

North Western Program Alliance

2023 Sustainability Report

Harnessing Strategic Partnerships



About this Report

The North Western Program Alliance (NWP) 2023 Sustainability Report incorporates the Global Reporting Initiative (GRI) Index that robustly frames the Alliance's sustainability performance.

This report encompasses the key social, environmental and economic achievements of projects in delivery or completed during 2023 and highlights case studies from the Keon Parade and Pakenham level crossing removal projects, as well as the Maidstone Tram Maintenance Facility, to demonstrate NWP's ongoing journey to sustainability excellence.

NWP's sustainability vision includes the Level Crossing Removal Project's (LXRP) five strategic objectives, known to the Alliance as 'the Five Greats'.

The Five Greats include:

- Great Places
- Great Partnership
- Great People
- Great Network
- Great Engagement

The Five Greats are part of NWP's holistic and multifactorial sustainability strategy that drives our commitment to achieve broad, long-term benefits for the environment and the communities we work in across all our projects.

Harnessing the Power of Strategic Partnerships

To drive successful circular economy and social impact outcomes, we have brought together Victoria's experts and innovators – from academia, industry, not-for-profits, social enterprises, business and government – and forged collaborative partnerships to accelerate our path to sustainability.

These partnerships proved invaluable in solving complex challenges and fostering innovations that have benefited from fresh insights and the development of alternative solutions, ultimately positioning us to genuinely embed circular economy principles and social impact imperatives into our projects.



Landscaping at Bell Station





Building for a circular economy – Pakenham Station's wave-like roof canopy uses fibre reinforced plastic to minimise the use of steel and reduce energy

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Acknowledgment of Country

The Alliance acknowledges the Wurundjeri Woi Wurrung People and the Boon Wurrung people of the Kulin Nation who are the traditional custodians of the land on which we work.

The Alliance would like to pay its respect to Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.





Baliyang the bat

The Oakover Green space tells the story of Baliyang the bat (creator of women) thumping its wings over water, until the water thickens into mud and two bagrooks (women) suddenly emerge.

Message from the Alliance General Manager

Colm O'Neill

In 2023, NWPAA developed a new 2023-2025 Strategic Plan that reflects our outstanding performance and reinforces our focus on leading sustainable industry transformation.

The four goals at the heart of our Plan – A great place to be, Excellence in construction performance, Advance our use of technology and Lead industry step changes – reaffirm our commitment to transforming the industry by continuing to do well and striving to advance.

As part of this process, we recognised that smart engineering was critical to overcoming sustainability challenges in terms of energy materials, so we made the bold move to embed sustainability into our engineering management team in a way that has driven accountability for the delivery of sustainable design across our projects.

I'm excited about continuing our role as Sustainability Champion under LXP's successful Project Beacon initiative. It's allowed us to positively influence inclusive, safe, climate-resilient, low carbon infrastructure and has strengthened my belief that now more than ever we need to empower our people to innovate, lead industry change and deliver great sustainable places for Victorians.

Our commitment to optimising recycled and reused materials, and diverting valuable materials from landfill, aligns with the Victorian Government's Recycled First Policy and continues to be front of mind in our decision making and planning. Our collaboration with Metro Trains Melbourne (MTM) to achieve ongoing approval for newly developed sustainable products resulted in them being integrated in the forecourt and urban realm at Keon Parade, creating LXP's first Recycled First precinct.

Sustainability is critical to our industry's transformation and at NWPAA this encompasses the key areas of governance, procurement, social impact, and an inclusive and diverse workforce and environment.

Also in 2023, our focus on strategic partnerships was critical to our implementation of capacity-building Aboriginal engagement programs and long-term meaningful engagement with suppliers. At Keon Parade and the Maidstone Tram Maintenance



Alliance General Manager
- Colm O'Neill

Facility (TMF), we engaged NLA Logistics – the only 100% Aboriginal female-owned plant hire business in Victoria – and at Keon Parade we partnered with social enterprise Ability Works to deliver a more inclusive and accessible station.

I'm proud that our values-driven projects continue to create thousands of jobs and leave an enduring legacy for local communities today and for generations to come.



The old Keon Park Station

Message from the Director Transformation and Sustainability

Fiona Bowie

We're continuing to stretch ourselves beyond excellence to achieve our ambitious goals and embed leading sustainability solutions that transform the industry.



Director Transformation & Sustainability – Fiona Bowie

Our main focus is fostering strategic partnerships that drive game-changing outcomes and deliver great sustainable places across NWP. Our partnership with the University of Melbourne Faculty of Engineering and Porous Lane – a company that recycles tyres to produce permeable paving – is a great example of how Australia's first porous kerb was installed at the new East Pakenham Station. We established the

partnership in 2023, engaged with asset owner MTM and conducted a research and development process to demonstrate the product's effectiveness, and are now integrating learnings in the field as we monitor and test this transformative solution.

