METROTUNNEL

# Sustainability Strategy
## Our Approach

RAIL PROJECTS VICTORIA

VICTORIA State Government

We acknowledge the traditional custodians of what is now known as Melbourne and offer our respects to their Elders past and present. We recognise and respect their cultural heritage and continuing connection to land, water and community.



Authorised by the Victorian Government, 1 Treasury Place, Melbourne Victoria 3000.

RAIL PROJECTS VICTORIA

VICTORIA State Government | Economic Development, Jobs, Transport and Resources

# Contents


Swanston St
MELBOURNE.VIC.GOV.AU/SHUTTLE
FREE WI-FI
MELBOURNE VISITOR SHUTTLE
CITY OF MELBOURNE
#NO ROOM FOR RACISM
#NO ROOM FOR RACISM
#NO ROOM FOR RACISM

# Introduction

Accessibility, connectivity and sustainability are the hallmarks of a liveable city. Connecting people in a healthier, more sustainable way to jobs, health and education services is critical to environmental, social and economic wellbeing.

Melbourne is Australia's fastest-growing city and is projected to be the nation's biggest by 2056. Our population is likely to almost double over the next few decades to around 8 million by 2051 - this means new Victorians bringing new ideas and new opportunities for our state.

The Victorian Government's program of major transport projects is putting in place some of the key infrastructure that will support Victoria's growth and ensure Melbourne remains a liveable, prosperous and inclusive city. The expansion of the city's rail network through the Metro Tunnel Project will not only connect Melburnians with jobs and services in a sustainable way – it also provides an opportunity to leave a positive legacy for our city.

And legacy is at the heart of sustainability – it's about making sure that we meet our needs today, while protecting the opportunity for future generations to meet theirs. That is why sustainability has been a core focus during the planning and concept design phases of the Metro Tunnel Project, and will continue to underpin our work during delivery.

We're committed to delivering a Metro Tunnel that demonstrates excellence in environmental, social and economic sustainability. Five new underground stations will connect us with jobs, services and some of our favourite landmarks - and also with our natural environment through biophilic design.

Collaboration is vital to this city shaping project. We're working with local community groups, universities, research institutions, and other organisations at every step of the way. For example, Rail Projects Victoria (RPV) has collaborated with the Green Building Council of Australia (GBCA) to develop an innovative tool for assessing the sustainability of underground railway stations. This ensures that our stations are rated and certified, and provides an opportunity to share our innovations with other projects across Australia.

RPV is committed to achieving sustainability excellence, ensuring a positive legacy for present and future generations.

**Evan Tattersall, Chief Executive Officer**
Rail Projects Victoria

# Project overview

The Metro Tunnel will support Melbourne's connectivity and liveability for decades to come. It will add two underground nine-kilometre rail tunnels from Kensington to South Yarra, including five new underground stations, providing a new pathway for the Cranbourne, Pakenham and Sunbury lines.

The Metro Tunnel will free up space in the City Loop and allow more trains to run more often across Melbourne, particularly on the busy lines servicing the city's growth areas in the north, west and south-west.

The Metro Tunnel is on track to be completed by 2025, a year ahead of schedule.

# Sustainability overview

**Sustainability is about meeting the needs of the present without compromising the ability of future generations to meet theirs.**

The sustainability vision for the Metro Tunnel is underpinned by a series of environmental, social and economic commitments. We believe that working to create a balance between these three core commitments is vital for maintaining Melbourne's liveability and for delivering a project with a lasting positive legacy.

An integrated sustainability approach will generate multiple benefits. These include better building and infrastructure performance, economic growth and ecologically sustainable development, better operational efficiency and maintenance requirements, whole-of-life cost and Greenhouse Gas (GHG) emission savings and, importantly, safe and healthy environments for commuters.

## Values

**Collaboration**
Working smarter together with our delivery partners.

**Respect**
Delivering the project in a respectful way for local communities.

**Social cohesion**
Strengthening communities in how we operate.

**Innovation**
Being open to new thinking and smart ideas.

**Legacy**
Safeguarding and strengthening Melbourne's liveability for years to come.

## Sustainability Vision

Through our delivery of the Metro Tunnel Project we're committed to connecting communities in the healthiest, most sustainable way possible.

We'll help to ensure a lasting legacy for present and future generations for a more liveable Victoria - environmentally, socially and economically.

