RAIL PROJECTS VICTORIA

Sustainability Annual Report 2017-18

Towards a sustainable future

Wominjeka

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

Smoking ceremony
Aunty Di Kerr conducting a smoking ceremony at the Metro Tunnel Project's Town Hall Station site

See page 46 for the case study

Contents

Forewo

Victoria is growing fast, with the population projected to grow from 6.5 million in 2018 to 11.2 million by 2056. This not only means a bigger Melbourne – it also means bigger regional cities and towns, with Victoria's regional population set to double in the next 20 years[1].

A sustainable and resilient transport system will help meet the challenge, while supporting a growing state. We're excited to be delivering some of the projects that improve Victoria's transport system, including the Metro Tunnel Project and the Regional Rail Revival, and we're working to drive sustainable outcomes during construction and into the future.

Rail Projects Victoria's Sustainability Report for 2017-2018 celebrates some of the stories behind the delivery of our projects. This year's themes are: promoting innovation, reducing our impact, supporting strong communities and building a resilient workforce. These themes showcase the breadth of sustainability initiatives that Rail Projects Victoria and our project teams have implemented to respond to unique opportunities and challenges.

Behind each of these stories are people who saw opportunities to do things better – to try new approaches and drive positive change. Sustainability is everyone's responsibility and I'm proud of the work our teams and delivery partners do to deliver social, economic and environmental sustainability through our projects.

Evan Tattersall
Chief Executive Officer,
Rail Projects Victoria

1 The State of Victoria Department of Environment, Land, Water and Planning 2019, Victoria in Future 2019. Population Projections 2016 to 2056: https://www.planning.vic.gov.au/__data/assets/pdf_file/0032/332996/Victoria_in_Future_2019.pdf

Introduction

About this report

Rail Projects Victoria is committed to driving environmental, social and economic sustainability through the design and delivery of our projects. One of the ways we demonstrate accountability for meeting this commitment is through public reporting on the sustainability performance of our projects.

This is our first sustainability report and it documents our sustainability achievements over the 2017-2018 period.

During this period, two of our projects entered delivery phase – the Metro Tunnel Project and the Ballarat Line Upgrade. This report:

— Outlines our sustainability commitments for each project

— Describes our governance processes for ensuring we meet our commitments

— Shares sustainability initiatives implemented on our projects.

About Rail Projects Victoria

Rail Projects Victoria is a Project Group within the Major Transport Infrastructure Authority, an Administrative Office in relation to the Department of Transport. Rail Projects Victoria is the Victorian Government body responsible for the delivery of the Metro Tunnel Project, Regional Rail Revival, Melbourne Airport Rail, Sunbury Line Upgrade and the Western Rail Plan including fast rail between key regional cities.

Governance approach

Policy

Rail Projects Victoria's Sustainability Policy applies to all projects we deliver. The Policy includes a sustainability vision for our projects:

Through our delivery of major projects, 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.

To achieve this vision, Rail Projects Victoria is committed to:

— Optimising the Projects' design to ensure they are delivered to operate sustainably

— Managing resources efficiently through embedding energy, water and material saving initiatives into the design, construction and operation of the projects

— Avoiding, minimising and offsetting harm to the environment and the loss of biodiversity

— Protecting and conserving the natural environment

— Preparing for the challenges presented by climate change.

Implementation

We give effect to our Sustainability Policy by developing sustainability frameworks and strategies for our programs and projects. These frameworks and strategies translate our sustainability commitments into project specific commitments, objectives and targets, which are supported by project specific sustainability management plans. Our plans articulate the processes for working with delivery partners to ensure sustainability requirements are achieved.

Monitoring sustainability performance

We monitor the sustainability performance of our projects across the delivery phase to ensure we are on track to achieve our sustainability requirements. Our monitoring program includes:

— Collecting and reviewing project sustainability performance information on a monthly basis

— Externally auditing projects' sustainability programs on a regular basis to provide assurance that our sustainability requirements are being met

— Use of third-party verification rating tools, such as the Infrastructure Sustainability Rating Scheme Tool and the Green Star Rating Tools, to measure and monitor sustainability performance on some projects.

Current projects


Collins St
1157
PT

Metro Tunnel Project

Overview

The Metro Tunnel Project will transform Melbourne's congested rail network, but it is much more than an engineering project. It will shape Melbourne's future — physically, socially and economically — and underpin the city's growth for decades to come. Construction on the Metro Tunnel Project began in 2016 and is on track to be completed by 2025.

The Project comprises:

— Twin 9 km-long rail tunnels, running between Kensington and South Yarra

— New underground stations at Arden, Parkville, Domain and two new CBD stations directly connected to the City Loop at Flinders Street and Melbourne Central stations

— Rail tunnel entrances, or portals, at Kensington and South Yarra

— Connections to existing and new train / tram and bus interchanges at Parkville, State Library, Town Hall and Anzac.

The Metro Tunnel Project is being delivered through four work packages – Early Works, Tunnel and Stations, Rail Infrastructure and Rail Systems.

Early Works

Metro Tunnel Early Works delivered the contract to prepare the sites for construction of the Metro Tunnel and five new underground stations. The Early Works Package involved the relocation of utility services such as gas, sewer and water mains, demolition and road, bicycle and footpath changes.

Tunnel and Stations

Cross Yarra Partnership, a consortium led by Lendlease Engineering, John Holland, Bouygues Construction and Capella Capital, is building the twin rail tunnels including the design, construction and maintenance of the main tunnelling works and the five underground stations including station design and fit-out.

Rail Infrastructure

Rail Infrastructure Alliance, a consortium comprising John Holland, CPB Contractors and AECOM, will deliver works connecting the Metro Tunnel to the rest of the network by upgrading and building new infrastructure including a new platform and turnback facility at West Footscray station, and track and signalling work between Tottenham and Oakleigh.

Rail Systems

Rail Systems Alliance, a consortium of CPB Contractors and Bombardier Transportation, is delivering the Rail Systems works, which includes the first roll-out of high capacity signalling and communications system on an existing rail network anywhere in Australia.


To Sunbury
North Melbourne 1
Parkville 2
Kensington (western tunnel entrance)
West Melbourne
To be renamed West Melbourne, formerly known as North Melbourne
State Library 3
Melbourne Central
Flagstaff
Parliament
Town Hall 4
Southern Cross
Flinders Street
Anzac 5
To Cranbourne/ Pakenham
South Yarra (eastern tunnel entrance)

Metro Tunnel Sustainability Commitments

The *Metro Tunnel Sustainability Strategy 2018* sets out the sustainability commitments that apply to the Metro Tunnel Project. These commitments, grouped into nine themes, are presented opposite. The *Sustainability Strategy* also details a set of 33 comprehensive sustainability targets. These targets, designed to support the achievement of the Metro Tunnel sustainability commitments, are outlined in **Appendix A**.

Excellence

Our commitment

Demonstrating leadership in sustainability across every part of the project to deliver positive environmental, social and economic outcomes.

Urban Ecology and Vegetation

Our commitment

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.

Climate Resilience

Our commitment

Working to ensure the planning and design of the Metro Tunnel helps us to adapt and build resilience to predicted climate change impacts.

Communities

Our commitment

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.

Supply Chain

Our commitment

Procuring materials and services from sustainable sources, with strong local content requirements.

Workforce

Our commitment

Helping to build a resilient local workforce through the Metro Tunnel Project to facilitate economic development and prosperity.

Energy

Our commitment

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

Water

Our commitment

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

Materials and Waste

Our commitment

Reducing the impacts of materials across the life of the Metro Tunnel by sourcing materials in a responsible way and carefully managing waste.

REGIONAL RAIL REVIVAL

The Regional Rail Revival program will upgrade every regional passenger train line in Victoria.

It is a joint initiative of the Australian and Victorian governments, delivering:

— Ballarat Line Upgrade
— Bendigo and Echuca Line Upgrade
— Geelong Line Upgrade
— Gippsland Line Upgrade
— North-East Line Upgrade
— Shepparton Freight Network Planning
— Warrnambool Line Upgrade.