NWPA is also continuing to embrace our role as Sustainability Champion for LXP's Project Beacon, focusing on Keon Parade to act as a 'beacon' in our drive to overcome barriers to the optimisation and innovation of recycled materials. Together with LXP, Ecologiq, Darebin Council, MTM and the Urban Design Advisory Panel (UDAP), we held a Recycled First competition for the Keon Parade urban realm and selected a range of products that are being integrated into the forecourt and open spaces at our signature recycled first precinct.

NWPA is strategically partnering to transform industry and integrate circular economy principles into our transport network and urban precincts.

I'm proud of our achievements in 2023, but also know that sustainability improvements never stop. Our benchmarks are always increasing and we must continually work smarter, challenge the status quo and innovate. We're seeing this happen to great effect on our current projects where we're driving our carbon emissions down even further while delivering great outcomes for the community.

As NWPA's Director of Transformation and Sustainability, I'm steadfastly committed to improving our performance with each new project as we look ahead to 2024.



Oakover Green open space area between Oakover Road and Bell Station



About the Level Crossing Removal Project

The Level Crossing Removal Project (LXRP) was established by the Victorian Government to lead one of the largest rail infrastructure projects in the state's history. LXRP is part of the Victorian Infrastructure Delivery Authority (VIDA) and falls under Victoria's Big Build program.

A total of 110 level crossings are targeted to be removed by 2030, in addition to other rail network upgrades, such as new train stations, train and tram maintenance facilities and track duplication, to bring greater safety, traffic improvements and connection to the growing communities of Melbourne.

LXRP's sustainability vision aims to achieve excellent environmental, social and economic outcomes across all phases of a project. This ensures the delivery of an integrated program that connects the community in an environmentally sustainable manner.

Importantly, as a member of the Infrastructure Sustainability Council of Australia, LXRP endeavours to obtain an independent Infrastructure Sustainability Rating for appropriate projects.

To achieve its Vision, LXRP is focused on three areas – aligned with eight United Nations' Sustainable Development Goals (SDGs) – that have the greatest impact:

- Materials and Energy: Reducing program-wide emissions and environmental impact from materials and energy use.

- Climate Resilience: Building climate resilient infrastructure by considering climate risks in design, construction and operation.
- Liveable Communities: Creating places that support liveability by contributing to a safe, reliable and affordable transport network, promoting public health and improving air quality.

LXRP's sustainability strategy is based on the principle that embedding sustainability practices during the planning phase is the best way to achieve positive outcomes for local and global communities.

Context

In alignment with LXP’s sustainability strategy, we are continuing to minimise the resource footprint of our projects by designing and building infrastructure that considers carbon reduction and integrates circular economy principles.

Our unwavering commitment to prioritising decarbonisation drives our determination to reduce carbon emissions associated with materials, construction and operational energy consumption.

Specifically for construction materials, we are using materials with recycled content and using innovative products that deliver on Victoria’s Recycled First Policy circular economy goals –

to reduce material use, reduce waste at the end of the life of an asset, reuse materials and replace virgin materials with more sustainable alternatives.

Our ongoing focus is to provide infrastructure that promotes inclusive, healthy and safe communities, enhances the environment for people and nature, and adapts to climate extremes.

And by going above and beyond legal and regulatory requirements, we are confident we will leave a positive legacy for generations to come.

In line with LXP’s sustainability strategy, we are proud to be leading industry change and supporting the achievement of the Victorian Government’s net zero targets and Recycled First Policy objectives.



Evening commute at Glenroy Station



About the Alliance

The North Western Program Alliance (NWP), comprising Level Crossing Removal Project (LXRP), John Holland (JH), Kellogg Brown Root (KBR), Metro Trains Melbourne (MTM) is one of five Alliances delivering the LXRP program of works to remove 110 level crossings across metropolitan Melbourne by 2030.

NWPA was established in early 2017 to deliver level crossing removals, predominantly on the Craigieburn and Upfield lines along the north-western rail corridor, and additional works required to facilitate broader network upgrades.

Since its inception, the Alliance footprint has grown to also include projects across the Mernda, Pakenham and Frankston lines, due in part to its strong reputation as a high-performing alliance with an excellent culture.

We are building better places for Victorians to live, work and enjoy.

Key Result Areas

For NWPA, achieving excellence across our Key Result Areas (KRAs) demonstrates alignment and commitment to LXP key project deliverables and outcomes. This builds both trust and a reputation for exceptional project delivery, all while creating the opportunity for improved financial project outcomes.

