Transport Environment and Sustainability Policy Framework

JUNE 2013

NSW GOVERNMENT | Transport for NSW

Table of Contents

1. INTRODUCTION

1.1   Transport for New South Wales

Transport for New South Wales (TfNSW) aims to be a world class transport authority, delivering safe, reliable and integrated transport for the people of NSW. TfNSW is responsible for managing the transport system in NSW. Decision making for planning and policy is centralised within TfNSW whilst operating agencies RailCorp[1], Roads and Maritime Services (RMS) and State Transit Authority (STA) focus on service delivery.

The Transport Environment and Sustainability Policy Framework (the Framework) is a collective and coordinated approach to deliver the NSW Government's environmental and sustainability agenda across the Transport cluster (TfNSW, RailCorp, RMS and STA). The Framework is outcomes based and seeks to improve Transport's environmental sustainability performance.

TfNSW acknowledges the three spheres of sustainability: environment; social; and economic. The Framework focuses on the conservation and enhancement of air, water, soils, energy, resources and other factors in the environment needed for biodiversity and our communities.

Framework elements are summarised below and presented in more detail later in this report.

Transport for NSW Environment and Sustainability Policy Statement					
Transport for NSW Sustainability Definition					

Transport for NSW Sustainability Aspiration

Sustainability Guiding Principles

Consider whole of life	Integrated planning	Encourage innovation	Customer focus	Partner with supply chain	Measure and report on performance

Environment and Sustainability Themes

Energy management	Pollution control	Climate change resilience	Resource management	Biodiversity	Heritage	Liveable communities	Corporate sustainability

Environment and Sustainability Indicators and Targets
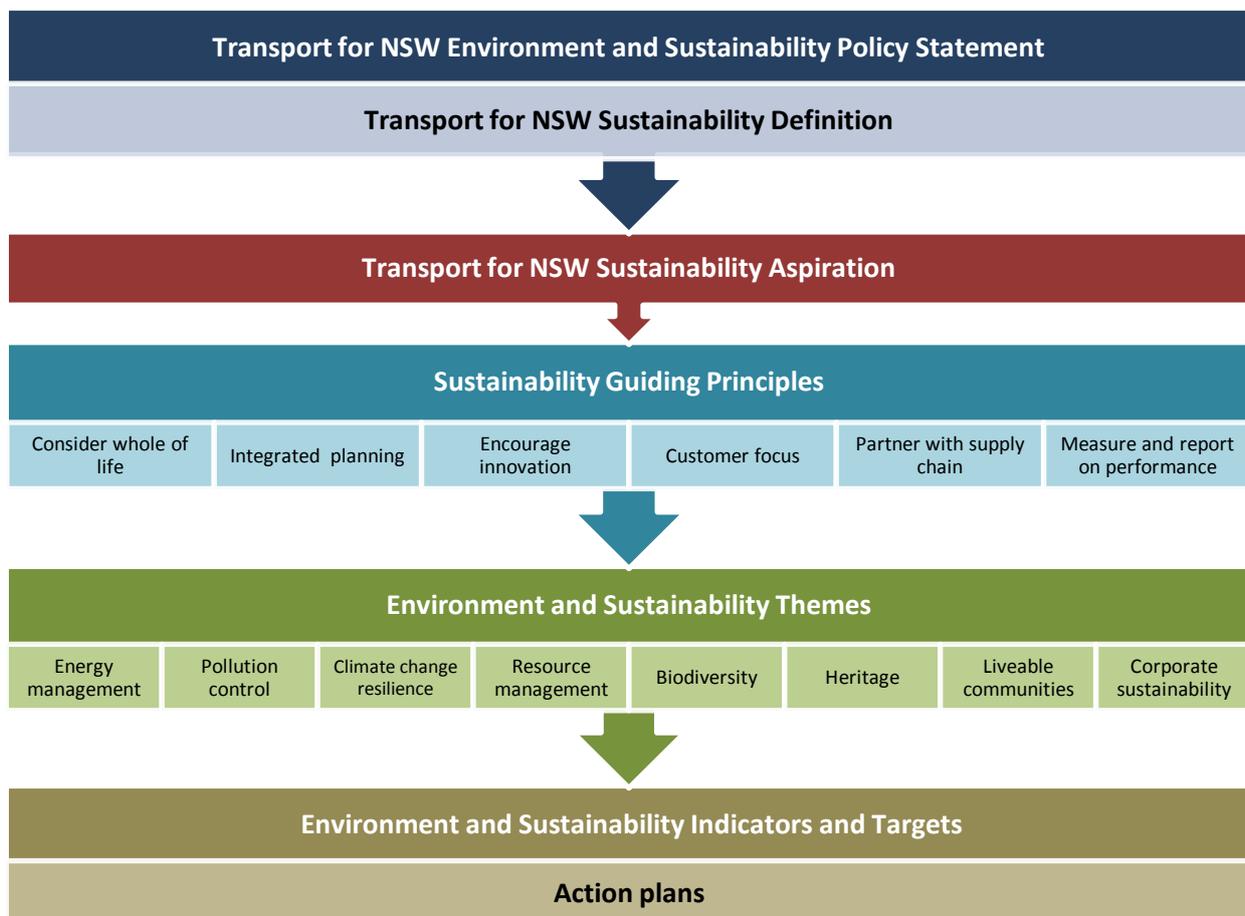
Action plans

Figure 1 - Transport Environment and Sustainability Policy Framework

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[1] From 1 July 2013 RailCorp will be split into two new bodies Sydney Trains and NSW Trains, separating urban and regional rail services.

The Framework addresses 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.

It comprises governance arrangements that support the continuous improvement of environmental sustainability performance, including targets, measures and action plans to deliver positive environmental outcomes. The Framework provides an integrated picture of the portfolio's objectives, targets, actions and achievements to minimise transport's impact on the environment and takes relevant *NSW 2021* goals into account.

1.2   Regulatory and policy framework

1.2.1   Legislation

The Framework is derived from state and commonwealth legislation. Key legislation and policies relevant to Transport's environment and sustainability effort is listed in *Attachment 1*.

The *Transport Administration Act 1988* establishes the structure for the governance of the delivery of transport services. The Act sets common objectives and service delivery priorities for public transport agencies (TfNSW, RailCorp, RMS, and STA). One such objective is *to promote the delivery of transport services in an **environmentally sustainable** manner*.

The Act further establishes ecologically sustainable development as an organisational objective for public transport agencies (RailCorp and STA) and requires each to conduct their operations in compliance with the principles of ecologically sustainable development contained in section 6 (2) of the *Protection of the Environment Administration Act 1991.*

1.2.2   Policies

NSW 2021: A Plan to Make NSW Number One sets the NSW Government's agenda. It provides direction to the public sector by setting priorities structured according to goals. The following environmental goals are directly relevant to TfNSW.

