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Our Vision

Our vision is to make lives better for our road users, the local and global community and future generations. As an organisation we will balance the needs of all groups of society.

While addressing our road user needs we will also seek to improve the broader community’s health and wellbeing while protecting their environmental values. To do this, we need to recognise that our impact extends beyond the road corridor, within the broader community and long after construction is complete.

Our Strategic Commitment envisions that we make lives better for the community and our customers. We will do this through focusing on better journeys, improving wellbeing and strengthening productivity.

Wellbeing is an important part of Victoria’s liveability. While a large part of VicRoads’ responsibility is to facilitate better journeys and strengthen productivity, it is important to recognise that delivering these outcomes have the potential to impact on wellbeing and environmental outcomes. Our challenge is to improve the road system while supporting the living standards and wellbeing of all Victorians. This is in the context of a growing population which is placing increasing demands on maintaining, operating and upgrading our transport system.

This Sustainability and Climate Change Strategy sets out a framework that will guide the delivery of activities contributing to the environmental sustainability and health and wellbeing objectives under the Transport Integration Act 2010. It articulates our vision, challenges and a broad plan that supports the wellbeing outcome articulated in our Strategic Commitment.

It seeks to explain the complex relationships between journeys, productivity and the way in which these benefit and impact on community wellbeing and environmental outcomes both within and outside the road corridor. It also explains how we foresee the community and environmental challenge being tackled through our Strategic Planning Framework – Movement and Place, together with its supporting tools and initiatives.
Our Framework

Our vision is to make lives better for our road users, the local and global community and future generations.

As an organisation we will balance the needs of all groups of society. While addressing road user needs we will also seek to improve the broader community’s health and wellbeing while protecting their environmental values. To do this, we need to recognise that our impact extends beyond the road corridor, within the broader community and long after construction is complete.
OUR CHALLENGES

1. Protect health and wellbeing
   - Review Traffic Noise Policy
   - Develop a network air quality model
   - Reduce construction vehicle emissions

2. Protect community environmental values
   - Review stormwater management practices
   - Review biodiversity management practices

3. Embed environmental resilience
   - Benchmark the carbon footprint of our roads
   - Reduce energy consumption
   - Climate change adaptation
   - Improve metropolitan tree canopy coverage

SHORT-TERM INITIATIVES

Our plan is to integrate the Sustainability and Climate Change Strategy into central frameworks including Movement and Place and the Corporate Plan.

Movement and Place
- Utilise the Sustainability and Climate Change Strategy to inform the impacts of ‘movement’ and opportunities for ‘place’
- Provide guidance to our staff to ensure that engagement practices include stakeholders that represent health, wellbeing and environmental values of the broader community
- Build on existing tools to enhance and integrate a triple bottom line assessment

Corporate Plan
- Include our community wellbeing and environmental priorities in future Corporate Plans to progress towards our long term vision
Our Challenges

While a large part of VicRoads responsibility is to facilitate better journeys and strengthen productivity, it is important to recognise that delivering these outcomes have the potential to impact on wellbeing and environmental values of the broader community.

Our challenge is to improve the road system while supporting the living standards and wellbeing of all Victorians. We define our Sustainability and Climate Change Strategy challenges as:

1. Protect health and wellbeing
2. Protect community environmental values
3. Embed environmental resilience
Protect health and wellbeing

VicRoads’ challenge is to reduce traffic noise and improve air quality to protect the broader community’s health and wellbeing. We seek to meet this challenge by planning a road network that avoids significant traffic noise and air quality impacts and design infrastructure that mitigates these impacts. We also work with other responsible agencies to reduce the impact of traffic movement on health and wellbeing.

Traffic Noise

A growing population means that there are more people and goods moving on our road network. People are also living closer to transport corridors and activity centres. While this reduces the need to travel by car, it also increases their exposure to high levels of traffic noise.

Furthermore, freight vehicles are increasingly operating at night to avoid day time congestion. While this seeks to achieve a more efficient use of our limited road space, it contributes to a level of traffic noise that can disturb residents’ sleep.

There is also an increasing awareness of the health effects of noise. A growing body of research indicates that prolonged exposure to traffic noise can impact on health and wellbeing. Effects identified include increased risk of heart disease, diabetes and stroke as well as annoyance and sleep disturbance.

Air Quality

In urban areas, increased traffic congestion combined with more people living close to arterial roads means air quality impacts from motor vehicle emissions have the potential to impact on health and wellbeing.

Emissions from motor vehicles on high movement roads can lead to elevated concentrations of certain air pollutants including carbon monoxide (CO), nitric oxides (NOₓ); nitrogen dioxide (NO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM₂.₅) and benzene.