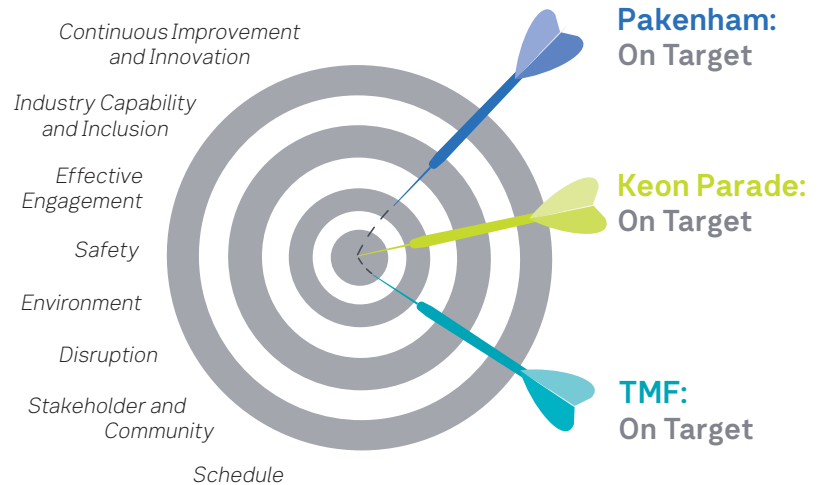
NWPA has eight KRAs that drive maximum performance and value for money across all aspects of the LXP program.

Three of these are 'program' KRAs which guide the operation of all LXP alliances, including:

- Continuous Improvement and Innovation
- Industry Capability and Inclusion
- Effective Engagement

There are also five 'package-specific' KRAs, which guide the delivery of each project:

- Safety
- Environment
- Disruption
- Stakeholder and Community
- Schedule



Key Result Areas	Pakenham	Keon Parade	TMF
Program KRAs: Continuous Improvement and Innovation, Industry Capability and Inclusion, Effective Engagement.	On Target	On Target	On Target
Package-specific KRAs: Safety, Environment, Disruption, Stakeholder and Community, Schedule.			



PRACE Disability Class hearing about upcoming construction works at Keon Parade

NWPA Purpose, Vision and Values

Our Purpose is to make a real difference to the lives of people in the communities in which we work, and our Vision is to be the most creative, engaged and enthusiastic team that builds better places for Victorians to live, work and enjoy.

Our Purpose and Vision are supported by our values of **Care, Empowerment, Creativity** and **Excellence**, which we apply across all phases of the project lifecycle.

The work we deliver provides tangible and lasting community benefits – improving road safety, reducing congestion, increasing capacity to run more trains on the network, and connecting communities through well-designed open spaces.

We are proud to say that our values-driven projects are contributing to thousands of job opportunities and leaving a sustainable legacy that can be enjoyed by local communities today and for generations to come.

Our Purpose

We make a real difference to the lives of people on the Alliance and in the communities in which we work

Our Vision

We strive to be the most creative, engaged and enthusiastic team, building better places for Victorians to live, work and enjoy



Care

We care about each other, we listen, and operate with a generosity of spirit



Empowerment

We own our roles, trust and support each other



Creativity

We approach our work with curiosity, an open mind and optimism



Excellence

We operate with teamwork and integrity to deliver excellence

Our purpose, vision and values



View from above Pakenham Station

Our History



NWPA Sustainability Approach

NWPA delivers projects that achieve a great social, environmental and economic legacy aligned to the objectives of the United Nations' SDGs. Our strategic and resilient approach addresses and mitigates existing and emerging sustainability challenges and realises opportunities for sustainability innovation.

We are passionate about the key role we play in building sustainability capability for the rail infrastructure environment and our local communities, and understand that urban design and transport infrastructure must be inclusive and tailored to the community's needs.

We proactively engage with stakeholders to ensure our projects meaningfully contribute to a sense of community connection and ownership, and our dedicated construction and operational resources create inclusive and accessible station precincts and open spaces that enhance wellbeing.

NWPA Sustainability Approach

Sustainability has been at the centre of NWPA's project development and delivery over the past seven years. It has framed our approach to removing 13 level crossings, building seven new rail stations, and moving toward completion of a further two projects in 2024 and one by 2025.

Our 2021 Sustainability Report described our Power of the Program governance framework that enabled us to leverage our program of works to target and adopt step-change innovations, continually improving and building on what we had learned.

Our sustainability outcomes and achievements set new industry benchmarks in 2021. Reservoir became the first train station in Australia to be awarded a 5 Star Green Star As Built rating by the Green Building Council of Australia (GBCA), and Coburg Station, part of our Bell to Moreland project, raised the bar by being awarded a 6 Star Green Star rating – making it Australia's first ever 6 star As Built rated train station.