Goal 22:
Protect our natural environment

Increase renewable energy (20% renewable energy by 2020)

Goal 23:
Increase opportunities for people to look after their own neighbourhoods and environments

Increase recycling targets to meet the 2014 NSW waste recycling targets

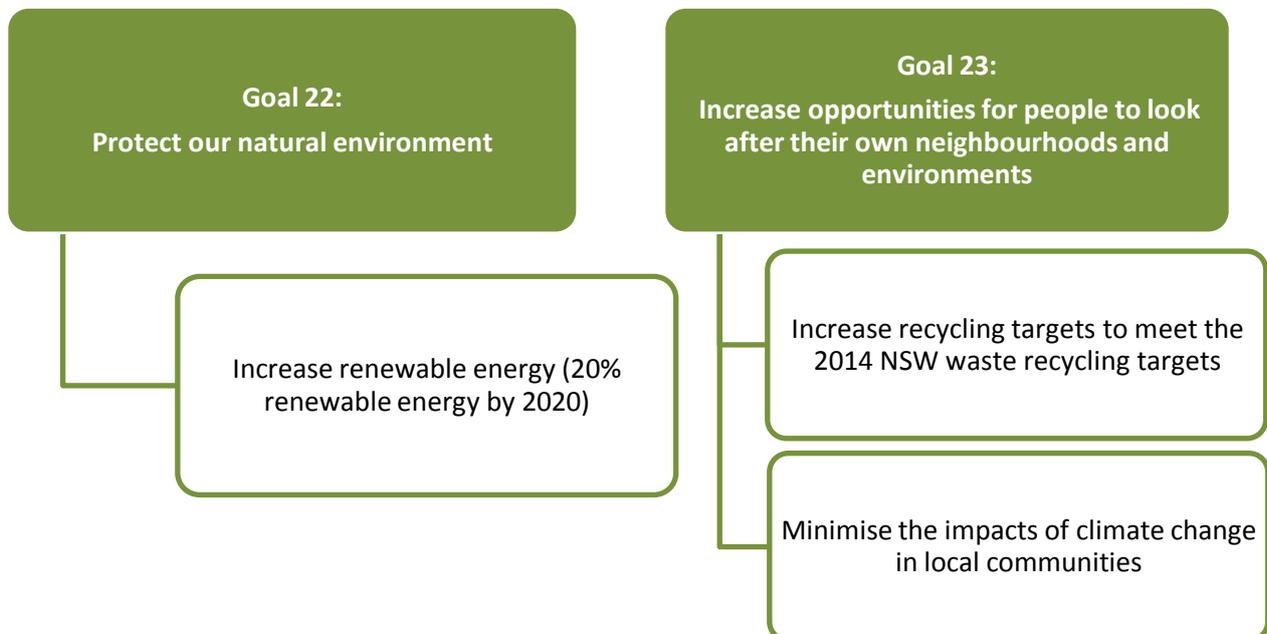Minimise the impacts of climate change in local communities

Figure 2 - Environmental Goals from NSW 2021
Source: *NSW 2021 a Plan to Make NSW Number One*

TfNSW is also taking the lead in the delivery of the following *NSW 2021* goals related to enhanced delivery of transport services and delivery.
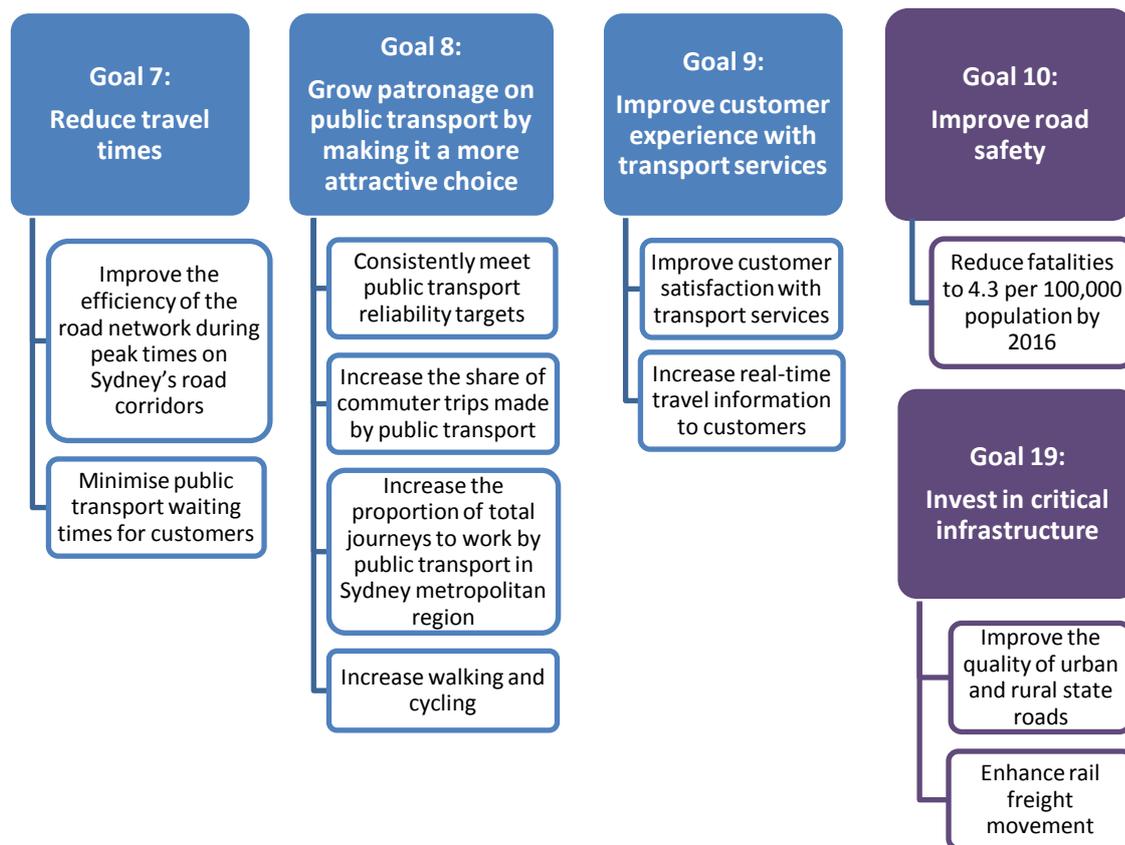

Figure 3 - Transport focussed Goals NSW 2021
Source: *NSW 2021 a Plan to Make NSW Number One*

Goals 7 and 8 can help to achieve further environmental outcomes by way of reduced vehicle emissions and improved air quality. Goal 19 provides opportunities to enhance environmental and sustainability outcomes in improving the quality of urban and rural state roads and enhancing rail freight movement.

Transport for NSW Corporate Plan 2012-2017 Connections commits to promoting transport systems that meet our present social and economic needs without compromising the quality of life of future generations. An important part of this is minimising the impact of transport on our natural environment now and into the future.

The *NSW Long Term Transport Master Plan* (Master Plan) is the guiding transport planning and policy document supporting *NSW 2021*. The Master Plan acknowledges that meeting community expectations in environmental sustainability is a state-wide challenge. To meet this challenge, Transport will promote sustainability and protect the environment in its planning, decision making and project delivery. Initiatives to manage and minimise the environmental impacts of our transport system, include:

- a co-ordinated approach to addressing environmental issues at all levels of transport planning
- sustainable design guidelines for transport projects
- better ways to assess the environmental benefits of projects.

Specific *Master Plan* actions to deliver environmental sustainability outcomes are addressed in the following table.

Challenge	Action
Enhancing environmental and sustainability outcomes	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
Improving air quality, efficiency of energy use and reducing greenhouse gas emissions	Develop an electric vehicles road map
	Consider air quality impacts of transport projects
	Restructure motor vehicle registration charges
Boosting our resilience to climate change and natural disasters	Assess transport climate resilience
Noise abatement	Mitigate noise from road projects
	Mitigate noise from rail projects
	Mitigate noise from ports
	Mitigate noise from aircraft
Integrating land use and transport planning	Support Department of Planning and Infrastructure in delivering urban renewal
	Encourage transit-oriented development
	Implement minimum standards for transport and land use integration
	Deliver new and improved public transport, walking, cycling and road links to growth centres across NSW
Managing demand and making better travel choices	Support the development of travel access guides
	Pilot transport management associations
	Promote workplace travel plans

Figure 4 - NSW Long Term Transport Master Plan actions to deliver environment and sustainability outcomes
Source*: NSW Long Term Transport Master Plan*

The *Draft Freight and Ports Strategy* has been prepared to deliver a freight network that effectively supports NSW economic growth whilst balancing freight needs with community and environment considerations. A Rail Noise Steering Committee comprising TfNSW, RailCorp, NSW Department of Planning and Infrastructure, Environment Protection Authority and Ministry of Health provides guidance and assistance in the management and implementation of TfNSW's Strategic Noise Action Plan for mitigating and managing noise.