REGIONAL RAIL REVIVAL | BALLARAT

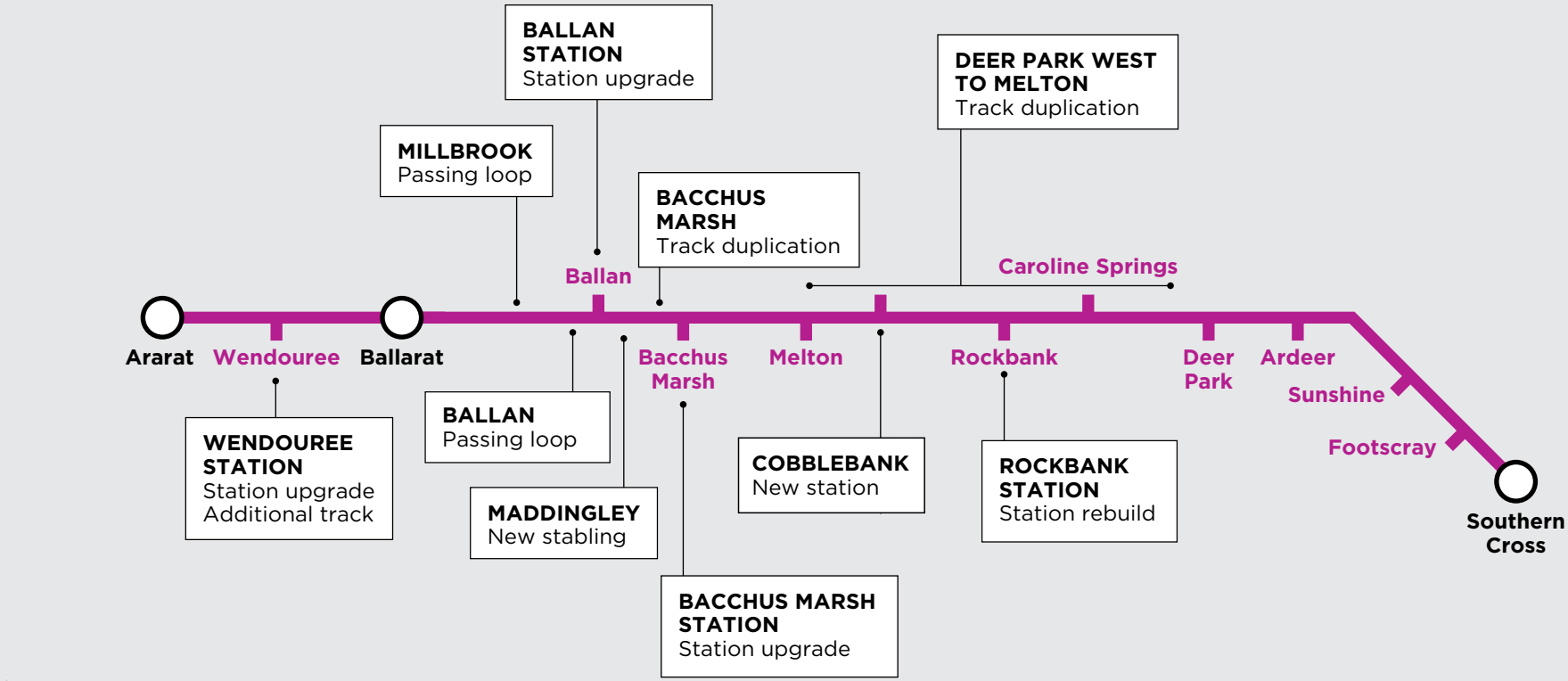
Ballarat Line Upgrade

Overview

The Ballarat Line Upgrade is a half a billion-dollar project that is part of the Regional Rail Revival Program. The project is being delivered by the Ballarat Line Upgrade Alliance, a consortium comprised of Lendlease, Coleman Rail and SMEC Australia. It will deliver more trains and improved reliability for Melbourne's outer western suburbs including:

— Duplication of 18 kilometres of track between Deer Park West and Melton
— A new Cobblebank Station, between Rockbank and Melton, separately funded by the Victorian Government's Growth Area Infrastructure Contribution
— Rebuilt Rockbank Station, including new and longer platforms, a pedestrian overpass and a new car park with 350 spaces
— Bacchus Marsh Station upgrade including a new platform, pedestrian overpass and 100 new car park spaces
— Ballan Station upgrade including a new platform, pedestrian overpass and a new car park on the southern side of the station
— Wendouree Station upgrade including a new platform, pedestrian overpass and extra track
— Track duplication at Bacchus Marsh
— A new stabling facility at Maddingley
— Passing loops at Ballan and Millbrook
— Signalling upgrades and track improvements.

Construction started on the Ballarat Line Upgrade in October 2017 and major construction on the project is expected to be complete in late 2019.


BALLAN STATION
Station upgrade
MILLBROOK
Passing loop
BACCHUS MARSH
Track duplication
DEER PARK WEST TO MELTON
Track duplication
Caroline Springs
Ballan
Ararat
Wendouree
Ballarat
Bacchus Marsh
Melton
Rockbank
Deer Park
Ardeer
Sunshine
Footscray
Southern Cross
WENDOUREE STATION
Station upgrade
Additional track
BALLAN
Passing loop
MADDINGLEY
New stabling
COBBLEBANK
New station
ROCKBANK STATION
Station rebuild
BACCHUS MARSH STATION
Station upgrade


Ararat
Ballarat
Melbourne

REGIONAL RAIL REVIVAL | BALLARAT

Ballarat Line Upgrade Sustainability Commitments

The Ballarat Line Upgrade Sustainability Management Plan sets out sustainability commitments specific to the project. These commitments are translated into nine key themes opposite and supported by a comprehensive set of 44 targets (**Appendix B**).

Excellence

Our commitment

Demonstrate leadership in the commitment to a prosperous and integrated economic, social and environmental sustainable future.

Urban Ecology and Vegetation

Our commitment

Protect and enhance vegetation, functioning of ecosystems and maintain biological diversity.

Climate Resilience

Our commitment

Respond to the challenges of climate change impacts through adaptation and resilience planning and design.

Communities

Our commitment

Support and enhance social, cultural and community wellbeing.

Supply Chain

Our commitment

Demonstrate commitment to sustainable procurement.

Workforce

Our commitment

Facilitate economic prosperity and development and providing a resilient local workforce.

Energy

Our commitment

Promote energy efficiency throughout design and delivery and implement innovative uses of renewable energy on site.

Water

Our commitment

Reduce water through an energy efficient design and identify and use non-potable water from local sources.

Materials and Waste

Our commitment

Reduce the impact of materials over the lifecycle, and provide healthy environments through the reduction of emissions, pollution and waste.

Promoting innovation

Innovation, new ideas and new approaches can lead to advancement in sustainability benchmarks and industry best practice.

Innovation in construction

Our projects are innovating in construction to minimise adverse impacts on local communities.

Case study:

Pile break-back

Case study:
Pile break-back

This initiative supports the following sustainability targets:

Excellence

Communities

During piling works for the construction of the Metro Tunnel Project's Parkville Station, our delivery partner Cross Yarra Partnership used cutting-edge technology to break-back piles (the support structures used during bulk excavation).

Pile break-back is required to crop piles to the correct level to allow the subsequent construction of pile caps or capping beams. Traditionally carried out by rock hammers or jackhammers, this innovative method involves the use of expanding mortar to create pressure and generate a horizontal cut so the top layer of concrete can be easily removed by crane.

This technique removes the need for jackhammers and excavators during the break-back process, reducing noise, dust and vibration impacts. This is a significant positive outcome for communities surrounding the construction works.

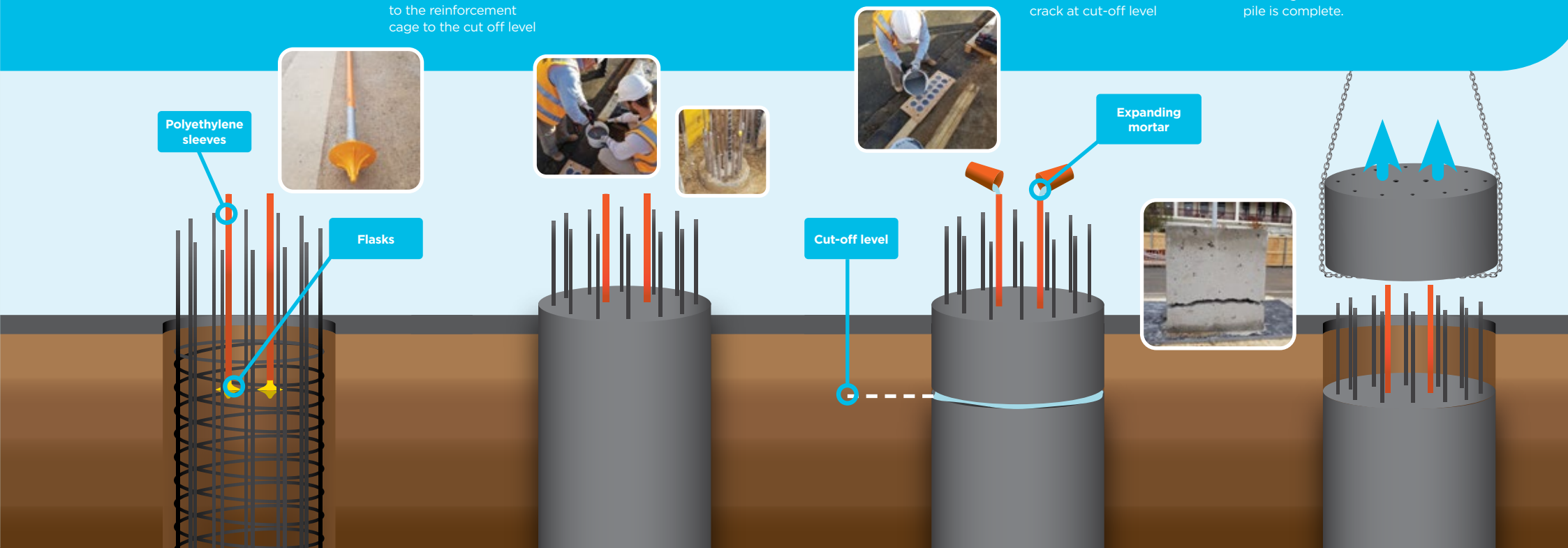
The innovative break-back process

As the piles are constructed, we are using an innovative method to break-back the piles. The method involves the use of an expanding mortar to create pressure and generate a horizontal cut, so the top layer of concrete can be easily removed by a crane.

This removes the need to use jack hammers and excavators in the pile break-back process, reducing the noise, dust and vibration impacts on the surrounding community.

Following the removal of the top layer of concrete, a temporary concrete capping beam is cast on top of completed piles to prevent any lateral displacement during subsequent excavation works.

1. Polyethylene sleeves are placed over the reinforcement cage down to the desired cut off level
2. An arrangement of purpose designed flasks with PVC tubes attached are fixed to the reinforcement cage to the cut off level
3. The concrete is then poured into the hole
4. Once the concrete is set, an expanding mortar is poured into the tubes
5. In this process, the pressure from the expanding mortar forms a perfectly horizontal crack at cut-off level
6. The top layer of concrete can then be removed using a crane and the breaking back of the pile is complete.



Innovation in design

Designing for sustainability means our projects leave a positive sustainable legacy.

