Coast Light Rail Operations	\$420 million	Operation	Registered

Gold Coast Light Rail

This project received a rating of 'Excellent' for a rating type 'As Built V1'. The environment and Sustainability Manager commended that 'The IS rating scheme has challenged the way in which the Gold Coast light rail project procures materials. A greater emphasis on engaging potential suppliers prior to releasing packages has helped ensure sustainability targets are realistic and achievable. We have incorporated sustainability right from the onset throughout the design, construction and delivery stages. This has allowed the project to go beyond the status quo and identify opportunities to minimise material usage, along with associated stakeholder and energy impacts'.⁴⁵ The ISCA website lists a number of highlights of the sustainability performance of the project including a 55 per cent improvement in embodied carbon based on a reference design and a 104 ktCO₂e reduced through embodied carbon reductions.

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⁴⁵ ISCA. 2014. Gold Coast Light Rail. <http://www.isca.org.au/is-rating-scheme/ratings/rating-directory/item/51-gold-coast-light-rail>.

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