Transport has also been instrumental in assisting the Office of Environment and Heritage prepare the whole-of-government *Government Resource Efficiency Policy* (GREP). It is anticipated that when finalised later this year, the GREP will comprise targets for energy use, water use and waste generation.

1.3   Transport task

To understand Transport's contribution to the environment it is important to quantify the scope of the transport task. *New South Wales Transport Facts 2012*[2] presents the road transport task (passenger vehicles, motorcycles, light commercial vehicles, rigid trucks and buses) and rail transport task (passenger and freight) as in the following table.

Road Transport	
Distance travelled	60 billion vehicle kilometres
Passenger task	92 billion passenger kilometres
Freight	671 million tonnes
Freight task	43 billion tonne-kilometres

Rail Transport	
Passengers	309 million persons
Passenger task	6 billion passenger kilometres
Freight	150 million tonnes
Freight task	45 billion tonne-kilometres

Figure 5 - Road and Rail Transport Task 2012
Source: *NSW Transport Facts 2012,* Centre for Transport Energy and Environment

The energy requirement to meet this road and rail transport task is 350 PJ-FFC[3], which is equivalent to the average annual energy use of around 13,318,112 NSW homes[4].
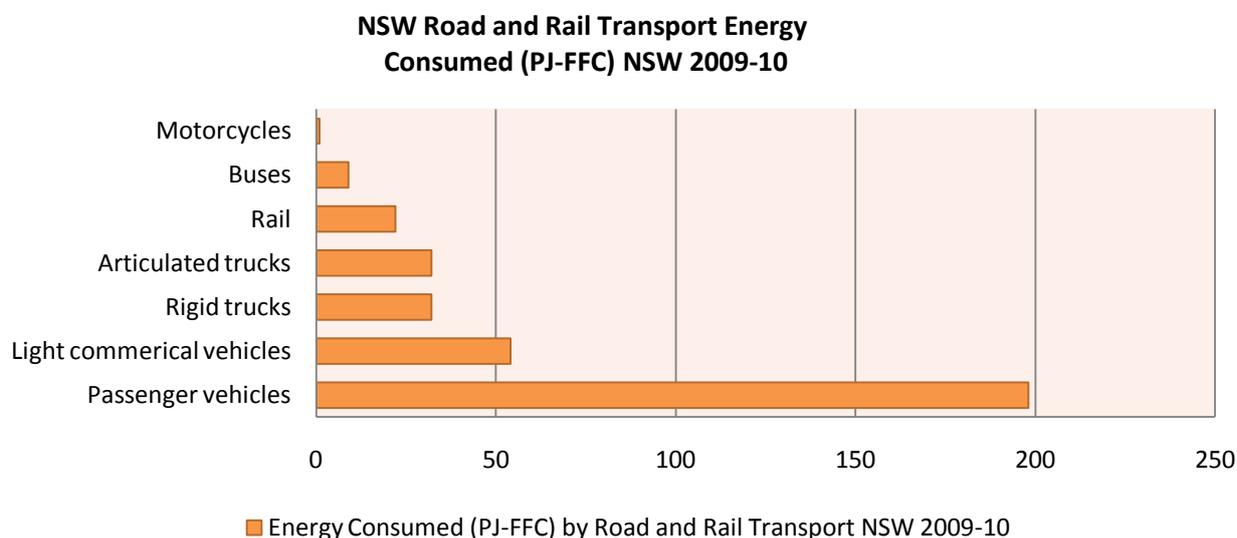
**NSW Road and Rail Transport Energy
Consumed (PJ-FFC) NSW 2009-10**

■ Energy Consumed (PJ-FFC) by Road and Rail Transport NSW 2009-10

Figure 6 - Energy consumed by NSW road and rail transport
Source: *NSW Transport Facts 2012,* Centre for Transport Energy and Environment

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[2] Centre for Transport Energy and the Environment, *New South Wales Transport Facts 2012*, Adam Pekol Consulting
[3]   Petajoules (PJ = 10^{15} Joules) on a full fuel cycle (FFC). FFC refers to emissions resulting from end-use energy consumption plus those resulting from feed stock extraction and refining, power generation and energy distribution.
[4] An average NSW home uses 7,300 kWh of electricity a year www.savepower.nsw.gov.au

When energy use is expressed on a per passenger kilometre basis, it is apparent that passenger vehicles are the largest energy users. The energy intensity of the NSW road fleet is presented in the following figure.

Energy Intensity of Passenger Rail Services and Road Vehicles Undertaking a Passenger Task (MJ-FFC/pkm) NSW 2009-10
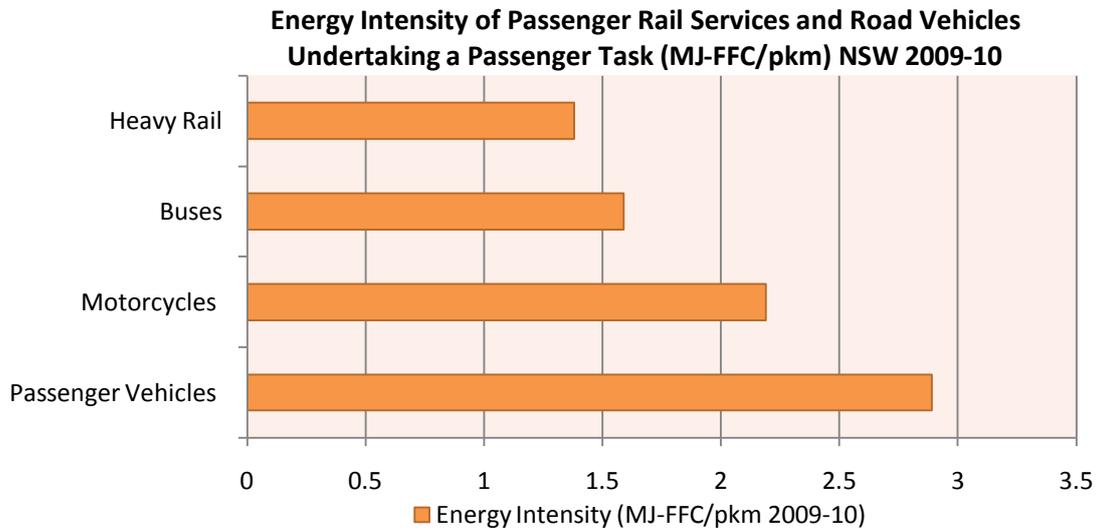

Figure 7 - Energy intensity of passenger task for NSW rail and road
Source: *NSW Transport Facts 2012*, Centre for Transport Energy and Environment

Non-renewable energy sources (petroleum, diesel, marine diesel and electricity generated from coal) are the principal sources of greenhouse gases (carbon dioxide, methane and nitrous oxide) as well as local and regional air pollutants (oxides of nitrogen, oxides of sulfur and particle emissions). Energy consumption also depletes non-renewable energy resources. Efficient use of energy can conserve depleting resources, drive down greenhouse gases and reduce air pollutants.

NSW produced 28% of the national total of greenhouse gas emissions in 2009-10[5]. Road and rail transport account for 22,572 Gigagrams[6] (Gg) of carbon dioxide equivalent (CO_2-e) and 1,276[7] Gg CO_2-e respectively.

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. Implications of climate change for TfNSW include:

- assessing if and when to adapt existing assets
- ensuring services can be effectively delivered in changing conditions
- including climate change resilience into projects
- establishing governance arrangements and strategies to enable the delivery of transport systems in conditions of greater climatic variation and to minimise exposure of known contributors to climate change.