Case studies:

Regenerative braking

Moray Street upgrade

New North Melbourne Station

Case study:
Regenerative braking

This initiative supports the following sustainability targets:

Excellence

Energy

Cross Yarra Partnership, our Metro Tunnel Project delivery partner is installing regenerative brakes on station escalators. Regenerative brakes are an innovative design as they capture otherwise wasted braking energy which can then be stored and reused. Energy is captured and stored by feeding reclaimed energy from regenerative brakes on escalators, travelling in a downward direction, back into the grid.

Case study:
Moray Street upgrade

This initiative supports the following sustainability targets:

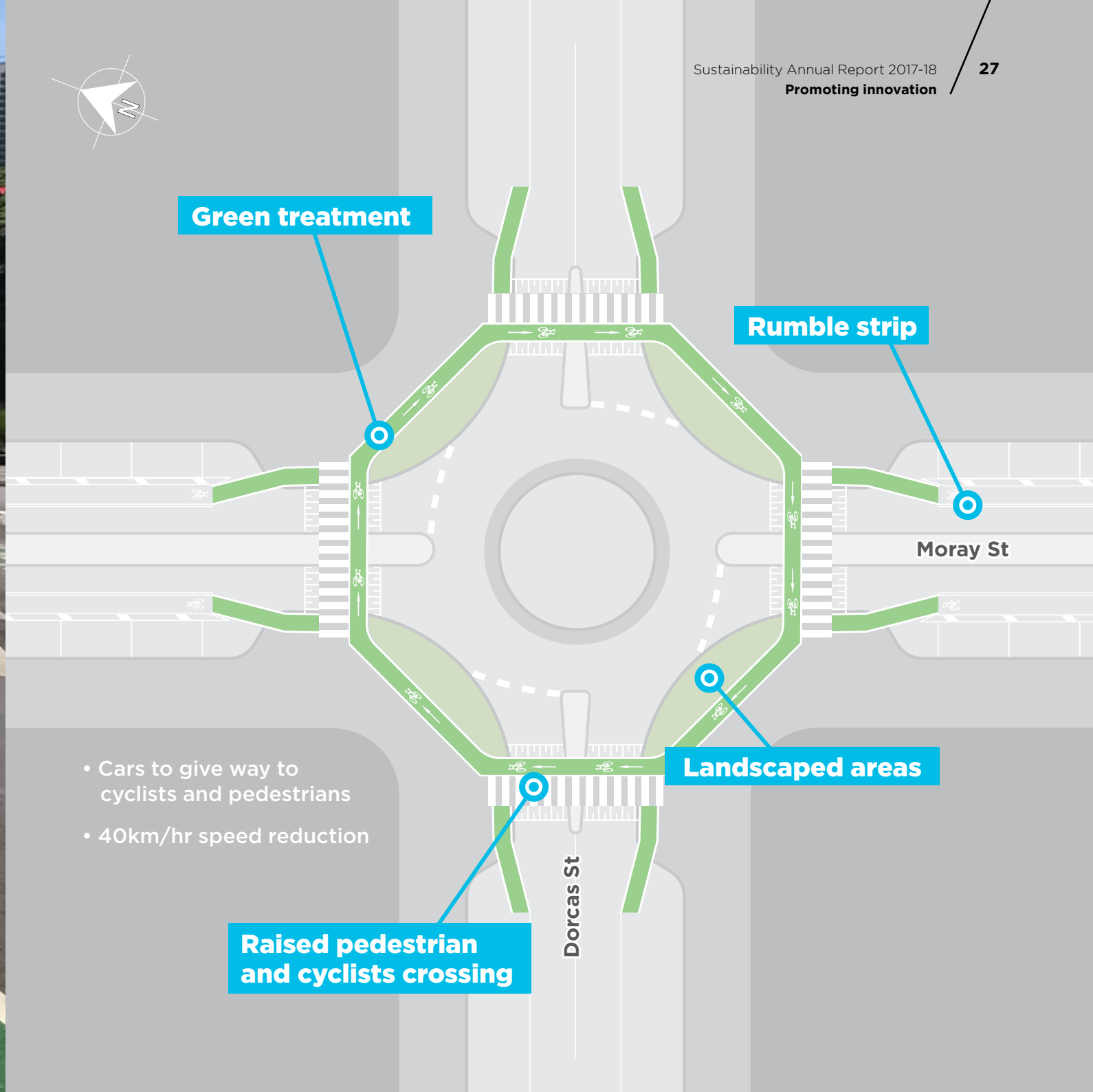
- **Excellence**
- **Urban Ecology and Vegetation**
- **Communities**
- **Water**

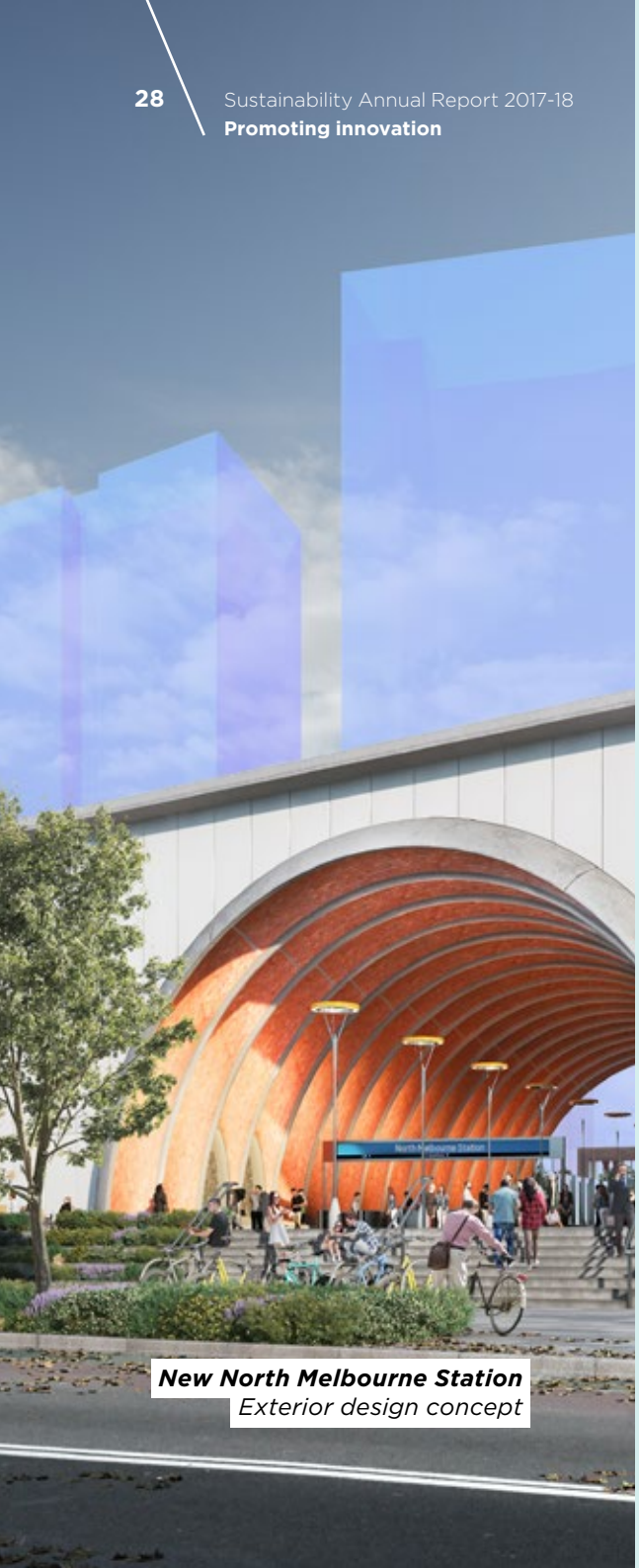
In December 2018, Metro Tunnel Early Works upgraded the Moray Street bike path, providing a safe alternative north-south route for cyclists during Metro Tunnel works on St Kilda Road.

The new Moray Street bike path and roundabouts are a Victorian first. The roundabouts are an innovative protected design which gives pedestrians and cyclists right-of-way. A raised zebra crossing and a dedicated bike path running parallel at each pedestrian crossing, requires vehicles to stop, gives cyclists right-of-way, and allows cyclists to pass through the roundabout freely and safely.

The Moray Street Upgrade also included the delivery of additional vegetated surfaces and passive irrigation.

Moray Street upgrade
A Victorian First at Moray and Dorcas Street roundabouts





New North Melbourne Station
Exterior design concept

Case study:
New North Melbourne Station

This initiative supports the following sustainability targets:

- **Excellence**
- **Urban Ecology and Vegetation**
- **Climate Resilience**
- **Communities**
- **Energy**
- **Water**
- **Materials and Waste**