Adding to the list of firsts, the Infrastructure Sustainability Council (ISC) awarded Bell to Moreland the highest ever sustainability As Built rating of 98 points out of a possible 110, an incredible outcome that further positions NWPA as a sustainability leader.

In our 2022 Sustainability Report, we highlighted how our approach to leading the way in developing and implementing great sustainability outcomes was recognised by the wider industry.

We were successful at the coveted National Banksia Sustainability Awards for our Bell to Moreland project, winning the award for Future Places, and took home the prize for the Industry Leader Award in the Sustainable Places and Destinations category at the Premier's Sustainability Awards.

We continued to harness our Power of the Program governance framework to improve and mature our initiatives with every project we delivered.

Our Glenroy and Preston projects were largely completed in 2022 with excellent sustainability credentials, including significant energy reductions and outstanding improvements to ecological value.

In our 2023-2025 Strategic Plan, we reinforced our commitment to transforming the industry and leading step changes in construction, rail infrastructure, sustainability and corporate social responsibility. We continue to build greater gender equity, stronger engagement with Aboriginal suppliers and social enterprises, and to lead climate resilient technological innovation and sustainability outcomes that integrate circular economy principles.



NWPA's 2023-2025 Strategic Plan reinforces our commitment to transforming industry

Preston Station



Measuring Sustainability Performance

NWPA remains dedicated to ensuring the infrastructure we build delivers cultural, economic, social, environmental and sustainable benefits across all aspects of the program.

Measuring performance is the foundation of good sustainability management and through our strong performance management framework we progressively establish new sustainability baselines from which we measure our operational performance. This enables us to ensure excellence, safeguard continuous improvement and target inefficiencies and nonconformances.

We measure, manage and strive to improve in all aspects of a project's lifecycle.

Our NWPA project teams aspire to create long-term value for communities by supporting the objectives of the United Nations' SDGs and benchmarking against leading sustainable rating tools, notably the Infrastructure Sustainability (IS) Rating Scheme delivered by the ISC.

With each new project, we aim to surpass the performance achieved on the last.

Our ongoing impact

From Camp Road through to Preston LXP, NWPA has achieved outstanding outcomes in energy, water and material reduction.

Energy	Reduction in lifecycle energy GHG emissions (t CO2-e)	91,946 t
Water	Total water reduction (ML)	1316 ML
Material	Reduction in GHG emissions for materials (t CO2-e)	55,868 t



Preston LXP's Oakover Green

Sustainability Performance Outcomes

NWPA benchmarks and measures our sustainability outcomes against the United Nations' SDGs, IS Rating Scheme, and Station Design and Performance Requirements.

United Nations' Sustainable Development Goals

The SDGs came into effect in January 2016 and provide a blueprint to achieve a better and more sustainable future for all. They address global challenges, including those related to poverty, inequality, climate, environmental degradation, prosperity, peace and justice.

NWPA is progressively incorporating the SDGs into relevant documentation, plans and reports to provide a point of reference that enables us to deliver strong performance outcomes.

Infrastructure Sustainability (IS) Rating

Developed and administered by ISC, the IS Rating Scheme is the industry standard in evaluating the social, environmental, governance and economic performance of infrastructure. It covers all aspects of infrastructure projects – planning, design, procurement, construction, operations & maintenance.

With its standardised benchmarks and independent third party assured data, the rating scheme provides a common language for best practice sustainability in infrastructure across Australia, New Zealand and beyond. The scheme helps build an organisation's sustainability credentials and reputation by promoting commendable instances of continuous improvement and innovation to its global audience.

The IS Rating Scheme continues to adapt to industry growth with iterative changes incorporating new tools and meeting shifting performance thresholds.

Station Design and Performance Requirements

Infrastructure projects are driven by sustainability performance outcomes. NWPA conducts assessments to evaluate our sustainability performance during the design, delivery and operational phases of each project.

These assessments are informed by LXP and NWPA Sustainability Policies, as well as best practice building standards, and are then verified by Technical Advisers engaged by LXP. Equipped with this approach, the project team gains further insights on opportunities for improvement and alignment with project Key Performance Indicators (KPIs) and NWPA's values.

The Alliance promotes sustainable transformation of the built environment by assessing a project's performance against the following objectives:

- Reduce the impact of climate change.
- Enhance health and quality of life.
- Restore and protects the planet's biodiversity and ecosystems.
- Drive resilient outcomes for buildings, communities and homes.
- Contribute to a sustainable economy.