This Framework aims to minimise transport's impact on the environment by establishing a process which identifies risk and attempts to minimise risk and reports on progress manage transport environment impacts.

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[5] NSW Environment Protection Authority, State of the Environment Report 2012.
[6] 22,572,000 tonnes
[7] 1,276,000 tonnes

2. TRANSPORT ENVIRONMENT AND SUSTAINABILITY POLICY FRAMEWORK

The Transport Environment and Sustainability Framework's governance arrangements support Transport for NSW (TfNSW) in meeting its state-wide challenge to promote sustainability and protect the environment in transport planning, decisions and projects. The Framework supports the *Transport for NSW Corporate Plan 2012-2017* in ensuring that the impact of transport on the environment is minimised. Framework elements comprise:

- Transport Environment and Sustainability Policy Statement (refer to *Attachment 2*)
- sustainability definition
- sustainability aspiration
- sustainability principles
- environmental and sustainability themes (refer to *Attachment 3*)
- indicators and targets
- action plan.

2.1 Framework development process

The Framework has been developed through:

- organisational reviews
- senior level interviews
- online survey of environment, planning and sustainability professionals
- workshops with key stakeholders
- peer review.

The Framework has also been built on a review of:

- global best practice – Transport for London; Hong Kong Mass Transit Railway and Metropolitan Transit Authority New York
- relevant state and federal plans and policies
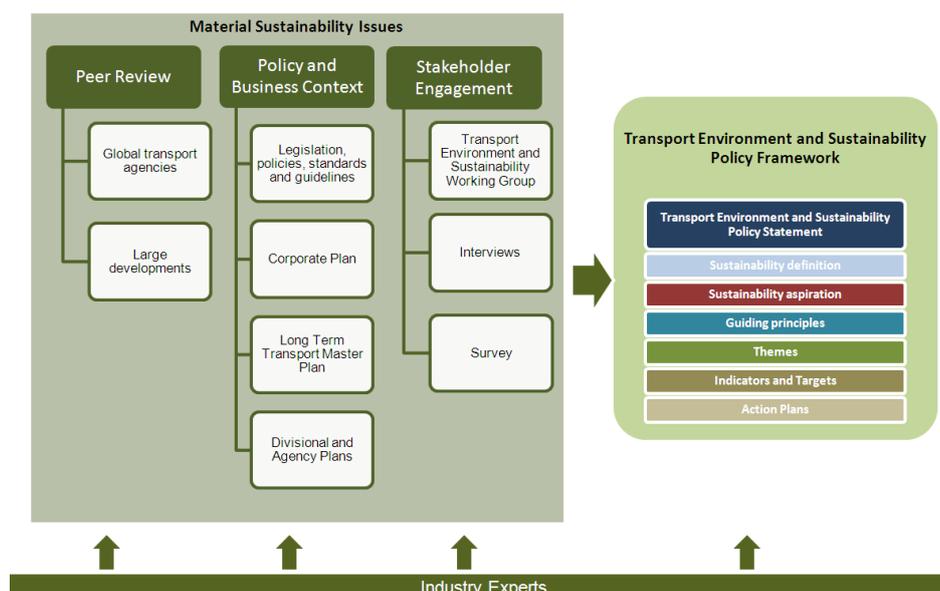- current business context of TfNSW.

Figure 8 - Developing the Transport and Environment Policy Framework

2.2 Elements of the transport environment and sustainability policy framework

2.2.1 Sphere of influence

The Framework reflects the degree to which TfNSW has an environmental impact, the level of influence and control TfNSW has, and the extent to which an impact occurs across the Transport cluster.

The Framework gives priority to those areas where it has the most impact on, and controls the environmental performance of the organisation – planning, designing, building and operating transport infrastructure as well as the operation of its corporate facilities. These are split into the following categories for reporting:

- Corporate – day to day operation and maintenance of head offices
- Operations and maintenance – delivering transport services, running operational buildings (e.g. stations and depots) and maintaining or upgrading existing transport infrastructure and operational buildings
- Construction of capital projects – constructing new transport infrastructure (e.g. roads and railways).

The tiers of activities over which TfNSW has control (the power to govern the financial and operating policies of an enterprise so as to obtain benefits from its activities) or influence (the power to participate in the financial and operating policy decisions of the entity but not the power to control those policies) are represented in the following figure.
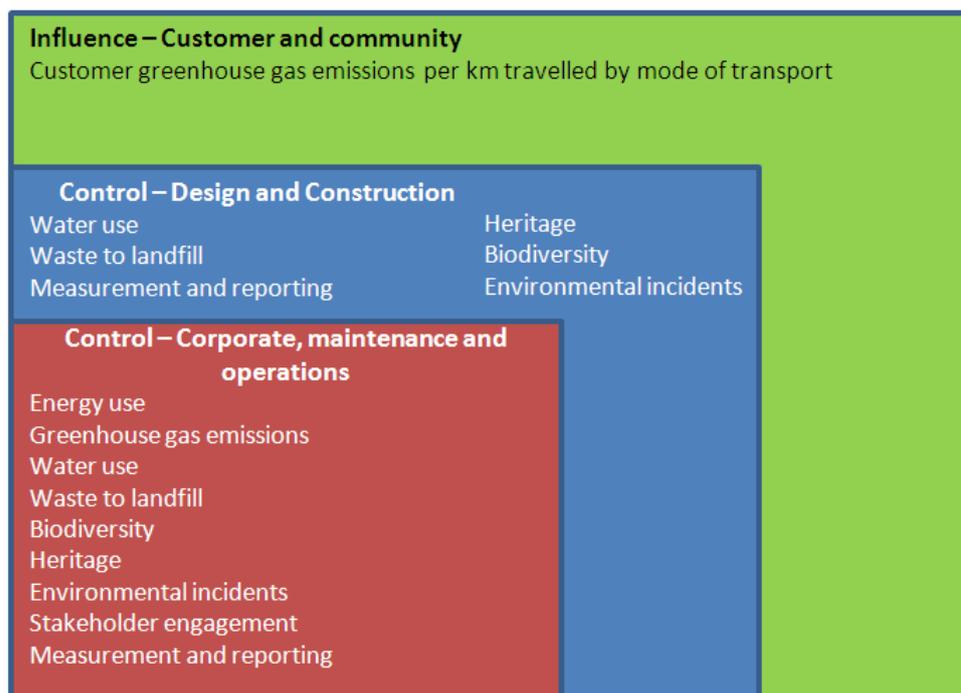

Influence – Customer and community
Customer greenhouse gas emissions per km travelled by mode of transport

Control – Design and Construction
Water use
Waste to landfill
Measurement and reporting
Heritage
Biodiversity
Environmental incidents

Control – Corporate, maintenance and operations
Energy use
Greenhouse gas emissions
Water use
Waste to landfill
Biodiversity
Heritage
Environmental incidents
Stakeholder engagement
Measurement and reporting

Figure 9 - Transport for NSW sphere of influence

2.2.2 Transport environment and sustainability policy statement

Transport's Environment and Sustainability Policy Statement confirms TfNSW's commitment to continual improvement in environmental performance. The policy statement, relevant to the environmental aspects of TfNSW's activities, is to be signed by the Director General and made publicly available. The Transport Environment and Sustainability Policy Statement can be found in *Attachment 2*.

2.2.3   Transport for NSW sustainability definition

The Transport for NSW Sustainability Policy focuses on the conservation and enhancement of air, water, soils, energy, resources and other factors in the environment needed for biodiversity and our communities.

Social sustainability (e.g. individual and community well-being, safety) and economic sustainability (e.g. economic prosperity, productivity) are equally important to TfNSW and are managed and reported separately from environmental effort.

2.2.4   Transport for NSW sustainability aspiration

To provide a world class sustainable transport system that meets customer expectations and optimises economic development for NSW.