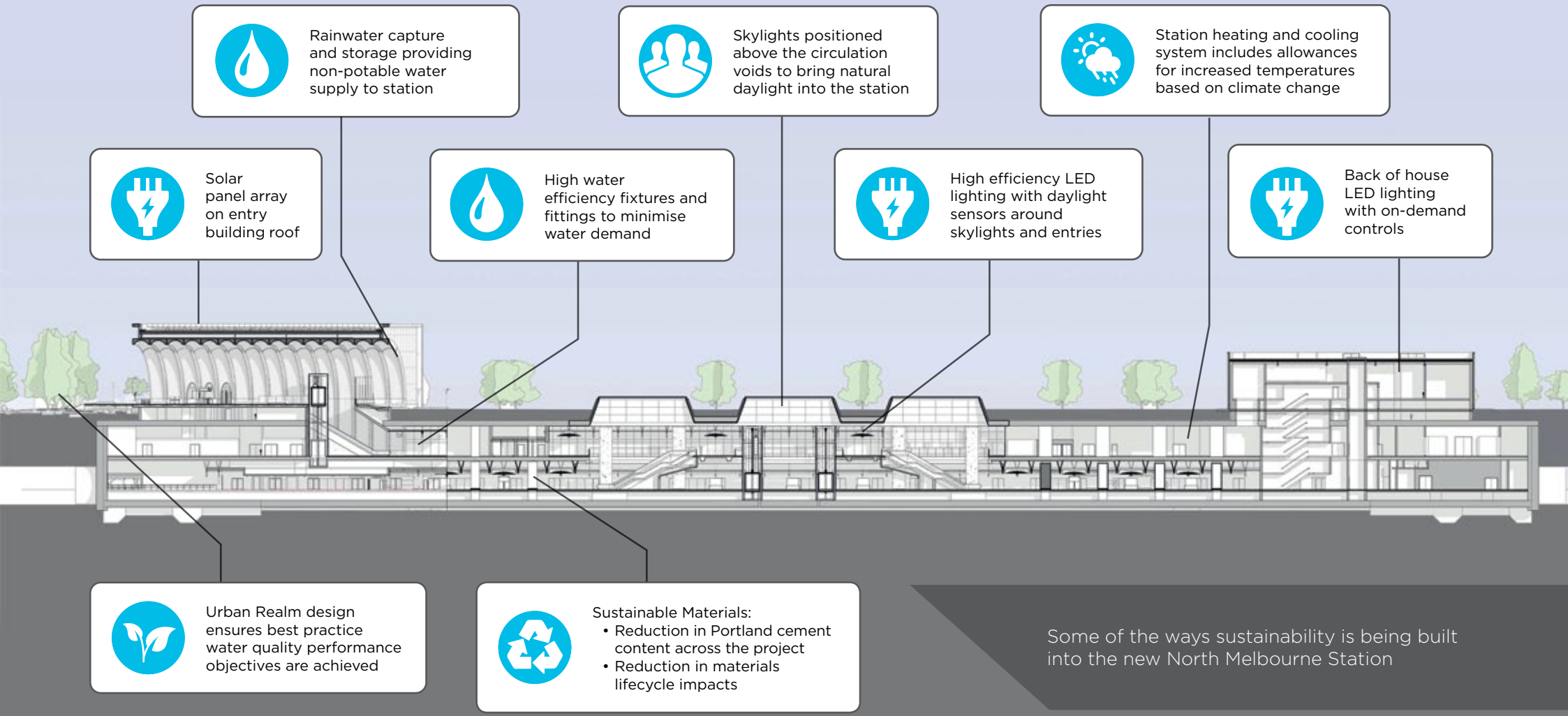
The new North Melbourne Station highlights some of the sustainable design initiatives being implemented in stations across the Metro Tunnel Project.

There are several elements of the new North Melbourne Station design that work to reduce the station's impact on the environment. Some key design initiatives include:

— Solar panels to reduce station energy consumption

— Skylights and light emitting diode (LED) lights which respond to daylight-saving energy when there is already sufficient natural light provided in the station

— Water sensitive urban design including rainwater capture and storage, tree planting and landscaping providing passive irrigation and reducing the use of potable water.



Some of the ways sustainability is being built into the new North Melbourne Station

New North Melbourne Station
A case study of station design sustainability initiatives

We are helping to protect and enhance ecological systems. Our project teams have implemented a range of environmental initiatives.

Reducing our impact

Tree reuse

We are working with local councils and other partnering organisations including Vision Australia and Aboriginal Communities to facilitate the effective repurposing of trees to be removed from the Metro Tunnel Project area.

Depending on the integrity of a tree removed, it can be repurposed in several ways. Stronger and more robust trees can be repurposed for artwork, furniture, TAFE training programs, ecological parks, playgrounds, cultural heritage commemoration and community development programs. Trees which have limited structural integrity can be mulched and used to create and maintain a healthy growing environment for trees.

Some repurposing highlights include:

- Timber milling with vision impaired members of the community
- A large sugar gum eucalyptus tree used to create cultural objects by the Mullum Mullum Aboriginal Community and Healesville Indigenous Community Association
- Mulched timber donated to Westgate Park
- Milled timber crafted into benches for Pentridge Community Garden
- Native gum trees repurposed as habitat logs in Elsternwick Park
- Repurposing trees into fauna habitat structures at a City of Port Phillip workshop, ‘Habitat Creation’.

Case studies:
Healesville
Vision Australia

Case study: Healesville

This initiative supports the following sustainability targets:

- **Urban Ecology and Vegetation**
- **Communities**
- **Materials and Waste**

The Metro Tunnel Project arranged for the Mullum Mullum Aboriginal community and the Healesville Indigenous Community Association to repurpose a large sugar gum eucalyptus tree that was removed from South Yarra.

The Mullum Mullum Aboriginal community and the Healesville Indigenous Community Association youth and men groups sawed, peeled, sanded and carved the sugar gum tree's timber into cultural items, including a two-person bark canoe, boomerangs, coolamon dishes and clapsticks.

The timber has provided an opportunity for local Aboriginal communities to connect with Indigenous craftmanship and cultural practices thousands of years old.

Healesville
Tree investigations on the Metro Tunnel Project

Case study: Vision Australia

This initiative supports the following sustainability targets:

Urban Ecology and Vegetation

Communities

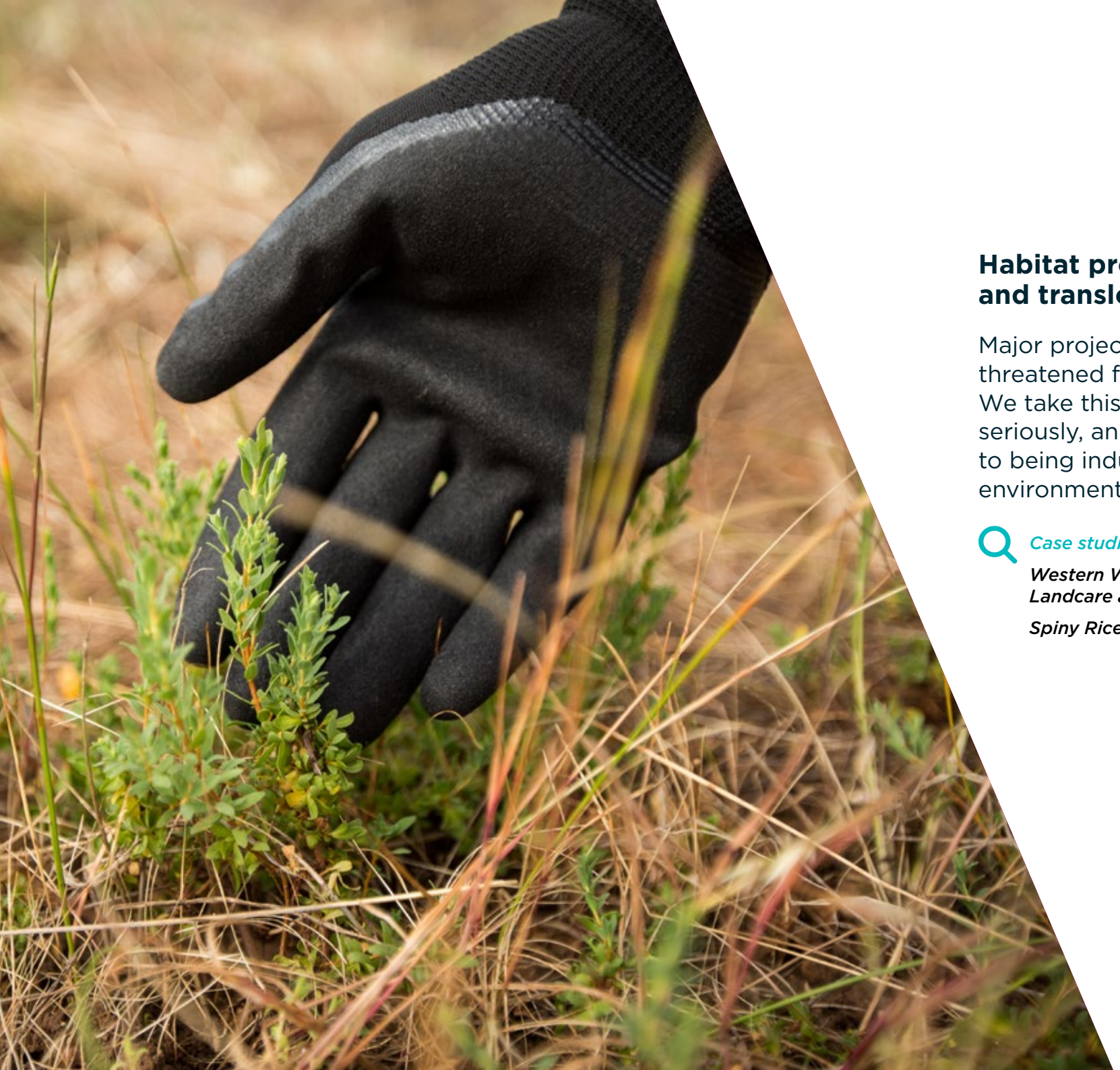
Materials and Waste

A partnership with Vision Australia has involved running weekly classes for around 30 people where qualified sawyers train blind and low-vision participants in woodworking to produce a range of timber items, such as community furniture.

Participants are taught to safely use heavy machinery to mill trees before learning how to cut giant logs into planks that are then left to dry for a year.

Once dried, the materials are returned to Vision Australia woodwork shops in Kensington and Ballarat, where participants use tailored equipment (speaking to the user as they saw) to carve, sand and polish the timber for wood craft projects.

This collaboration with Vision Australia responds to Rail Projects Victoria's key environmental and social sustainability commitments, repurposing timber as well as restoring confidence in those who relied heavily on their practical skills before losing their eyesight.



Habitat protection and translocation

Major projects can impact threatened flora and fauna. We take this responsibility seriously, and are committed to being industry leaders in environmental management.