There is increasing research and awareness of the health effects of poorer air quality from traffic, indicating that prolonged exposure to poor air quality can impact on cardiovascular and respiratory diseases and bronchitis.

Initiative 1.1: Review Traffic Noise Policy

VicRoads is undertaking a comprehensive review of its existing Traffic Noise Reduction Policy placing health and wellbeing as its core principle. This has involved extensive stakeholder and community engagement in order to manage the impact of traffic noise on the community in a more holistic approach. The revised policy will be supported by comprehensive implementation guidelines to assist VicRoads management of traffic noise impacts.

Initiative 1.2: Develop a network air quality model

VicRoads will undertake monitoring of the road network to inform the development of a network wide air quality model. This model will help assess the benefit or impact that network strategy development or operation of the network will have on air quality.

Initiative 1.3: Reduce construction vehicle emissions

In line with the review of the National Environment Protection Measure (NEPM) Ambient Air Quality and the recognition of the need to further reduce particulate exposure within the community, VicRoads will work with the construction industry to introduce requirements for the use of particulate filters on all off-road diesel vehicles.
Protect community environmental values

VicRoads’ challenge is to recognise and protect environmental values of the community that may not be covered by State and Commonwealth legislation. We seek to meet this challenge by identifying environmental assets and understand community’s environmental values early in the strategic network development process. We also seek to meet this challenge by designing infrastructure that mitigates impacts on water and biodiversity resources.

Water

When roads are built or widened in a water catchment area, their impervious surfaces alter the natural flow of water. The faster moving and larger volume of water runoff from roads can cause changes in erosion and sedimentation rates within waterways and affect aquatic ecosystems.

These effects can threaten the community’s uses of waterways. The Victorian community value waterways and want to see them protected. It is important for the community to have access to waterways to use for recreation which contributes to their sense of place and wellbeing.

Biodiversity

Road reserves can contain some of the best quality remnant native vegetation in Victoria. They often hold important habitat for rare plants and animals and provide protection to animals assisting movement across fragmented landscapes.

However roads themselves can also fragment the landscape and create barriers to wildlife movement. The community value biodiversity and continually express that it is important to experience and protect natural vegetation and wildlife which contributes to their sense of place and wellbeing.

Initiative 2.1: Review stormwater management practices

VicRoads will review its stormwater management practices to take a catchment wide approach and support climate change resilience across the network. To do this effectively requires close collaboration with other stakeholders involved in stormwater management across the catchment.

Initiative 2.2: Review biodiversity management practices

VicRoads will review its approach to network planning and development under Movement and Place. When developing transport solutions under our strategic framework, VicRoads will ensure solutions are developed with not only road users and landholders but also those stakeholders that value the environment. This review of engagement practices will seek to ensure biodiversity values are understood early in the planning process and protected to the extent possible.
VicRoads’ challenge is to both mitigate climate change by reducing greenhouse gas emissions while also understanding the level of risk climate change poses to our infrastructure and community. We seek to meet challenge by planning, building, operating and maintaining our road network in a way that reduces greenhouse gas emission intensity. We also aim to meet the challenge by working with a range of stakeholders to ensure that infrastructure and community wellbeing is protected from future climate change events.

Greenhouse gas emissions
Greenhouse gas emissions from transport in Victoria are continuing to grow with the expanding urbanisation and increasing population. Cars and other light vehicles account for the largest share of transport greenhouse gas emissions. This sends a clear message that there is a significant opportunity to focus on mode shift to more sustainable modes including public transport, walking and cycling.

There are other significant sources of road network greenhouse emissions. Street lighting, traffic signals and traveller information systems also consumed energy and contribute to greenhouse gas emissions. Furthermore, materials that our contractors use in road construction also has associated greenhouse gas emissions and add to the depletion of finite resources.

Climate Change Adaptation
Victoria is already experiences extreme weather events that impact on the performance of the road network and the condition of its assets. Under climate change projections, these events are likely to increase in both frequency and severity. These events can include increased temperatures, storm surges, sea level rise, bushfires and localised flooding from intense rain events.

Whilst climate change can affect the safe and reliable movement of people and goods on our network, these impacts can also affect places that the community live in and experience. For example, the urban heat island effect will be exacerbated through increased temperatures and warmer nights. Particularly where there is a lack of vegetation to provide shade for pavements and footpaths.

Initiative 3.1: Benchmark the carbon footprint of our roads
VicRoads through partnering with the Transport Agencies Greenhouse Gas Working Group has developed Carbon Gauge which quantifies the carbon footprint of road and rail construction projects. VicRoads will utilise this tool to optimise road design to minimise the carbon footprint and to seek to influence its supply chain by incentivising contractors to offer materials with higher sustainability value. All construction projects will be required to achieve minimum greenhouse gas benchmarks. Attainment of these benchmarks will be incentivised through best practice sustainable procurement.