United Nations' SDGs

Sustainability Objectives



Waste

- Lower waste throughout project lifecycle
- Maximise reuse of spoil



Carbon and Energy Management

- Strive for reduced carbon footprint
- Increase energy efficiency over asset life cycles



Water Efficiency

- Design for climate resilience i.e. Water Sensitive Urban Design
- Reuse rainwater, stormwater, wastewater and groundwater



Governance

- Embed sustainability into decision-making
- Demonstrate performance against industry benchmarks
- Be accountable and transparent



Biodiversity

- Protect and create biodiversity through planning, management and financial controls



Heritage

- Protect and promote heritage through design, planning and management controls



Community

- Positively contribute to community health and wellbeing
- Ensure local community engagement in project development



Sustainable Procurement

- Encourage contractors to adopt sustainable procurement practices



Environmental Performance

- Minimise pollution and environmental nuisance



Innovation

- Share learnings and proposals at the Joint Coordination Committee



Materials

- Reuse materials i.e. Australian made steel products
- Substitute traditional materials with sustainable alternatives



Liveability

- Enable and encourage walking, cycling and public transport use
- Deliver an inclusive space that facilitates positive interactions
- Enhance network reliability



Workforce Development

- Support local businesses and employ local people

2023 objectives

L-beam installation at Keon Parade



2023 Project Updates

In 2023, we achieved major milestones, forged industry-changing strategic partnerships and continued to embed circular economy principles into our projects.

Glenroy Level Crossing Removal Project

After the station opened in 2022, in 2023 we:

- Finalised our IS Rating and achieved a Leading sustainability rating with a score of 83 out of a possible 110 points – an incredible outcome that acknowledged:
 - 36 tonnes of carbon saving through low carbon paths
 - 14% reduction in operational water use
 - 22% reduction on greenhouse gas emissions for materials
 - 55.3% reduction in project lifecycle energy use
 - 74% increase in ecological value
 - 38kW solar PV system

- 96.9% construction waste diverted from landfill
- 200 endangered geraniums propagated and relocated.

Across Glenroy and Preston LXRPs, we achieved three industry leading innovations verified by ISC:

- Australian First verified for low carbon paths and pavement (EcoPACT Zero and Emesh mix) initiative
- Australian First for Radiant Heat Curing (CIGCURE)
- Victorian First for Single Line Running methodology.



Transforming the heart of Glenroy with a new sustainable station and precinct

Preston Level Crossing Removal Project

After stations opened in 2022, we:

- Achieved a leading sustainability rating with a score of 93 out of a possible 110 points – an incredible outcome that acknowledged:
 - 46.9% reduction in project energy use
 - 22% reduction in greenhouse gas emissions for materials
 - 105% increase in ecological value
- 55% reduction in operational water use
- 97% of construction waste diverted from landfill
- 49 tonnes of carbon saving through low carbon paths
- 88kW solar PV system
- 1,000 tonnes of sustainable PolyPave asphalt across the station car park.



Preston level crossing removal project created expansive open spaces and integrated 1,000 tonnes of sustainable asphalt in the station car park

Keon Parade Level Crossing Removal Project

In 2023, we:

- Created NWPA's signature Recycled First precinct
- Undertook preparation for overhead structure installation
- Installed the structural steel for the station and commenced installation of the roof panels
- Built a 750m rail bridge over the road.



Piers and crossheads installed at Keon Parade, in preparation for the viaducts to come



Works on the overhead structures at East Pakenham

Pakenham Level Crossing Removal Project

In 2023, we:

- Completed construction of the elevated rail bridge over Main Street, McGregor Road and Racecourse Road, using 272 L-beams
- Completed structural steel installation for the Pakenham station canopy and commenced installation of the roof panels
- Completed the East Pakenham underpass
- Commenced construction of East Pakenham Station and ancillary buildings.

U-troughs

The bridge sections, known as U-troughs, are made up of 2 L-shaped beams. The two beams are joined together with concrete to form a U-shape and installed on top of the headstocks. Headstocks sit on top of the piers and support the horizontal bridge sections, transferring the bridge load to the pier below.

At Pakenham, 272 L-beams will be joined to form 136 U-troughs. This will become the base where we lay the train tracks and ballast.



Looking towards East Pakenham station from the East abutment



Artist impression - Maidstone TMF will maintain, clean and stable a new fleet of Victorian-built Next Generation G Class trams

Maidstone Tram Maintenance Facility (TMF)

- Awarded to NWPAA in 2023
- Maintains, cleans and stables a new fleet of Victorian-built Next Generation G Class trams that provide a more accessible, comfortable and energy-efficient journey for passengers starting in 2026.

In 2023 we:

- Prepared the site and nearby roads for the facility
- Excavated 28,000 tonnes of soil to create the foundations of the new buildings and internal access road
- Laid 700 metres of new underground services at the intersection of Hampstead, Williamson and Wests Roads
- Safely demolished 22 buildings across the site
- Retained and restored significant heritage elements, including the only Nissen Hut in Victoria still located on a migrant hostel site
- Increased our workforce to over 280 workers during peak periods
- Released community-informed design that included modern and sustainable infrastructure
- Maintained access to shopping and other destinations during construction and ensured key local businesses in Maidstone and Maribyrnong remained open.