Case studies:

Western Water and Pinkerton Landcare and Environment Group

Spiny Rice-flower

Case study:
Western Water and Pinkerton Landcare and Environment Group

This initiative supports the following sustainability targets:

- **Urban Ecology and Vegetation**
- **Communities**
- **Materials and Waste**

The Ballarat Line Upgrade teamed up with Western Water and Pinkerton Landcare and Environment Group (PLEG) to repurpose trees removed for habitat for native birds and other wildlife.

The trees, impacted by new tracks or station infrastructure, have been relocated between Pinkerton Forest and Bush's Paddock, near Melton, where PLEG and Western Water have been working to regenerate the forest and create a wildlife corridor.

Native birds, including the Sacred Kingfisher and the vulnerable Zebra Finch, have already taken to the area. Parrots, cockatoos and owls are expected to nest in the trees as they mature and hollow out.

Western Water and Pinkerton Landcare and Environment Group
Trees repurposed as habitat as part of the Ballarat Line Upgrade

Spiny Rice-flower
Relocation

Case study:
Spiny Rice-flower

This initiative supports the following sustainability targets:

Urban Ecology and Vegetation

As part of the Ballarat Line Upgrade, almost 400 Spiny Rice-flower plants were relocated. Spiny Rice-flower plants and the bioregion which they inhibit, the Victorian Volcanic Bioregion, are critically endangered, highlighting the importance of the relocation.

Careful planning was required to move the Spiny Rice-flower plants from the Caroline Springs section of the rail corridor to a site more than 6km away. The project team, required to salvage between 50 and 85 per cent of these threatened plants, successfully relocated 100 per cent. To date, survival rates have been positive, and Rail Projects Victoria and the Ballarat Line Upgrade Alliance are working hard to ensure successful re-establishment of the Spiny Rice-flower in its new location.

Supporting strong communities

Through the delivery of our projects we have implemented initiatives in social procurement, community engagement, education and creativity.

Celebrating our heritage

Victoria's heritage is unique, and Rail Projects Victoria aims to retain, protect and celebrate significant registered heritage features including buildings, views and vegetation.

Case studies:

Victoria's biggest archaeological dig

Smoking ceremony

Cultural proficiency training

Victoria's biggest archaeological dig
Metro Tunnel workers completing an Archaeological survey at the State Library site

Case study:
Victoria's biggest archaeological dig

This initiative supports the following sustainability targets:

Communities

The biggest archaeological investigations in Victoria's history have been undertaken at the sites of the new State Library and Town Hall Station in Melbourne's CBD.

In May 2018, and ahead of works for the Metro Tunnel Project, archaeological digging began through layers of rock and soil to uncover archaeological remains and artefacts.

The digs, overseen by Heritage Victoria, unveil a story of Melbourne's transformation and have uncovered more than a million artefacts from the sites, which have been home to various people, businesses and dwellings over the years.

Viewing windows were installed so the public could watch as 100 archaeologists, field workers, Registered Aboriginal Parties and students from The University of Melbourne, RMIT and La Trobe universities undertook the digs.

This rare opportunity to uncover Melbourne's history and share it with the public has created an opportunity to further understand and celebrate part of Melbourne's historical development.

Victoria's biggest archaeological dig
Artefacts

Victoria's biggest archaeological dig
Public viewing windows at Town Hall construction site

Victoria's biggest archaeological dig
Metro Tunnel workers completing an Archaeological survey at the State Library site

Case study:
Smoking ceremony

This initiative supports the following sustainability targets:

Communities

Prior to the main construction works beginning in 2018, Welcome to Country (Tanderrum) ceremonies were held at the Metro Tunnel Project's construction sites. The ceremonies were led by Aunty Di Kerr, a Wurundjeri Elder, to welcome the construction teams to the land.

Welcome to Country ceremonies are often performed by Aboriginal Traditional Owners before the start of major construction.

Smoking ceremony
Aunty Di Kerr conducting a smoking ceremony at the Metro Tunnel Project's Town Hall Station site

Case study:
Cultural proficiency training

This initiative supports the following sustainability targets:

- **Communities**
- **Supply Chain**
- **Workforce**

All our delivery partners and RPV staff are required to take part in cultural proficiency training. The training is being delivered by Indigenous Cultural Connections, which is a 100% owned and operated Victorian Aboriginal business. This interactive training aims to inform, advise and preserve the longstanding Aboriginal history in Victoria.

Metro Tunnel HQ

Metro Tunnel HQ

Metro Tunnel HQ is a high-tech visitor centre in the heart of the CBD inspiring the community and the next generation of train users to learn about the Metro Tunnel Project and how they'll benefit from it for decades to come.

Metro Tunnel HQ opened in June 2018 and recorded more than 41,000 visitors by the end of the year.

Metro Tunnel HQ in Swanston Street is a place where people can chat to staff about works happening in their area, use interactive screens to discover the benefits of the project and try virtual reality goggles to experience the world of tunnel boring machines, archaeology and high capacity trains.

It also features an education program where students are taught about the project in a way that matches the Victorian Curriculum.

Case study:

Education Program

Case study:
Education Program

This initiative supports the following sustainability targets:

Communities

Workforce

Rail Projects Victoria has created and implemented an Education Program that showcases our projects to schools and universities across Victoria, with a focus on careers learning, developing skills and encouraging student participation in Science, Technology, Engineering and Maths (STEM) subjects. The Education Program uses project-relevant subject matter linked to the Victorian Curriculum to generate learning outcomes.

Rail Projects Victoria's education program recognises that young people have a large stake in our future transport needs. The objectives of the Education Program are to:

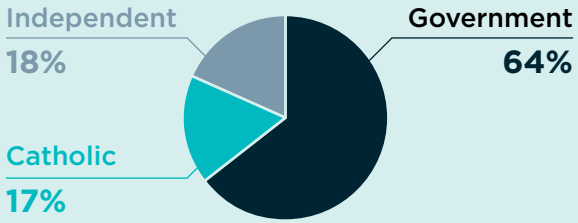
— Engage with schools and universities to increase student awareness and understanding of our projects, and more broadly the jobs and learning opportunities associated with them

— Use our projects as catalysts to promote student engagement with subjects

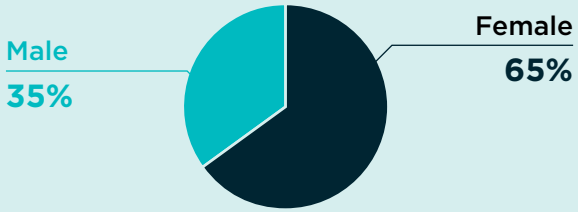
— Support young people from diverse backgrounds to develop their skills, knowledge and understanding of future career opportunities in the transport and infrastructure sectors.

In 2017 and 2018, the Education Program delivered learning activities reaching about 2,500 students from almost 40 different schools. Targeting girls' schools and supporting Power of Engineering events has been the key to achieving a 65 per cent female participation rate.

Schools by Sector



Male / Female Students



Education Program
School students learn about the Metro Tunnel Project at Metro Tunnel HQ

Metro Tunnel Creative Program
Lyn-Al Young, 'Nurrai Wula (Baby Emu)', silk painting on temporary hoarding at Town Hall Station construction site, 2019. Photographed by James Henry

Metro Tunnel Creative Strategy

Rail Projects Victoria's Metro Tunnel Creative Strategy guides the delivery of creative interventions undertaken as part of the Metro Tunnel Project and enables opportunities to engage local communities. The Creative Strategy includes a Temporary Program and a Legacy Program.

Legacy Artwork Program

The Metro Tunnel Legacy Artwork Program will deliver world-class public art experience for visitors and users of the Metro Tunnel and ensure the stations become must-see destinations that enhance Melbourne's reputation as Australia's cultural capital.

The Project is commissioning six major works, comprising five works for the new stations at North Melbourne (near Arden Street), Parkville, State Library, Town Hall and Anzac, and one line-wide commission which spans all five stations.

Temporary Creative Program

The Metro Tunnel Temporary Creative Program is dedicated to enlivening and enhancing city life alongside the construction of the Metro Tunnel Project. The program features activities and events designed and led by a team of designers, curators, and place managers.

Initiatives such as decorating hoardings, engaging with creative events and other initiatives provide opportunities for communities to engage with world-class arts and culture. The program has set an international benchmark for integrating creativity and transport infrastructure and supported Melbourne's reputation as a creative city.

Case study:

Collage by Beci Orpin

Metro Tunnel Creative Program
Beci Orpin, large-scale 'collage' on temporary hoarding at State Library Station construction site, 2017. Photographed by Chris Middleton. Historic images from the State Library Victoria Image Bank.

Case study:
Collage by Beci Orpin

This initiative supports the following sustainability targets:

Excellence

Communities

In 2017 as part of the Temporary Creative Program, the Metro Tunnel Project commissioned local artist Beci Orpin to give the hoardings at the State Library site a modern makeover.