## Mission

To work with local communities and stakeholders so that sustainability underpins the design, construction and planned operation of the Metro Tunnel.

# Our sustainability commitments

**Three core sustainability commitments underpin the Metro Tunnel Project to ensure it delivers a positive legacy for our city.**


Natural resources
Protect natural resources and enhance physical environments
Health and wellbeing
Promote and foster health and wellbeing
Resilience
Assist in strengthening Melbourne's economic resilience
Climate change
Strengthen Melbourne's resilience to climate change challenges
Community cohesion
Strengthen the social fabric of our local communities
Prosperity
Support a growing population and access to jobs
Living infrastructure
Create resilient, living infrastructure to support a healthy city
Quality of life
Protect and strengthen Melbourne's quality of life and liveability
Equality and inclusion
Promote equality and inclusion with jobs, training and development opportunities

# Sustainability themes

**We have a number of key sustainability themes and initiatives, which will guide the delivery and day-to-day operation of the Metro Tunnel and the five new underground stations.**

Our sustainability initiatives are designed to ensure that sustainability outcomes are achievable *and* measurable, and align with the sustainability rating tools adopted by the project.

## Excellence

We're demonstrating leadership in sustainability across every part of the project to deliver positive environmental, social and economic outcomes.

Our initiatives include:

- Certification of the project using the following tools:
  - + The IS Rating tool for Design and As-Built (minimum 'Excellent' rating)
  - + The GBCA custom Green Star Tool (minimum '5 Star' rating)
- Public reporting the sustainability performance of the Metro Tunnel Project.

These initiatives support the following sustainability commitments:

**Environmental sustainability**

**Social sustainability**

**Economic sustainability**

## Urban ecology and vegetation

We're committed to protecting the environment and helping restore and strengthen Melbourne's ecological systems in the areas we operate. We're working to protect and improve vegetation and ecosystem functioning to maintain biological diversity.

Our initiatives include:

- Contributing to the doubling of Melbourne's tree canopy
- Planting more trees than are cleared during construction
- Designing new and reinstated planting areas to support biodiversity and enhanced ecological value.

These initiatives support the following sustainability commitments:

**Environmental sustainability**

## Climate resilience

We're working to ensure the planning and design of the Metro Tunnel helps us to adapt and build resilience to predicted climate change impacts.

Our initiatives include:

- Developing a climate-change adaptation plan
- Increase the climate change resilience of infrastructure and station precincts.

These initiatives support the following sustainability commitments:

**Environmental sustainability**

**Social sustainability**

**Economic sustainability**

## Supply chain

We're focused on procuring materials and services from sustainable sources, with strong local content requirements.

Our initiatives include:

- A project-wide Local Content Strategy in accordance with the Victorian Industry Participation Policy Act 2003.

This will involve:

+ Collaborating with the Industry Capability Network to maximise opportunities for local small and medium-enterprise (SME) participation
+ Developing local content targets for each delivery package within the project
+ Identifying local SMEs for potential participation in the project's supply chain and alerting them to potential opportunities.

These initiatives support the following sustainability commitments:

**Social sustainability**

**Economic sustainability**

## Communities

The health and wellbeing of our communities has been critical to planning and designing the Metro Tunnel and we'll continue that focus during delivery.

Our initiatives include:

- Supporting the Victorian Government's commitment to social procurement with practices that generate social benefits beyond the products and services required
- Identifying places of historical and cultural significance and putting in place appropriate protection and interpretation strategies
- Designing to minimise adverse impacts on local communities during construction and operation of the Metro Tunnel
- An independent design review process that enables technical experts to address key urban design aspects of the project
- Sharing timely and relevant information with local communities
- Providing the community with opportunities to participate in the project's planning and delivery.

These initiatives support the following sustainability commitments:

**Social sustainability**

## Workforce

We're helping to build a resilient local workforce through the Metro Tunnel Project to facilitate economic development and prosperity.

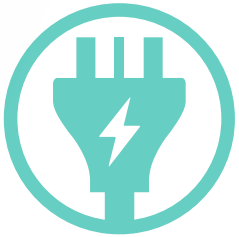
Our initiatives include:

- Supporting the utilisation of new workplace skills and contributing to relevant industry sector, state and national targets
- Using Victorian-registered apprentices, trainees and engineering cadets in accordance with the Major Project Skills Guarantee
- An Aboriginal Employment Target of 2.5 per cent of total labour hours on the project.
- Developing and implementing nationally recognised accredited training and skills development programs and ensuring at least one in every five workers participates in Nationally Recognised Accredited Training
- Developing a skills and labour gap plan for the project
- Developing and optimising employment and training opportunities for economically and socially disadvantaged individuals during construction and operation of the Metro Tunnel.