2.2.5   Sustainability guiding principles

Six guiding principles guide and support decision making in selecting indicators to measure performance, and initiatives and actions to deliver improved performance.

- **Consider whole of life costing**
  When comparing investment decisions, Transport will consider the potential future costs such as operating costs, environmental and social costs as well as the initial capital expenditure in the assessment of the best option. This will ensure the true cost of the asset over its life time is fully considered.

- **Integrated planning**
  Transport will work with its partners to develop integrated transport services and infrastructure that meet the existing and future requirements of its customers

- **Encourage innovation**
  Transport will work with its partners to drive continual improvement in the environmental performance of transport infrastructure and services during the planning, design, building and operating. This will help to ensure we maintain best practice and deliver value for money.

- **Customer focus**
  Transport will consider the needs and expectations of its customers in the planning, design, building and operation of transport services and infrastructure. The customer is at the centre of our decision making.

- **Engage our partners**
  The successful delivery of transport services and infrastructure is dependent on the performance of Transport's partners. Transport aims to develop strong and trusted relationships with its partners to ensure transport services and infrastructure meets the expectations of its stakeholders – value for money, innovation and environmental performance.

- **Measure and report on performance**
  To drive continual improve in transport services and infrastructure, Transport will measure and report its progress against the sustainability indicators and targets. It will report internally to its Executive bi-annually and to its external stakeholders on a regular basis.

2.2.6 Environmental sustainability themes

Environment and sustainability themes focus on key environmental issues in a number of different areas. The themes support the framework through specific outcomes and objectives. The eight themes with their respective outcomes are presented below.

Energy management

To use Transport's energy sources more efficiently and reduce its greenhouse gas emissions
- Reduced energy consumption
- Reduced greenhouse gas emissions

Pollution control

To minimise air, noise, water and pollution from Transport's operations and construction
- Reduced pollution (air, noise, land and water)

Climate change resilience

To plan and deliver transport infrastructure and operations that are resilient to the effects of climate change
- Transport infrastructure and operation that is resilient to the effects of climate change

Resource management

To reduce water consumption in Transport's operations, maintenance, construction and management
- Reduced waste generation
- Reduced resource consumption

Biodiversity

To mitigate transport impacts on biodiversity
- Transport which conserves and enhances biodiversity

Heritage

To mitigate transport impacts on heritage
- Transport which conserves and enhances heritage

Liveable communities

To improve community experience through the delivery of transport which is integrated with surrounding land use activities
- Transport which is integrated with surrounding land-use activities
- Improved community experience with transport

Corporate sustainability

To establish governance arrangements for Transport which support resources efficiency and continuous improvement in environment and sustainability performance
- Governance arrangements that support continuous improvement of sustainability performance

Figure 10 - Transport for NSW Environmental Sustainability Themes

2.2.7   Environment and sustainability indicators and targets

Indicators and targets focus on those issues TfNSW has control of – that is, environment and sustainability in the context of planning, designing, building and operating transport infrastructure as well as the operation of its corporate facilities. The indicators and targets:

- enable TfNSW to monitor its overall environment and sustainability performance
- enable individual agencies to monitor their own environmental performance
- help drive continuous improvement in environmental performance across TfNSW.

The six indicators are supported by ten targets organised according to environment and sustainability themes. Each is outcome-focussed. The following tables provide detail on the indicators and base targets. Stretch targets are also prepared for those agencies which aim to exceed the base target. Refer to *Attachment 4* for detail on stretch targets.

This approach provides TfNSW with the flexibility to select the target that best represents the level of maturity in environmental measurement and performance. In some cases the baseline target comprises 'developing a baseline target' as there is a need to establish this data.

Targets will be reviewed annually and may be revised through future versions of the reporting framework. This enables TfNSW to measure and clearly report on the benefits and outcomes achieved during the year. Where relevant indicators and targets are split into three categories for reporting:

- Corporate
- Operations and maintenance
- Construction of capital projects.

Four indicators and targets apply across TfNSW. These capture corporate activities and are consistent with the Office of Environment and Heritage's draft *Government Resource Efficiency Policy*.

Theme	Ref	Indicator	Base Target
Energy Management	E1	Energy Efficiency	Achieve 4.5 NABERS base building and tenancy energy rating
	E4	% of renewable energy consumed (generated or purchased)	Purchase 6% Greenpower or generate 6% renewable energy
Resource Management	R1	% of waste sent to landfill	63% recycling of operations and corporate waste by 2014
	R3	% of water consumed from potable sources	Achieve 4.5 NABERS base building rating

Figure 11 - Transport for NSW Corporate Indicators and Targets

Targets and indicators which specifically relate to operations maintenance and construction activities are scoped for application by agencies within Transport.

Theme	Ref	Indicator	Scope	Base Target
Energy Management	E2	Energy Efficiency	Rail and bus operations and maintenance	Develop baseline: • energy consumption measured in GJ • greenhouse gas emissions tCO_2-e
	E3		Roads operations and maintenance	Develop baseline: • energy consumption measured in GJ • greenhouse gas emissions $tCO2$-e
	E5	Energy intensity of public transport	Rail and bus operations and maintenance	Develop baseline energy consumption (to be developed): • KJ/person/km travelled • KJ/passenger seat/km travelled
Pollution Control	P1	Environmental incidents that result in material harm to the environment	Operations, maintenance and Construction	Achieve zero pollution incidents that cause or threaten material harm to the environment as a result of non-compliance
Resource Management	R2	% of waste sent to landfill	Construction	76% recycling of construction & demolition waste by 2014
	R4	% of water consumed from potable sources	Operations & maintenance Rail/Bus/Road	Develop baseline of water consumption

Figure 12 - Transport for NSW Operations, Maintenance and Construction Indicators and Targets

The above base targets are in most cases supported by and consistent with reporting requirements established in the following policies and legislation:

- Draft Government Resource Efficiency Policy
- NSW 2010 A Plan to Make NSW Number One
- NSW Long Term Transport Master Plan
- Protection of the Environment Operations Act 1997
- National Greenhouse and Energy Report Scheme.

Further detail including reporting thresholds and exclusions provided in *Attachment 4*.

2.2.8   Action Plan

An action plan responding to the following qualitative (activity based) measures will be prepared to realise the implementation of the Framework.

Theme	Scope	Action
Energy Management	Corporate buildings	Establish practices to reduce greenhouse gas emissions from corporate buildings
	Construction of major roads and other projects	Identify greenhouse gas emission sources at project planning stage and measures taken, where cost effective, to reduce these emissions through design and construction processes
Pollution Control	Operations, maintenance and construction	Establish practices, where practicable to mitigate noise from transport
Climate Change Resilience	Planning, construction and operations	High level analysis of climate change risks to transport operations and projects
		Develop climate change risk and action plan
Resource Management	Construction	Implement best resource management practices. Where practicable establish a water balance study to reduce water consumption
Biodiversity	Planning, operations, maintenance and construction	Develop and implement practices that mitigate transport's impact on biodiversity
Heritage	Planning, operations, maintenance and construction	Develop and implement practices that mitigate transport's impact on heritage
Liveable Communities	Planning and operations	Develop and implement practices which integrate transport with surrounding land use activities
Corporate Sustainability	Operations and maintenance, construction and corporate	Measure and report on transport environment and sustainability annually

Figure 13 - Transport for NSW Environment and Sustainability Action Plan

The plan is consistent with the *NSW Long Term Transport Master Plan* action to develop and implement an environment and sustainability plan for transport.

The action plan is sufficiently flexible to allow individual agencies to accentuate and report on specific core business activities, which address the Transport Environment and Sustainability Policy Framework.