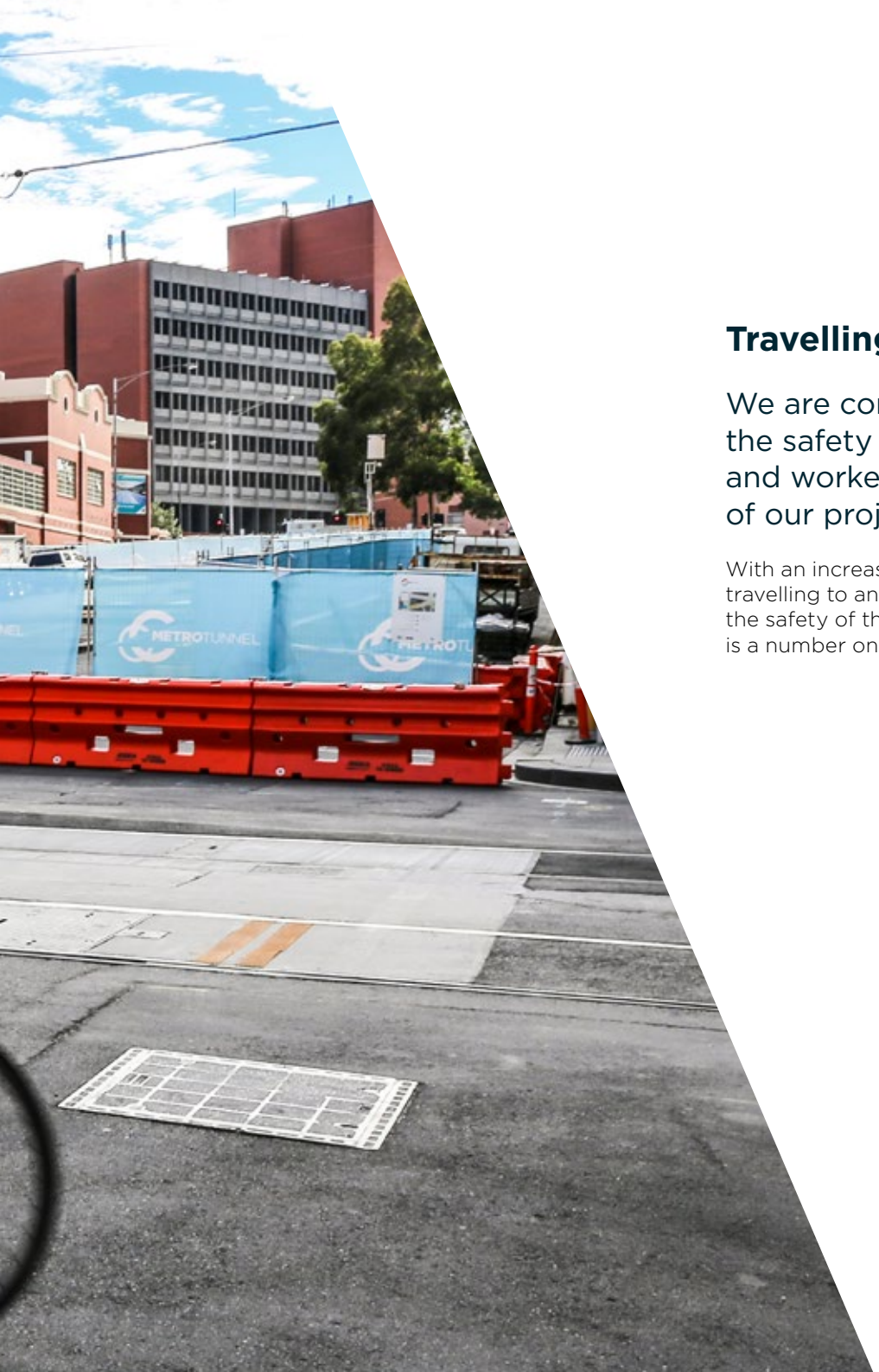
Spanning nine metres, the installation featured papers treated with a variety of materials such as inks, gouache, acrylics, pastels, colour pencils and watercolours. Photographed by Chris Middleton, the intricate collage was designed to continually surprise the viewer – especially those who passed by the site often.

The work featured historical context with prints of old city plans from the State Library archives, as well as pieces referencing local history, culture and indigenous flora.

The colourful installation activated the construction site and enhanced the experience of the area.

Metro Tunnel Creative Program
Beci Orpin, large-scale 'collage' on temporary hoarding at State Library Station construction site, 2017. Photographed by Christian Pearson (Misheye).


ROAD
CLOSED



Travelling safely near worksites

We are committed to ensuring the safety of the community and workers during construction of our projects.

With an increasing number of trucks travelling to and from our projects' worksites, the safety of the workers and the public is a number one priority.

We are working to reduce risks to cyclists, pedestrians and motorcyclists through a range of approaches:

— Fitting additional safety equipment to heavy construction vehicles

— Raising awareness with truck drivers on sharing the road with vulnerable road users

— Improving the design of temporary road and footpath diversions around worksites

— Providing information to vulnerable road users about the safest behaviours around trucks.

Case study:
Swapping Seats

Swapping Seats
Cyclists, pedestrians and road users learn about safety around trucks

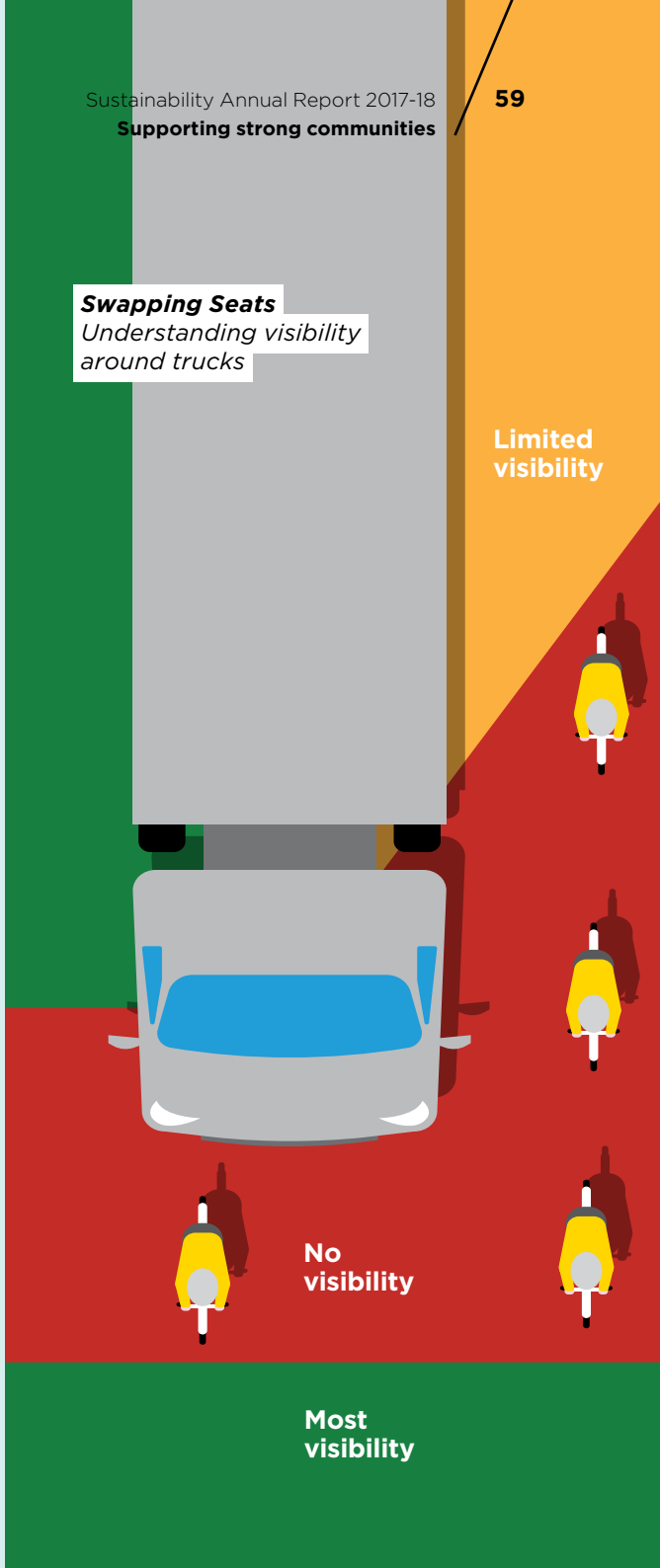
Case study:
Swapping Seats

This initiative supports the following sustainability targets:

- **Excellence**
- **Communities**
- **Workforce**

The Metro Tunnel Project collaborated with Bicycle Network to deliver the Swapping Seats campaign. The Swapping Seats pop-up also appeared at major events including Around the Bay cycle event in 2018, the Great Victorian Bike Ride in 2018, and as part of awareness raising campaigns on RMIT and The University of Melbourne campuses.

This initiative simulated a truck and a cyclist approaching the same intersection. Participants were invited to sit inside the cab of the truck and identify the blind spots and high-risk situations and areas as a cyclist rode around the truck, helping to ensure cyclists and pedestrians have an awareness of a truck driver's limited visibility.



Building a resilient workforce

We deliver our projects in line with the Victorian Government's Major Project Skills Guarantee, a commitment to growing jobs and promoting vocational training. We are building a resilient workforce by training and upskilling employees in the rail infrastructure industry.

Growing diverse and skilled teams

Our projects provide opportunities to grow the diversity and skills of Victoria's construction and rail industries.

Case studies:

Women in Construction

MetroHub

Women in Construction
Metro Tunnel workers

Case study:
Women in Construction

This initiative supports the following sustainability targets:

Communities

Workforce

Women in Construction is a program provided by our Metro Tunnel Project delivery partners, Cross Yarra Partnership. It is a six-week structured pre-employment program guaranteeing employment as a civil construction apprentice on the Metro Tunnel Project upon successful completion of the course. Women in Construction gives women without pre-existing experience or qualifications the chance to gain full-time employment with a clear pathway into the construction industry.

The longevity of the project ensures that these apprentices will have a chance to build professional and technical skills working on the Metro Tunnel Project.

Women in Construction
Sarah working on the Metro Tunnel Project

MetroHub
Offices on St Kilda Road

Case study:
MetroHub

This initiative supports the following sustainability targets:

- **Excellence**
- **Communities**
- **Supply Chain**
- **Workforce**

MetroHub works with a number of partners such as Holmesglen Institute's Skills and Jobs Centre, Whitelion, CareerSeekers, CareerTrackers, Asylum Seeker Resource Centre and social enterprises to support priority jobseekers. Priority jobseekers can get a head start in their careers through the employment, training and industry connection centre established as part of the Metro Tunnel Project.