Initiative 3.2: Reduce energy consumption
VicRoads will be retrofitting our high pressure sodium (HPS) street lights to LED technology. LED technology consumes significantly less electricity compared to HPS and is a major step towards reducing our operational carbon footprint.

VicRoads will also seek to partner with local councils to replace all cost shared lighting to further reduce energy consumption.

Initiative 3.3: Climate change adaptation
VicRoads has completed an assessment of risk associated with climate change. This assessment will guide VicRoads to proactively plan now to avoid future costly investments and disruptions to network operations in conjunction with the landholders at relevant locations.

Initiative 3.4: Improve metropolitan street tree canopy coverage
VicRoads will seek to mitigate the urban heat island effect by working closely with the Metropolitan Planning Authority to deliver a network of boulevards in growth areas and existing road corridors. VicRoads has undertaken an initial assessment of current street tree canopy within the two metropolitan regions. This assessment identifies the potential for improved street tree canopy in the northern and western suburbs of Melbourne. The development of tree lined streets in our Regions will be guided by our Tree Planting Policy.
Our plan is to integrate the Sustainability and Climate Change Strategy into central frameworks including Movement and Place and the Corporate Plan.

Informing impacts of ‘movement’ and opportunities for ‘place’

VicRoads will utilise the Sustainability and Climate Change Strategy to inform the impacts of ‘movement’ and opportunities for ‘place’ under the Movement and Place strategic framework. When considering transport solutions that improve movement, the place based wellbeing and environmental impacts must be identified and avoided through planning then mitigated through design. Conversely, when considering place based solutions, the Strategy can be utilised to inform better ‘places’.
Movement and Place

Movement and Place is VicRoads’ strategic approach that identifies the important interrelationship between transport and land use. It recognises that some streets are more strategically significant as movement conduits, while other streets provide destinations in their own right.

The Movement and Place approach identifies the strategic role of each street through a matrix. This matrix categorises each street, from motorways to bustling alleyways, according to the level of movement and place significance it provides. The approach provides a platform for VicRoads and its stakeholders to agree on where travel movement should be prioritised, and where they want to encourage greater interaction between people and places.

Movement impacts on place through increase in:

- traffic noise and poorer air quality which can impact on community health and wellbeing
- vegetation removal that may impact on biodiversity values and decrease shade availability
- impervious surfaces which alters water flows and decreases water quality
- greenhouse gas emissions that contribute to climate change, in turn affecting the resilience of our road network in the long term

Places are improved through considering:

- traffic noise levels and air quality which can improve amenity and attractiveness of places
- access to natural vegetation and water resources that the community value and want to experience
- the risk of future climate change impacts
- the benefits of tree planting on roadsides to reduce heat retention, create attractiveness and encourage walking and cycling
Focusing on transport solutions that make use of existing infrastructure and information can improve environmental and community outcomes. More efficient movement can reduce traffic noise, improve air quality and limit greenhouse gas emissions. Furthermore, these approaches can limit the expansion of the road network which can impact on environmental assets that the community value.

The Movement and Place approach seeks to guide our staff to focus on solutions that are not only more financially sustainable, but also provide better outcomes for the wellbeing of the community and environment.

We will focus on using smarter systems and providing better road user information before expanding or adding to the road network. However, sometimes new infrastructure is required, particularly in Melbourne’s growth areas and on key freight routes. While new infrastructure has the potential to impact on the community and environment, better planning and infrastructure design is key. When infrastructure is added to our network, sustainable transport options such as walking and cycling will be instrumental in enhancing community and environmental outcomes.

Environmental Toolbox

This Strategy is the overarching document that seeks to guide and provide the rationale for the development of a suite of tools that support Movement and Place. An Environmental Toolbox will be developed and utilised by our staff who are involved in planning, operating and maintaining the road network. These tools will assist our staff to understand the community’s environmental and wellbeing issues and avoid significant impacts early through appropriate planning. The toolbox will also assist our staff to mitigate significant impacts through best practice design and management. Community and environmental values can also be identified and enhanced where feasible.

Turning strategy into action

To turn this Strategy into action, we will include community wellbeing and environmental priorities in future Corporate Plans. This central plan is assessed annually to ensure our priorities are delivered to progress us towards our vision and Strategic Commitment.

Triple bottom line assessment

As part of the toolbox, VicRoads will build on existing tools to ensure triple bottom line assessments under Movement and Place. Through enhancing and integrating these tools, Regions will understand and seek to achieve better community and environmental outcomes which can be considered alongside the assessment of Movement and Place.