3. IMPLEMENTATION

The Transport Environment and Sustainability Policy Framework commits Transport for NSW (TfNSW) to set targets for improvement and performance, and to measure and appraise and report performance against these targets. This is in keeping with an *ISO 14001 Environmental Management System.*

Figure 14 - Transport Environment and Sustainability Policy Framework management approach

The Framework is implemented across the Transport cluster. This outcome-based approach harmonises Transport's environmental and sustainability effort, yet retains flexibility to allow for specific actions. Each operating entity, project office, and where applicable, divisions will prepare a unique action plan that addresses the established themes and their objectives. A Transport Environment and Sustainability Action Plan (the Action Plan) will be developed by consolidating input from across TfNSW.

The Environment and Sustainability Working Group will monitor, review and refine the transport indicators and targets on an ongoing basis, consistent with the performance management process. The membership list is at *Attachment 5*.

4. REPORTING

Transport for NSW's business activities are carried out by a network of agencies, some of these activities have environment and sustainability impacts. These range from the delivery of transport services, routine corporate operations and infrastructure planning through to external contractors and suppliers.

This arrangement presents a challenge with regard to identifying the extent and boundary of TfNSW's environment and sustainability data collection and reporting. The following figure shows Transport's sphere of influence, and is complimentary to *Figure 9* which identifies influence in the context of environment and sustainability outcomes.
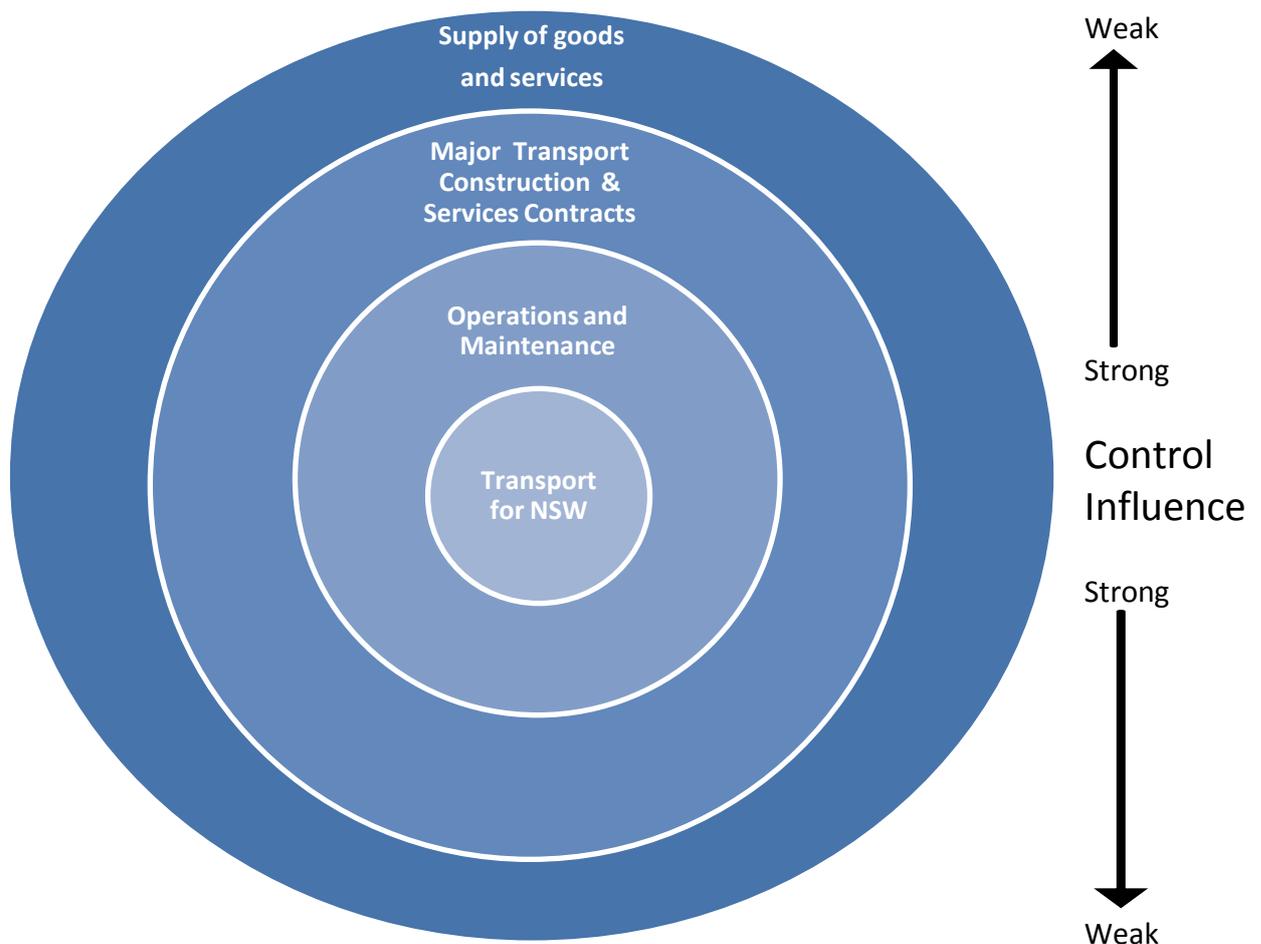

Figure 15 - Transport environment and data collection sphere of influence

The reporting process will be lead by the Policy and Regulation Division with support from TfNSW. This involves both divisions and operating agencies providing data on performance measures, along with actions to be implemented. The majority of indicators focus on achieving outcomes, which enable Transport to measure and give account of the benefits and results achieved in each reporting period.

The Framework and its accompanying indicators and targets demonstrate that the Transport cluster is proactively managing the environmental and sustainability impacts of its operations on the community and the environment. The Transport environment and sustainability performance report comprising progress against the targets (see *Figures 11* and *12*) and Action Plan will be produced and published on the TfNSW website.

The first Action Plan will comprise baseline data for the 2012 calendar year (or 2011/12 financial year), and key actions to be implemented by divisions and operating agencies in 2013 and 2014. Performance measures will be updated and reported annually consistent with established state and federal reporting timetables. The Action Plan will be also be reviewed and reported on annually. Transport, through the Transport Environment and Sustainability Working Group, will continue to review the reporting framework, performance measures and targets, and promote collaboration and provide opportunities to share best practice.

5. NEXT STEPS

The Transport Environment and Sustainability Policy Framework, and its accompanying indicators, targets and action plan demonstrate that the transport cluster is proactively managing the environment and sustainability impacts of its operations on the community and environment.

The Framework will be implemented across the transport cluster with an initial focus on corporate buildings, planning, construction, operations and maintenance, as well as support the delivery of Master Plan actions to deliver environmental sustainability outcomes. In future iterations the scope will be expanded to capture the specific activities of:

- Customer Experience
- Freight and Regional Development
- Planning and Programs
- Transport Services Divisions.

Membership of the Transport Environment and Sustainability Working Group will also be broadened to include representation from these divisions.