MetroHub's Cadet Program provides university students with a year-long placement working with Cross Yarra Partnership, including two block placements during the summer and winter university semester breaks. The program provides young people with valuable on-the-job experience in a professional environment while undertaking university studies.

MetroHub
Offices on St Kilda Road

Image courtesy: Whitelion

Working with social enterprises

Our teams work with social enterprises and support opportunities for all Victorians to participate in the delivery of our projects.

Case studies:

Whitelion: Professional Pathway Traineeship Program

Kinfolk

Case study:
Whitelion:
Professional Pathway Traineeship Program

This initiative supports the following sustainability targets:

Communities

Supply Chain

Workforce

We are committed to providing opportunities to social enterprise businesses that help disadvantaged jobseekers in our community.

Cross Yarra Partnership has partnered with Whitelion, a not-for-profit organisation that works with disadvantaged members of the community to provide young people at risk with opportunities.

Whitelion builds strong partnerships and relationships between young disadvantaged people and their caseworkers, community agencies, government, business and volunteers to give young people the tailored services they need to succeed.

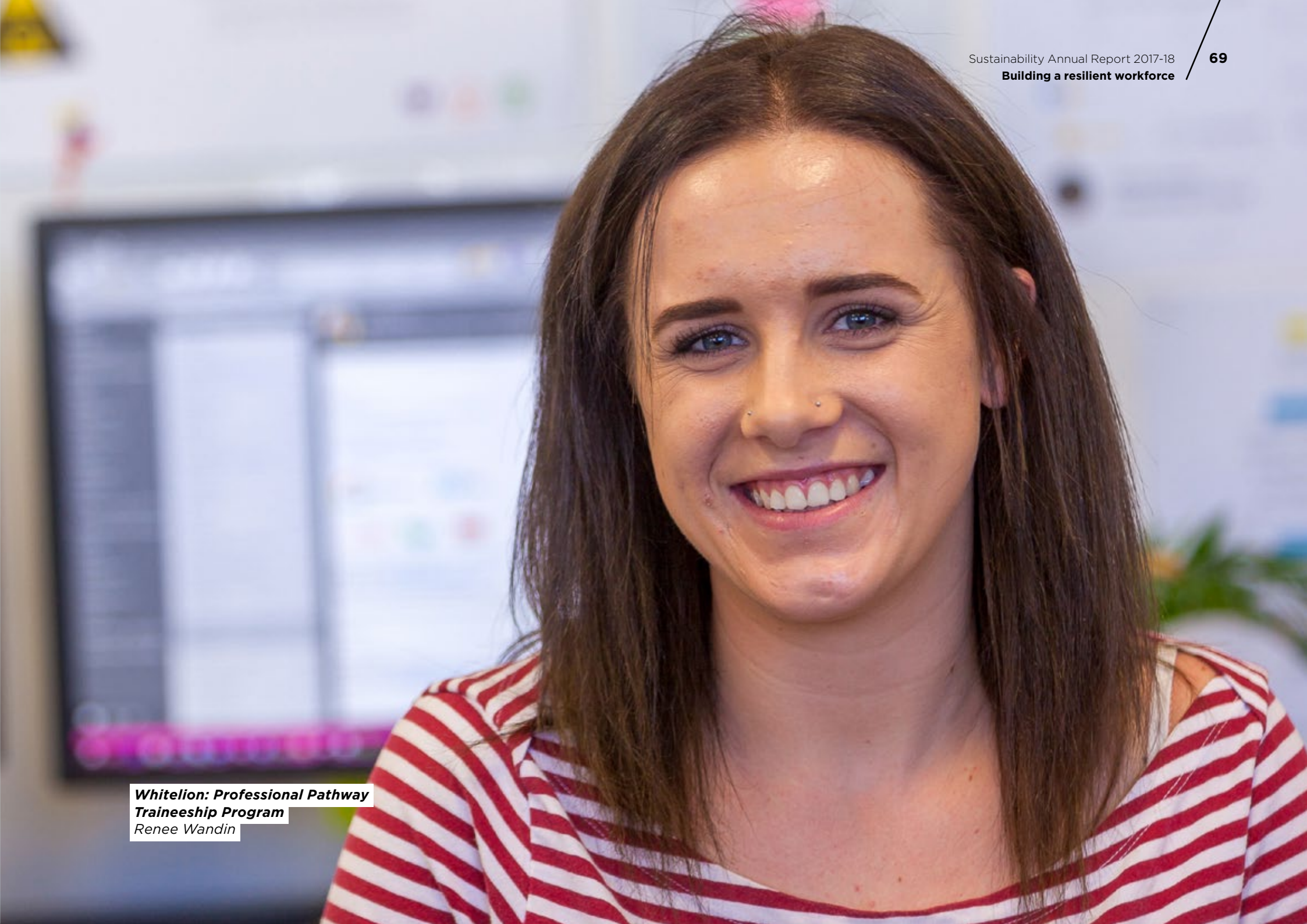
Cross Yarra Partnership partnered with Whitelion to open a café at the construction site of the new North Melbourne Station called Pouring for a Purpose. The café aims to increase the employability of disadvantaged young people who are interested in the hospitality and coffee industry by giving them the necessary knowledge and skills to obtain long-term employment.

Professional Pathway Traineeship Program

Cross Yarra Partnership, together with Whitelion, developed the Professional Pathway Traineeship Program to provide at-risk youth with on-the-job training and a qualification on completion.

Renee Wandin was the first graduate of the 18-month program to secure permanent employment with the Cross Yarra Partnership.

As part of the traineeship, Renee completed a Certificate IV Business Administration at Holmesglen. Renee is currently employed as a Training Administrator, managing the inductions of the thousands of people working on the Metro Tunnel Project, as well as the training programs calendar.



Whitelion: Professional Pathway Traineeship Program
Renee Wandin

Kinfolk
Volunteers
Image courtesy: Kinfolk

Case study: Kinfolk

This initiative supports the following sustainability targets:

- **Excellence**
- **Communities**
- **Supply Chain**

Since 2018, the Rail Systems Alliance has partnered with the social enterprise Kinfolk. Kinfolk is a Melbourne-based café, event space and catering business driven by volunteers with 100% of distributable profits donated to their partner charities every year. Kinfolk contributes to building more inclusive communities by providing employment and volunteer opportunities, regardless of age, race or gender.

The Rail Systems Alliance uses the event space and catering services of Kinfolk for meetings and professional development which helps to generate vital funds to the charities Kinfolk support.

Kinfolk
Healthy Sandwiches
Image courtesy: Kinfolk

Towards a sustain future

able

Metro Tunnel Creative Program
Mike Maka (Makatron), Hayden Dewar, Welin, Scott Nagy and Krimsone, 'Kensington', painted mural at Western Portal construction site, 2019. Photographed by Charlie Kinross. The artwork was painted with assistance from local residents and the Kensington Community Children's Co-Operative.

Our projects are off to a great start, with many exciting initiatives underway to deliver sustainable environmental, social and economic outcomes.

We look forward to sharing more sustainability stories and reporting on our sustainability progress as we deliver our projects.

Appendices

Appendix A – Metro Tunnel Project Sustainability Targets

Excellence

Our target

— Achieve a minimum IS score of 70 (Excellent) 'Design' and 'As Built' certified rating under the ISCA IS Rating Tool.

— Achieve a minimum 5 Star Green Star certified rating under the GBCA 'Design' and 'As-Built' Melbourne Metro Rail Tool for all below ground stations.

— Publicly report sustainability performance on an annual basis.

— Demonstrate the implementation of innovative and pioneering initiatives in sustainable design, processes or advocacy that is considered a first in Australia and/or the world through the achievement of:

  — innovative and pioneering initiatives during design and construction; and/or

  — a broader market transformation towards sustainable development.

Urban Ecology and Vegetation

Our target

— Double tree canopy cover by 2040 compared to the base case through the reinstatement of lost trees, planting of new trees, and the creation of improved growing conditions.

— Ensure that the total amount of vegetated surface permanently gained post construction will be greater than the total amount of vegetated surface area permanently lost.

— At least 25% of the new and reinstated planting areas must consist of diverse, multi-story plantings for biodiversity.

Climate Resilience

Our target

— Undertake a climate risk assessment and develop a climate change adaptation plan that addresses climate risks and implement measures that ensure infrastructure, stations and precincts are resilient to the impacts of a changing climate.

Communities

Our target

— Implement initiatives that generate positive social outcomes to strengthen the economic, social and environmental well-being of the community.

— Support the State's commitment to social procurement by implementing strategic procurement practices to generate social benefits beyond the products and services required.

— Identify places of historical and cultural significance and minimise adverse impacts during construction and operation; develop and implement an interpretation plan that details initiatives to celebrate cultural connections and local identity.

— Implement an independent design review process that enables technical experts to effectively address key urban design aspects of connectivity, accessibility, safety and identity.

— Provide timely and relevant information to the community on milestones, project designs and construction impacts; proactively identify and communicate opportunities for the community to participate in project planning and delivery.

Supply Chain

Our target

— Develop and implement a project wide Local Content Strategy that establishes the framework for meeting or exceeding specific significant, strategic local content targets and general local content considerations in accordance with the Victorian Industry Participation Policy Act 2003, including:

  — Collaborate with the Industry Capability Network to maximise opportunities for local Small and Medium Enterprises (SMEs) participation.

  — Develop bespoke local content targets for each delivery package within the project.

  — Identify local SMEs for potential participation in the Supply Chain for the project and demonstrate how these local SMEs have been alerted to potential tenders and supply opportunities.