Maidstone TMF taking shape

Harnessing Strategic Partnerships

Spotlight on Strategic Partnerships

Forming and maintaining strategic partnerships in order to drive industry change has been the cornerstone of our 'striving to advance' approach in 2023 and continues to be a major factor in our planning and decision making.

The diverse partnerships established at NWPA highlight the transformative power of collaboration and enable us to achieve our short- and long-term objectives by solving complex challenges, embedding innovations and going beyond compliance to embed circular economy and social impact principles into our projects.

Partnerships in Circularity

Pakenham LXP embeds Australia's first recycled tyre kerb



Collaborating for a circular economy with car park kerbing made from granulated waste tyres

Avoiding waste through good design and effective recovery of materials that can be reused is at the heart of our partnership with the University of Melbourne and Porous Lane, a company that recycles tyres to produce Australia's first recycled tyre kerbs.

The research-backed, academically tested sustainable product has been installed and successfully trialled at a section of the East Pakenham Station car park, and is currently undergoing further monitoring and testing with the aim to install it on other NWPA and VIDA projects.

The sustainable kerbing is made from granulated waste tyres and crushed rock bound together using an epoxy binder. It is highly durable, has a design life of 25 years and provides a sustainable alternative to porous concrete and asphalt, while reducing the need for costly stormwater upgrades and the requirement to treat and remove pollutants from stormwater.

The initiative was funded by Sustainability Victoria under the Circular Economy Market Fund: Materials. The University of Melbourne designed the bespoke solution, NWPA acted as the design and construction partner and MTM was the final asset owner.

Waste tyre permeable kerb installed at the East Pakenham Station car park is made of up to 60% recycled material, approximately three waste tyres per square metre, and laid on-site. It is easy to maintain due to its porosity and the materials can be reused and recycled at the end of its 25-year design life.

Waste tyre permeable kerb:

- Reduces waste
- Provides a circular economy solution by continuing the life of waste products
- Avoids the need for cement
- Contributes to a low carbon outcome
- Provides increased passive watering of vegetation by allowing water infiltration into the ground surrounding the kerbing.

Keon Parade LXP – NWPAs industry-transforming Recycled First precinct

We have forged several new strategic partnerships with suppliers of recycled products to create NWPAs first-ever Recycled First precinct – enabling us to achieve successful circular transformation, increase resilience and accelerate resource efficiency across the project. As Sustainability Champion under LXP’s Project Beacon initiative, we partnered with Ecologiq, MTM, UDAP and Darebin City Council (DCC) to run a Recycled First competition that challenged suppliers of emerging recycled materials to pitch their product solutions for the station and urban realm at Keon Parade. The aim was to increase the pace of materials adoption, optimise the use of recycled materials and firmly position LXP as a Recycled First leader.



Robovoid used within the Parkiteer cage



Ceres recycled timber used in seating areas

In 2023, we announced that five winning Strategic Partnerships had successfully demonstrated their product’s ability to achieve the technical, safety, social, environmental and economic outcomes that would contribute to Keon Parade becoming NWPAs signature Recycled First precinct.

By working in circular collaborative partnerships with local innovators and suppliers, we are prioritising a recycled first ethos that aligns with the Victorian Government’s Recycled First Policy and the United Nations’ SDGs. Several locally manufactured, sustainable products embedded at Keon Parade include:

- Robovoid – concrete void former made from 100% recycled plastic used for the Parkiteer slab
- CERES Fair Wood – maximises the reuse of site-salvaged timber in the urban realm
- Curcrete – robotically formed geopolymer bench seats with zero cement
- Recycled plastic aggregates in concrete mix:
 - Future Aggregates – exposed aggregate more than 3,000m²
 - Resin8 – other pavements more than 2,000m²
- Cacti Conserve – 61 recycled plastic tree stakes used for plantings
- Omnigrip – recycled glass surface treatment used in bus lanes and bike paths.

Project Beacon delivers transformational Recycled First outcomes for Keon Parade’s low waste, low carbon future.

How might we overcome the upfront barriers of being innovative, to transform LXP into a recognised and celebrated early adopter of sustainability innovations?

In 2021, the Joint Coordination Committee (JCC) directed a new Strategic Blueprint for implementing the Five Greats across the LXP Alliance Framework. The new Blueprint allocated a strategic theme to each LXP alliance to implement an industry-changing initiative aligned with that theme.

NWPA was allocated the Sustainability theme and asked to develop an industry-changing best practice Project Beacon initiative.