Attachments

Legislation and Key Policies

Legislation

Coastal Protection Act 1979

Contaminated Land Management Act 1997

Crown Lands Act 1989

Dangerous Goods (Road and Rail Transport) 2008

Environmental Planning and Assessment Act 1979

Environmentally Hazardous Chemicals Act 1985

Fisheries Management Act 1994

Heritage Act 1977

Local Government Act 1993

Marine Parks Act 1997

Marine Pollution Act 1987

Marine Safety Act 1998

Maritime Services Act 1935

Mine Subsidence Compensation Act 1961

National Parks and Wildlife Act 1974

Native Vegetation Act 2003

Noxious Weeds Act 1993

Pesticides Act 1999

Ports and Maritime Administration Act 1995

Protection of the Environment Administration Act 1991

Protection of the Environment Operations Act 1997

Protection of the Environment Operations (Noise Control) Regulation 2008

Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008

Protection of the Environment Operations (Waste) Regulation 2005

Roads Act 1993

Soil Conservation Act 1938

Sydney Water Act 1994

Sydney Water Catchment Management Act 1998

Threatened Species Conservation Act 1995

Transport Administration Amendment Act 2010

Transport Administration Act 1988

Waste Avoidance and Resource Recovery Act 2001

Water Act 1912

Water Management Act 2000

NSW policies

Draft Government Resource Efficiency Policy

M1999-08 NSW Government Procurement Policy

M2003-05 Government Waste Reduction and Purchasing Policy

M2005-03 Cleaner NSW Government Fleet

M2008-28 Sustainability Policy for NSW Government

Ministry of Transport Guidelines for the Development of Public Transport Interchange Facilities

New South Wales Guidance for Economic Appraisal including Guidance on Climate Change for Assets and Infrastructure Assessments, September 2010

NSW Government Environmental Management Systems Guidelines

SEPP (Infrastructure) 2007

SEPP (Major Development) 2005

SEPP No 55 - Remediation of Land

SEPP No 71 - Coastal Protection

SREP (Sydney Harbour Catchment) 2005

Commonwealth legislation

Aboriginal & Torres Strait Islander Heritage Protection Act 1984

Clean Energy Act 2011

Clean Energy Regulator Act 2011

Energy Efficiency Opportunities Act 2006

Environment Protection and Biodiversity Conservation Act 1999

National Environment Protection Council Act 1994

National Greenhouse and Energy Reporting Act 2007

Native Title Act 1993

Natural Heritage Trust of Australia Act 1997

Ozone Protection and Synthetic Greenhouse Gas Management Act 1989

Renewable Energy (Electricity) Act 2000

Commonwealth Policies

Air Toxics NEPM

Ambient Air Quality NEPM

Assessment of Site Contamination NEPM

Diesel Vehicle Emissions NEPM

Intergovernmental Agreement on the Environment 1992

National Packaging Covenant

National Pollutant Inventory NEPM

National Strategy for Ecologically Sustainable Development

National Strategy for the Conservation of Australia's Biological Diversity

Transport Environment and Sustainability Policy Statement

Transport is essential to the economic and social development of NSW, by providing access to jobs, housing, goods and services and providing for the mobility needs of people to improve quality of life.

Transport for NSW, RailCorp[1], Roads and Maritime Services and the State Transit Authority (Transport) are committed 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. We will achieve this by:
- Ensuring that the development, expansion and management of the transport network is sustainable and resilient to climate change
- Minimising the impacts of transport on the environment, encompassing transport operations, infrastructure delivery and maintenance and corporate activities
- Enhancing the quality of life for transport customers by procuring, delivering and promoting sustainable transport options.

We will continuously improve environment and sustainability performance by:
- Implementing sound governance practices to set, apply and monitor environmental and sustainable policy across the portfolio
- Setting objectives and environment and sustainability targets to continually improve management and performance
- Monitoring, environment and sustainability performance and reporting in the Annual Report
- Raising staff awareness and capacity of environment and sustainability processes in their day-to-day business
- Forming constructive partnerships with government, industry and the community on environmental and sustainability issues
- Contributing to and influencing the strategic environment and sustainability agenda of NSW Government.

We will apply implement this policy statement as we act to "minimise our impact on the environment"[2] and promote "the delivery of transport services in an environmentally sustainable manner"[3].

Les Wielinga
Director General
May 2013

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[1] To be established as Sydney Trains and NSW Trains on 1 July 2013.
[2] *Connections Transport for NSW Corporate Plan 2012-17*
[3] *Transport Administration Act 1988*

Transport Environmental Sustainability Themes

Who is Transport?

For the purposes of the Transport Sustainability Framework "Transport" refers to Transport for NSW, RailCorp, Roads and Maritime Services and the State Transit Authority, which are collectively responsible for:

- Improving the customer experience of transport, developing policy and regulation, planning and program administration, procuring and managing transport services and infrastructure, and assisting the m
- ovement of freight
- Operating passenger rail services, holding, managing, maintaining and establishing rail infrastructure facilities and providing access to its rail network to support freight and other rail services by third party operators
- Delivering customer focused road services, delivering and maintaining roads and road infrastructure, and managing the use of the road network through licensing and registration
- Overseeing the use of harbours and waterways
- Operating Sydney Buses, Newcastle buses and ferries and Western Sydney Buses.

The Transport Sustainability Framework recognises the three spheres of sustainability: environment; social; and economic.

The Transport for NSW Sustainability Policy focuses on the conservation and enhancement of air, water, soils, energy, resources and other factors in the environment needed for biodiversity and our communities.

Social sustainability (e.g. individual and community well-being, safety) and economic sustainability (e.g. economic prosperity, productivity) are also managed by Transport for NSW and will be reported separately from environmental effort.

Why have environmental sustainability themes?

The Transport Environment and Sustainability Policy Framework Working Group has established eight themes unifying a number of actions that seek to minimise the environmental impacts arising from transport related activities. These themes will form the basis of target setting, measuring environmental performance, review and evaluation.

Central to the environmental sustainability themes is the integration of economic, social and environmental considerations in decision making processes, otherwise known as ecologically sustainable development.

Under the Transport Administration Act 1998, public transport agencies are, amongst other things, to:

- *Promote the delivery of transport services in an environmentally sustainable manner*

- *Where activities affect the environment, conduct operations in compliance with the principles of ecologically sustainable development*
- *Contribute to the delivery of social benefits for customers, including greater inclusiveness, accessibility and quality of life.*

The Transport Sustainability Policy will help guide the response of transport agencies.

What are the eight environmental sustainability themes?

1.   Energy Management
Energy efficiency is recognised as a highly cost effective means to reduce the environmental impact of Transport and reduce the costs of providing transport services for the community. Transport seeks to improve its energy consumption, minimise energy demand and where practicable use renewable energy sources (e.g. wind, solar, biomass). This theme also targets reduction in greenhouse gas emissions. This theme will focus on:

- Monitoring and reporting on energy use across the transport portfolio
- Proactively identifying cost-effective opportunities to improve energy efficiency and reduce energy consumption whilst maintaining or enhancing the customer experience
- Maximising opportunities to obtain financial support and income from energy improvement initiatives (e.g. Energy Saving Certificates)
- Purchase energy efficient products and services and design for energy efficiency where products and services are cost effective and fit for purpose
- Supporting innovative approaches to energy efficiency
- Determining whether renewable technologies can support energy requirements.

2.   Pollution Control
The introduction of excessive noise or contaminants into the environment can cause harm to human health and the environment generally. This theme is concerned with the need for Transport to operate with the best interests of the community and environment. Specifically it focuses on minimising air, noise, water and land pollution and contamination. This theme will focus on:

- Minimising transport operation and construction impacts
- Developing and maintaining appropriate policies, systems and training to deliver continual improvement and prevent pollution
- Ensuring immediate reporting and management of pollution incidents in line with legal obligations
- Implementing improved pollution response capabilities
- Developing and implementing programs to rehabilitate contaminated sites as required.

3.   Climate Change Resilience
Increases in temperature, sea level rise, fluctuations in rainfall and more frequent extreme temperature and rainfall events will impact on natural, social and economic systems in NSW. This theme focuses on how Transport can mitigate the impacts of climate change and address its own climate change vulnerability.

This theme acknowledges that some level of climate change is inevitable, and is concerned with Transport's effort to adapt and build resilience into its planning, projects and operations thereby minimising the impacts and costs of climate change on Transport customers and contributing to greater climate change resilience for NSW. This theme will focus on:

- Recognising that efficient planning, construction and operations of road, rail and marine transport networks provides important mitigation and adaptation opportunities
- Promoting an adaptive risk management approach (e.g. considering sea level rise projections) that takes into account the duration/life of the asset/service
- Providing leadership by planning, constructing and operating efficient transport modes and actively encouraging others to do the same
- Delivering projects and implementing policies to encourage greater use of more sustainable modes of transport
- Where applicable consider and promote innovative design and technologies that reduce greenhouse gas emissions over the life of an asset (e.g. alternate fuels, energy from renewable sources and low embodied energy materials).