Workforce

Our target

— Identify and implement workforce initiatives that provide for the utilisation of new workplace skills and contribute to relevant sectoral, state and national targets.

— Utilise Victorian registered apprentices, Victorian registered trainees or engineering cadets for at least 10% of the contract works' total estimated labour hours in accordance with the Major Project Skills Guarantee.

— Achieve the Aboriginal Employment Target of 2.5% of total labour hours on the project.

— Develop and implement nationally recognised accredited training and skill development programs and ensure that 20% of the workforce participate in Nationally Recognised Accredited Training.

— Assess current and future workforce skill needs and develop a skills and labour gap plan and workforce profiles, including skill categories, required for the design and construction of major elements of the project.

— Develop and optimise employment and training opportunities for economically and socially disadvantaged individuals during the construction and operational phase.

Energy

Our target

— Achieve reductions in greenhouse gas emissions by a minimum of 20% below the base case (scope 1 and scope 2 emissions), excluding the use of renewable energy, for the infrastructure lifecycle.

— Of the remaining greenhouse gas emissions footprint, source a minimum of 20% of energy from renewable sources for the infrastructure lifecycle through either:

  — generation of onsite renewable energy; and/or

  — use of alternative fuels; and/or

  — purchase of renewable energy from an Australian Government accredited renewable energy supplier.

Water

Our target

— Reduce total water use by a minimum of 5% below the base case, for the infrastructure lifecycle.

— Of the remaining total water use, replace a minimum 20% with local non potable water, for the infrastructure lifecycle.

— Reduce railway station potable water use by a minimum of 30% below a GBCA Reference Building.

— Use rainwater and/or stormwater to provide passive irrigation to all tree plots and vegetated areas to support soil moisture needs.

— Manage stormwater runoff from new or reinstated ground surfaces and roof areas to achieve the best practice water quality performance objectives as set out in the CSIRO Best Practice Environmental Management Guidelines for Urban Stormwater (Victoria).

Materials and Waste

Our target

— Achieve a 15% reduction in materials lifecycle impacts (measured through EnviroPoints) below the base case.

— Reduce Portland cement content in concrete by a minimum 36% measured by mass across all concrete used in the project compared to the GBCA reference mixes.

— Source at least 95% of all timber products used for permanent works from re-used timber, post-consumer recycled timber, or from Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) certified timber.

— Source at least 80% of steel used in construction from suppliers certified under Australian Certification Authority for Reinforcing Steels or similar international association or organisation.

— Source at least 80% of fabricated structural steelwork from a steel fabricator/steel contractor which is accredited to the Environmental Sustainability Charter of the Australian Steel Institute (ASI) or similar international association or organisation.

— Ensure that greater than 95% by volume of reusable topsoil and spoil (general fill), greater than 90% by volume of inert and non-hazardous waste and greater than 60% by volume of office waste is diverted from landfill.

Appendix B – Ballarat Line Upgrade Sustainability Targets

Excellence

Our target

- Achieve an Excellent (minimum IS score of 70) Design and 'As Built' certified rating under IS Rating tool.
- Achieve a minimum 3 points in the IS Rating Tool Innovation Credit (Inn-1) during the Design and Construction of the Project works.
- Adopt sustainable building design practices and achieve:
  - Minimum 4 Star Green Star non-certified self-assessment rating, and minimum points specified for mandated credits for new built form infrastructure at Rockbank Station, and Bacchus Marsh Station and Ballan Station, using the GBCA Green Star Design & As-Built Melbourne Metro Rail Tool – Submission Guidelines.
  - Minimum 4 Star Green Star non-certified self-assessment rating, and minimum points specified for mandated credits for new built form infrastructure at Melton and Rowsley stabling yards (or Kerrs Road stabling yard), using the GBCA Green Star Design & As-Built Tool.
- Publicly report sustainability performance on an annual basis.

Urban Ecology and Vegetation

Our target

- Where the project potentially may impact land that has been identified as ecologically sensitive, an ecological management plan must be developed and demonstrate how the plan will be implemented.
- A comprehensive landscape plan must be prepared that demonstrate appropriate landscape treatments inclusive of native plant species appropriate to the site.

Climate Resilience

Our target

— Ensure the infrastructure is resilient to the projected impacts of a changing climate over the assets' Design Lives, in accordance with the adopted climate change projections and scenarios provided in the Climate Change Requirements and Preliminary Assessment (BLU-AJM-PWAA-RP-NS-000082).

— Undertake a climate change risk assessment in accordance with the Climate Change Requirements and Preliminary Assessment (BLU-AJM-PWAA-RP-NS-000082) to identify climate change adaptation measures to treat all 'extreme' and 'high' risks identified from the Alliance's design.

Communities

Our target

— Implement initiatives that generate positive social outcomes to strengthen the economic, social and environmental well-being of the community.

— Identify places of historical and cultural significance and minimise adverse impacts during construction and operation; develop and implement an Interpretation Plan that details initiatives to celebrate cultural connections and local identity.

— Implement an independent design review process that enables technical experts to effectively address key urban design aspects of connectivity, accessibility, safety and identity.

— Support the State's commitment to social procurement by implementing strategic procurement practices to generate social benefits beyond the products and services required.

— Provide timely and relevant information to the community on milestones, project designs and construction impacts; proactively identify and communicate opportunities for the community to participate in project planning and delivery.

Supply Chain

Our target

— Develop and implement a local content strategy that establishes a framework for meeting or exceeding local content targets in accordance with the Victorian Industry Participation Policy Act 2003, including:

— Collaboration with the ICN to maximise opportunities for local Small and Medium Enterprise (SME) to participate in delivery

— A certified Local Industry Development Plan (LIDP) that establishes a strategy to meet or exceed an overall minimum of 88% local content and specifies proposed percentages for each of the contestable items identified by Industry Capability Network Victoria (ICN).

— Identification of local SMEs for potential participation in the supply chain and demonstrate how these local SMEs have been alerted to potential tenders and supply opportunities.

Workforce

Our target

— Identify and implement workforce initiatives that provide for the utilisation of new workplace skills and contribute to relevant sectoral, state and national targets.

— Utilise Victorian registered apprentices, Victorian registered trainees or engineering cadets for at least 10% of the contract works' total estimated labour hours in accordance with the Major Project Skills Guarantee.

— Achieve the Aboriginal Employment Target of 2.5% of total labour hours on the project.

— Develop and implement nationally recognised accredited training and skill development programs and ensure that 20% of the workforce participates in Nationally Recognised Accredited Training.

— Assess current and future workforce skill needs and develop a skills and labour gap plan and workforce profiles, including skill categories, required for the design and construction of major elements of the project.

— Develop and optimise employment and training opportunities for economically and socially disadvantaged individuals during the construction and operations.

Energy

Our target

— Achieve reductions in greenhouse gas emissions by a minimum of 20% below the Base Case, covering Scope 1 and Scope 2 emissions and land clearing as a minimum, for the infrastructure lifecycle of all installed assets (Construction and Operation).

— Include greenhouse gas emissions associated with the construction and operation of the Alliance's Project Design office within the Ene-1 inventory boundary.

— Undertake an opportunity analysis for inclusion of Scope 3 energy use and greenhouse gas emissions within the ISCA Ene-1 footprint.

— Implement reductions in greenhouse gas emissions with consideration given to the emissions reduction hierarchy provided in the ISCA IS Technical Manual V1.2.

— Source a minimum 20% of energy for the Works during Construction from renewable sources through either: generation of onsite renewable energy; use of alternative fuels; purchase of renewable energy from an Australian Government accredited renewable energy supplier; purchase of accredited offsets that contribute to renewable energy projects.

— Maximise the use of solar photovoltaic panels across roof structures for Rockbank station, and stabling yards. Battery storage initiatives are to be investigated in the design with the intent to achieve all electricity requirements at these locations.

— For all installed assets, maximise the generation of onsite renewable energy to the extent achievable for the Operational Phase.

Water

Our target

— Achieve a minimum 5% reduction in total water use below the Base Case in accordance with the ISCA IS Rating Tool Base Case Framework.

— Include water consumption associated with the Alliance's Project Design office within the IS Rating Tool Wat-1 footprint boundary.

— Achieve a minimum replacement of 10% of total water use (potable water), with local non potable water for the infrastructure lifecycle (Construction and Operation).

— Use rainwater and/or stormwater to provide passive irrigation to all tree plots and vegetated areas to support soil moisture needs.

— Manage stormwater runoff from new or reinstated ground surfaces and roof areas to achieve the water quality performance objectives set out in the CSIRO Best Practice Environmental Management Guidelines for Urban Stormwater (Victoria).

Materials and Waste

Our target

— Achieve a minimum of 15% reduction in materials lifecycle impacts (measured by IS Enviropoints) below the Base Case.

— Include materials associated with the Alliance's Project Design office within the IS Rating Tool Mat-1 inventory boundary.

— Reduce, and demonstrate that it has reduced, the Portland cement content in the Works by a minimum of 36%, measured by mass across all concrete used in the Works compared to the GBCA reference mixes.

— Source 95% of all timber products used for permanent works from re-used timber, post-consumer recycled timber or from Forest Stewardship council.

— Source at least 80% of steel used in construction from suppliers certified under Australian Certification Authority for Reinforcing Steels or similar international association or organisation.

— Source at least 80% of fabricated structural steelwork from a steel fabricator / steel contractor which is accredited to the Environmental Sustainability Charter of the Australian Steel Institute (ASI) or similar international association or organisation.

— Ensure that greater than 95% by volume of reusable topsoil and spoil (general fill), greater than 90% by volume of inert and non-hazardous waste and greater than 70% by volume of office waste is diverted from landfill.

More information

To find out more about our projects:

railprojects.vic.gov.au

1800 105 105 (24 hours a day, 7 days a week)

VICTORIA'S BIG BUILD

VICTORIA State Government