Partnerships in Inclusive Design – Keon Parade LXP

Listening and responding to the disability community to deliver an inclusive and accessible station

Partnering with social enterprise Ability Works allowed us to leverage the lived experience and expertise of people with diversity in vision, hearing, mobility, cognition and social anxiety to provide a more inclusive and accessible Keon Park Station.

Harnessing the power of our partnership, the project team experienced first-hand the challenges commuters with disability face and acknowledged them as consultants with specific skills that until now have rarely been recognised.

Their input highlighted areas that could better accommodate their needs, with design elements such as:

- Incorporating braille on Help Point panels
- Addressing lighting concerns for those with sensory sensitivities
- Ensuring audible notifications in lifts to assist individuals with visual impairments.

In this way, we maximised and re-shaped how the station's functionality and facilities were designed and constructed to create dignified, equitable and independent access for everyone, regardless of their ability.

Listening and responding to the lived experience of Ability Works consultants provided an inclusive and accessible station, that features:

- Directional Tactile Ground Surface Indicators (TGSIs) provided throughout the precinct for wayfinding purposes at station entrances, lifts, stairs and other essential locations
- Water fountains added at platform and ground levels, with ground level fountains including custom dog bowls for Guide Dogs
- 6 off-street Disability Discrimination Act (DDA) car parks in the station car park
- 'No press' (sensored) elevator button for ease of elevator access
- Varied lighting levels throughout the precinct to allow for different abilities.

The legislative context

From a legislative perspective, in March 2022 the Australian Government released a third review of the Disability Standards for Accessible Public Transport 2002 (Transport Standards), which indicated a need for the standards to meet the needs of the disability community and public transport industry. The response from the Australian Government also included Recommendation 2 – Increase the involvement of the disability community.

The opportunity

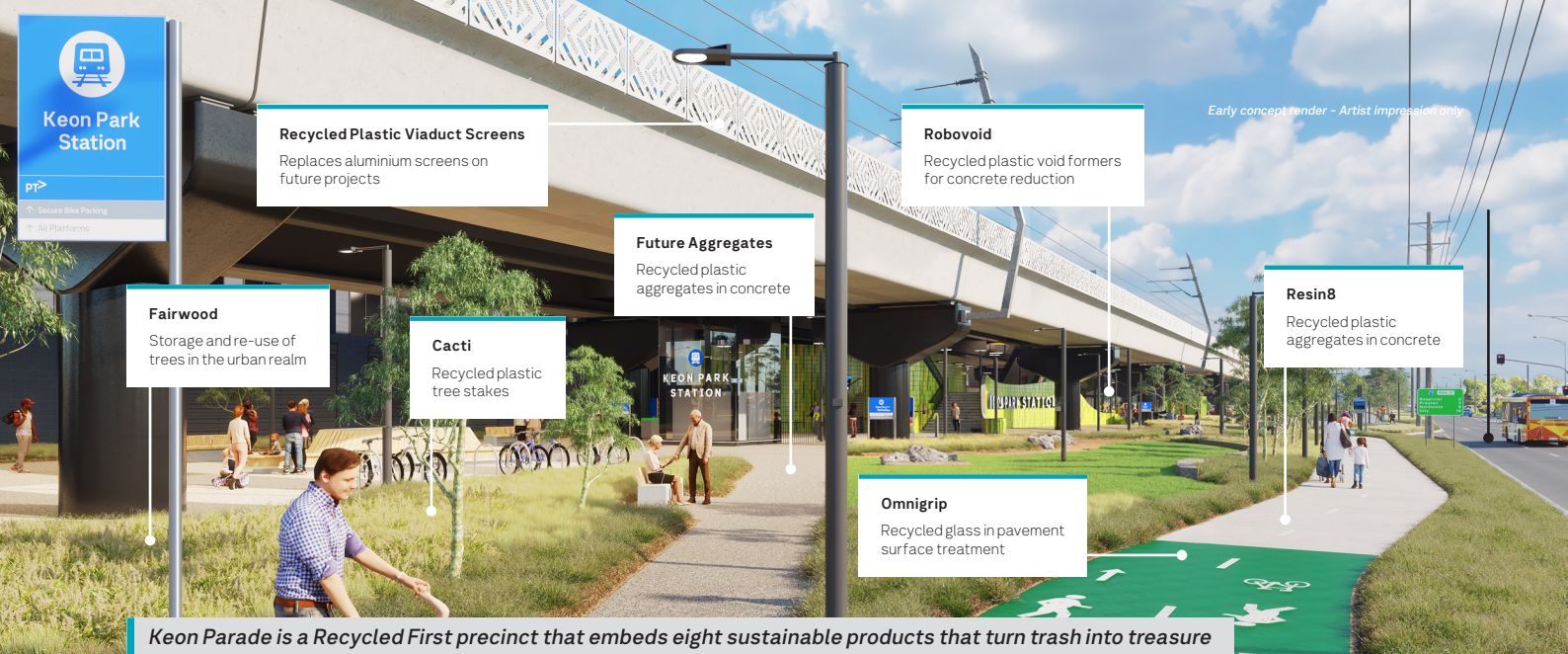
Based on this review, NWPA identified an opportunity to leverage the lived experience and insights of those with diversity in vision, hearing, mobility, cognition and social anxiety to maximise the inclusiveness of the new Keon Park Station design.