These initiatives support the following sustainability commitments:

**Social sustainability**

**Economic sustainability**



## Energy

Energy efficiency is critical to the design, construction and operation of the Metro Tunnel and consequently we're prioritising innovative use of renewable energy onsite.

Our initiatives include:

- Reducing greenhouse gas emissions by a minimum of 20 per cent below business-as-usual for the project*
- Of the remaining greenhouse gas emissions footprint, we're sourcing a minimum of 20 per cent of energy from renewables for the Infrastructure Lifecycle*.

These initiatives support the following sustainability commitments:

**Environmental sustainability**

**Social sustainability**

**Economic sustainability**

* Note that RPV, being a delivery Authority are responsible for meeting targets for Design; influencing Operation and Construction.

## Materials and waste

We're reducing the impacts of materials across the life of the Metro Tunnel by sourcing materials in a responsible way and carefully managing waste.

Our initiatives include:

- Reducing the lifecycle impacts of materials
- Using less Portland cement in our concrete
- Sourcing almost all of our timber products used for permanent works from sustainable sources, including reused, recycled, or Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) certified timber
- Sourcing most of our steel from suppliers certified by the Australasian Certification Authority for Reinforcing and Structural Steels, or similar international association or organisation
- Using steel fabricators and contractors accredited under the Environmental Sustainability Charter of the Australian Steel Institute, or similar international association or organisation, for most of our fabricated structural steelwork
- Maximising inert and non-hazardous waste in reusable topsoil and general fill
- Diverting at least 60 per cent of office waste from landfill.

These initiatives support the following sustainability commitments:

**Environmental sustainability**

## Water

We're reducing water usage with the Metro Tunnel's efficient design and by using non-potable water from local sources as much as possible.

Our initiatives include:

- Supporting reduced total water use and using a minimum 20 per cent local non-potable water, for the infrastructure lifecycle
- Reducing potable water use in our railway stations
- Using rainwater and/or stormwater to provide passive irrigation
- Managing stormwater runoff to achieve best practice water quality.

These initiatives support the following sustainability commitments:

**Environmental sustainability**

# Collaboration

## Collaboration and partnerships are critical to the Metro Tunnel

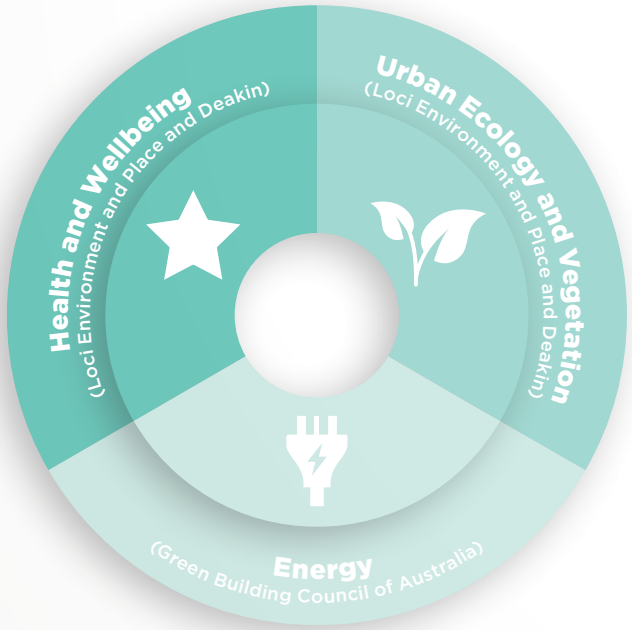
The Metro Tunnel Project is an opportunity to collaborate with project partners to develop new approaches and new ways of thinking.

RPV's project partners include local community groups, education, training and research institutions, as well as leading industry groups and business organisations. They're working with us to provide expertise, share knowledge and pool resources in project problem solving and planning.

Combined, we're driving new approaches and we'll set new sustainability benchmarks to extend industry best practice.