4.   Resource Management

Resource management is concerned with reducing the impacts of materials production, consumption and disposal on the environment. This theme focuses on efficient use and end-of-use considerations for materials, water and waste through asset design, construction, use, maintenance and demolition. It also takes account of sustainable purchasing and efficient consumption to reduce purchase costs and save resources such as raw materials including water. This theme will focus on:

- Building sustainability and effective resource management into purchasing practices
- Effectively managing the environmental risks associated with procuring goods and services over the life cycle of the purchase
- Sustainable procurement and supply chain management
- Reducing resource use and beneficial reuse of resources
- Minimising waste generation
- Minimising waste to landfill
- Minimising the use of hazardous and other dangerous materials
- Effective use of resources such as using sustainable water cycle management.

5.   Biodiversity

Biodiversity is the variety of all living things, including flora and fauna, the genes they contain and the ecosystems in which they live. Transport can have a range of impacts on both terrestrial and aquatic flora and fauna of local and national significance. This theme aims to ensure biodiversity is an important consideration for Transport. This theme will focus on:

- Minimising transport operation and construction impacts on biodiversity
- Effectively managing threatened species and populations
- Offsetting biodiversity impacts where they cannot be avoided
- Restoring biodiversity where it compliments transport operations

- Managing our flora and fauna responsibilities in a manner conducive to the operation and maintenance of the transport services and infrastructure
- Effectively managing pests and weeds through effective control programs.

6. Heritage

Heritage is the collective environment, traditions and assets inherited from the past and preserved for use of future generations. This theme is concerned with conserving and celebrating the rich Indigenous and non-Indigenous heritage for which Transport is the custodian. This theme will focus on:

- Minimising transport operation and construction impacts on heritage
- Promoting innovative approaches to heritage asset conservation, such as using new materials to extend the lifespan of structures and identifying new compatible uses
- Where heritage assets cannot be retained in service, consider options for new uses or transfer ownership to continue promotion of their heritage significance
- Ensuring heritage is used positively to enrich the customer experience.

7. Liveable Communities

Transport networks have both a transport role as well as a role in creating places that contribute to the built environment and the community. In many cases this improves personal freedom, education, social and life opportunities. This theme is primarily concerned with social factors. This theme will focus on:

- Land-use and planning, which centres on building well-planned urban environments which reduce the need for travel
- Guiding transport development towards creating attractive, accessible and safe destinations which seamlessly enhance the transport journey
- Showcasing transport infrastructure as exemplars of sustainable development
- Minimising the negative impacts of infrastructure and services on the communities we serve
- Being a considerate neighbour.

8. Corporate Sustainability

Government has established policy to ensure the decisions of today do not harm future generations. This theme considers the importance of sound governance practices required to set, implement and monitor environmentally sustainable policy across Transport. This theme will focus on:

- Transparent governance arrangements
- Meaningful measurement and reporting of environmental and sustainability effort
- Developing people and capacity to enact change
- Promoting and recognising excellent practice
- Partnering and sharing knowledge across the "portfolio"
- Instilling an environmentally and sustainability aware and responsible culture within Transport.

When to apply the themes?

Connections the Transport for New South Wales Corporate Plan for 2012-2017 provides strategic direction for Transport for New South Wales and the transport agencies. *Connections* identifies the challenge of transport meeting current social and economic needs, without compromising the ability for future generations to do the same.

In response this challenge *Connections* advocates a need to ensure the transport system is delivered and operated in an environmentally sustainable manner. The Transport environment and sustainability themes are prepared as a blue print to achieving and reporting against the result area *the impact of transport on the environment is minimised*.

Transport Environment and Sustainability Indicators and Targets

Theme	Objective and *Outcome*	Indicator	Scope	Reference	Base Target	Stretch Target	Reporting Threshold	Reporting Exclusions	Indicator Source
Energy Management	To use Transport's energy sources more efficiently and reduce its greenhouse gas emissions *Reduced energy consumption* *Reduced greenhouse gas emissions*	Energy Efficiency	Corporate (Buildings)	E1	Achieve 4.5 star NABERS base building and tenancy energy rating	NABERS 5 star rating	All non temporary buildings owned or leased >2,000m^2	Excludes site offices, depots and office space <2,000m^2	NSW Government Resource Efficiency Policy Consistent with target under NSW 2021 Goal 5
			Rail and bus operations and maintenance	E2	Develop baseline: • energy consumption measured in GJ • greenhouse gas emissions tCO$_2$-e	NA	Infrastructure assets operated by RailCorp[1] and STA	Assets not owned and operated by RailCorp & STA	National Greenhouse and Energy Reporting (NGER) Scheme
			Roads operations and maintenance	E3	Develop baseline: • energy consumption measured in GJ • greenhouse gas emissions tCO$_2$-e	NA	Infrastructure assets operated by RMS Includes: Street lights, traffic signals, variable message screens)	Assets not operated by RMS	State Government energy reporting policy through Online System for Comprehensive Activity Reporting (OSCAR)
		% of renewable energy consumed (generated or purchased)	Corporate (Office Buildings)	E4	Purchase 6% Greenpower or generate 6% renewable energy	Purchase 25% Greenpower or generate 25% renewable energy	All office buildings owned or leased	NA	NSW Government Resource Efficiency Policy Consistent with target under NSW 2021 Goal 22
		Energy Intensity of Public Transport	Rail and bus operations and maintenance	E5	Develop baseline energy consumption: • KJ/person/km travelled • KJ/passenger seat/km travelled	NA	Infrastructure assets operated by RailCorp and STA	NA	National Greenhouse and Energy Reporting (NGER) Scheme
Pollution Control	To minimise air, noise, water and pollution from Transport's operations and construction *Reduced pollution (air, noise, land and water)*	Environmental incidents that result in material harm to the environment	Operations, maintenance and Construction	P1	Achieve zero pollution incidents that cause or threaten material harm to the environment as a result of non-compliance	NA	All assets operated, maintained and constructed by TfNSW, RailCorp, RMS and STA	NA	Protection of the Environment Operations Act 1997 NSW LTTMP • Consider the air quality impacts of transport projects
Resource Management	To reduce waste generation from Transport's operations, maintenance, construction & management *Reduced waste generation*	% of waste sent to landfill	Operations and Corporate (Buildings)	R1	63% recycling of operations and corporate waste by 2014	80% recycling waste by 2014	All operations and corporate	NA	NSW 2021 Goal 23
			Construction	R2	76% recycling of construction & demolition waste by 2014	90% recycling of construction & demolition waste by 2014	All construction	NA	NSW 2021 Goal 23
	To reduce water consumption in Transport's operations, maintenance, construction & management *Reduced water consumption*	% of water consumed from potable sources	Corporate (Buildings)	R3	NABERS water rating of 4.5 stars	NA	All non temporary buildings owned or leased >2,000m^2	Excludes site offices, depots and office space <2,000m^2	NSW Government Resource Efficiency Policy
			Operations & maintenance Rail/Bus/Road	R4	Develop baseline of water consumption	NA	All operations and maintenance activities	Recording of water use for individual road maintenance and operations jobs	Consistent with target under Goal 21

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[1] From 1 July 2013 RailCorp will be split into two new separate bodies Sydney Trains and NSW Trains.

Transport Environment and Sustainability Working Group Membership

- Finance Audit and Strategy Division

- Freight and Regional Development Division

- Policy and Regulation Division

- RailCorp

- Roads and Maritime Services

- State Transit Authority

- Transport Projects Division

- Transport Shared Services