Our meaningful engagement with local communities will help strengthen a sense of 'place', with local communities actively contributing to project planning to get the best result for their local area.

Key areas of collaboration



Case Study

# Loci Environment and Place

Loci Environment and Place (Loci) is a not-for-profit organisation that's changing how cities are planned and built. It develops, trials, partners and teaches city-making solutions to reduce natural resource and pollution impacts.

RPV is working with Loci to develop best-practice approaches to the design and construction of 'living infrastructure'.

## Key benefits

With Loci, we've developed:

- Best-practice initiatives in the emerging field of living infrastructure to help the project achieve its environmental and social commitments
- A targeted Living Infrastructure Plan to expand the project's sustainability legacy. This plan adopts best practice approaches to create healthy, resilient and biodiverse urban landscapes to support Melbourne's future liveability.

This means:

+ Creating greener landscapes in areas of inner Melbourne to support positive environmental, public health and wellbeing outcomes
+ Expanding the knowledge of local urban planning and development practitioners to support improved sustainable development and climate resilience outcomes

Case Study

# Deakin University


Deakin University is one of Australia's leading universities and internationally recognised for its innovative research projects.

RPV is working with Deakin University to assess the feasibility and opportunities of biophilic design, and how we can incorporate these into the Metro Tunnel Project. The resulting *Creating Healthy Places* report has guided the design of the five new underground stations to improve their sustainability, accountability and innovative design.

## What is biophilic design?

Biophilic design is a nature-informed design approach that can reduce stress, enhance creativity and clarity of thought, and improve our sense of wellbeing and capacity for self-healing.

Biophilic design will underpin the station design for the Metro Tunnel Project. Biophilic design techniques include use of natural light and ventilation, indoor plants, and designs inspired by nature.

## Key benefits

With Deakin University, we've:

- Explored opportunities to design the new Metro Tunnel stations with biophilic design principles to provide an enriching experience for commuters and support improved environmental outcomes
- Delivered a comprehensive report that provides an international technical benchmark for biophilic design and outlines opportunities for how biophilic design can create healthier cities and communities
- Informed the development of the ambitious Green Star and ISCA certification targets adopted by the project.

Case Study

# Green Building Council of Australia

The Green Building Council of Australia (GBCA) is one of Australia's leading authorities on sustainable buildings, communities and cities.

RPV has collaborated with the GBCA to develop an innovative tool for assessing the sustainability performance of underground railway stations. This tool was developed alongside the sustainable design of the Metro Tunnel Project and will be used to rate the sustainability outcomes of the underground railway stations. The tool assesses sustainability performance for design, construction and operation. RPV and GBCA are continuing to work together to ensure our innovative sustainability initiatives can be shared with projects across Australia.

## Key benefits

With GBCA:

- We've developed an industry leading tool for rating the sustainability of underground railway stations.
- We're building on the custom tools to develop a sustainability rating tool for train stations that can be used on projects across Australia.

# Implementation and monitoring

## Managing sustainability

Our comprehensive approach to managing sustainability ensures that sustainability requirements are integrated into the Metro Tunnel Project's deliverables and activities. We're requiring all delivery partners to develop their own sustainability management systems and, importantly, outline how they'll meet the project's sustainability targets and wider initiatives.

## Sustainability coordination

RPV is leading a sustainability coordination subcommittee, which includes representatives from delivery partners and the operator. This group shares knowledge and works to ensure sustainability is implemented across the project.

### 2016

- Early Works contract award (Jun)
- Minister for Planning approves EES (Dec)

### 2017

- Pre-cursor works commence (e.g. site preparation, shafts)
- Property acquisition
- PPP & RSA contract award
- Road network changes

### 2018

- Development of detailed design
- Major construction on tunnels and stations
- RIA contract award
- Piling and acoustic sheds

### 2025

- On track to be completed, a year ahead of schedule

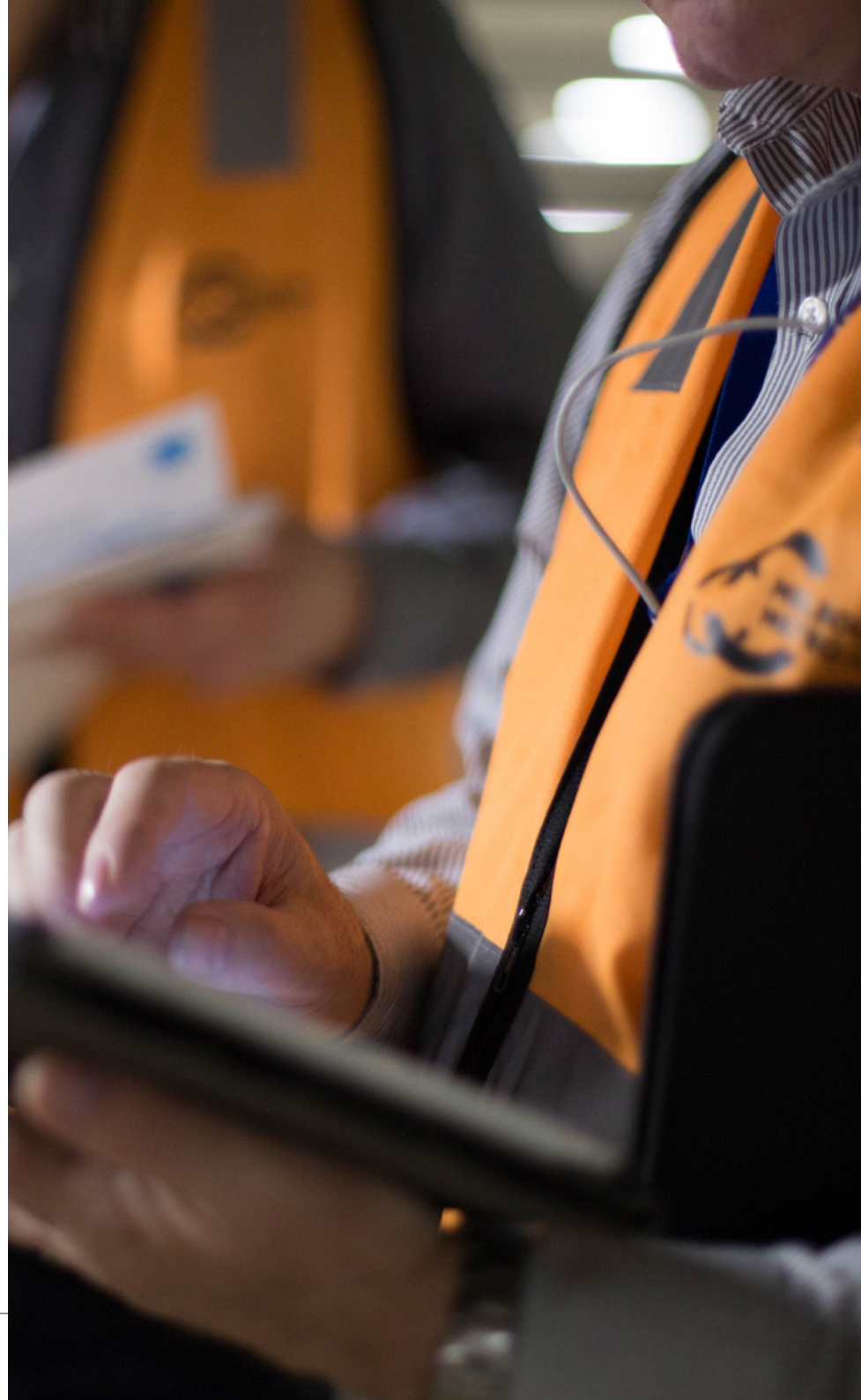
**We're ensuring that sustainability is implemented, monitored and measured as we design and deliver the Metro Tunnel Project.**

## Sustainability rating tools

Another way we're ensuring sustainability outcomes are delivered is by applying leading sustainability rating tools to the project. These include the Infrastructure Sustainability Council of Australia (ISCA)'s IS Rating Scheme Tool, and the Green Building Council of Australia (GBCA)'s custom Green Star Tool. These will set critical benchmarks to monitor and measure the sustainability performance of the Metro Tunnel Project against sustainability requirements.

## Annual reporting

We're committed to reporting our performance against sustainability outcomes on an annual basis until the project is completed.



# Want to find out more?

## Contact


metrotunnel.vic.gov.au

@metrotunnel

@metrotunnelvic

1800 105 105

Rail Projects Victoria

Rail Projects Victoria,
PO Box 4509, Melbourne, VIC 3001


RAIL PROJECTS VICTORIA

VICTORIA State Government