Lessons learned from review at Bell station



The learned experience of the disability community contributed to a more inclusive and accessible Reservoir Station



Keon Park Station
 Secure Bike Parking
 All Platforms

Recycled Plastic Viaduct Screens
 Replaces aluminium screens on future projects

Future Aggregates
 Recycled plastic aggregates in concrete

Robovoid
 Recycled plastic void formers for concrete reduction

Resin8
 Recycled plastic aggregates in concrete

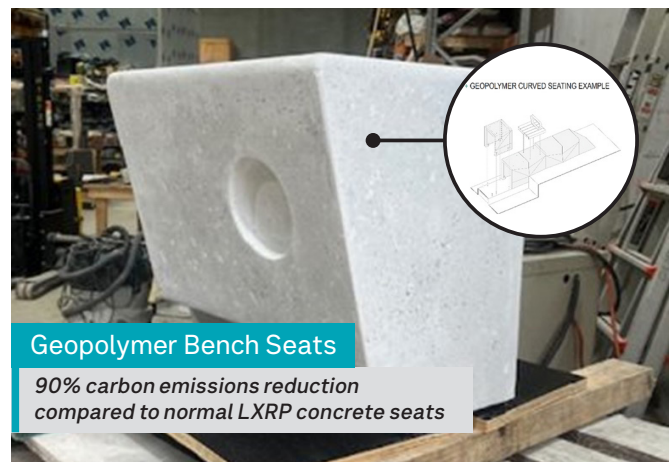
Fairwood
 Storage and re-use of trees in the urban realm

Cacti
 Recycled plastic tree stakes

Omnigrip
 Recycled glass in pavement surface treatment

Early concept render - Artist impression only

Keon Parade is a Recycled First precinct that embeds eight sustainable products that turn trash into treasure



Geopolymer Bench Seats
 90% carbon emissions reduction compared to normal LXP concrete seats



Salvaged and recycled timber
 Furniture grade timber milled into seating and logs salvaged for landscaping

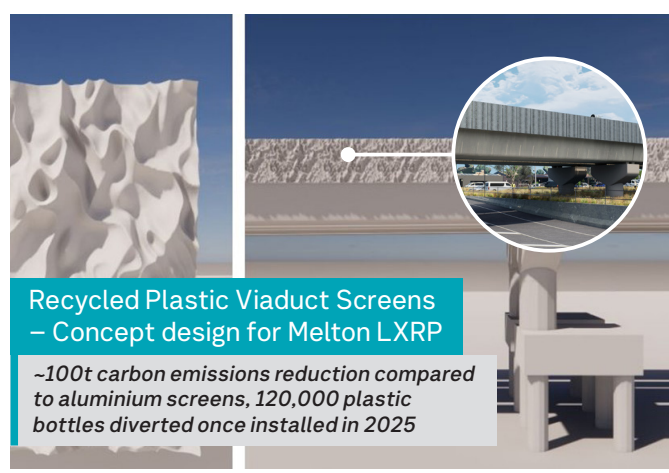


Recycled Glass Surface Treatment
 ~500m2 of recycled glass used – the entire road and pavement treatment



Recycled Plastic Aggregate in concrete pavements

- >5000m2 of recycled aggregate concrete
- ~50,000 plastic bottles diverted from landfill



Recycled Plastic Viaduct Screens – Concept design for Melton LXP
 ~100t carbon emissions reduction compared to aluminium screens, 120,000 plastic bottles diverted once installed in 2025



Recycled Plastic Concrete Void Formers – Parkiteer Concrete slab

- 1200 recycled plastic cones used
- 24% reduction in concrete used compared to standard Parkiteer slab



2023 Awards

Outstanding design and innovation transforms the heart of Glenroy

– Four Silver GOV (Government, Community & Public Sector) Design Awards

In 2023, multiple awards recognised Glenroy Station's outstanding design and innovation with four Silver GOV Design Awards in the Urban Design, Community & Civic, Transport and Public Realm categories, and Silver in the 2023 Melbourne Design Awards, Public & Institutional Architecture category.

The project transformed the heart of Glenroy with a central plaza, green public spaces, better pedestrian connections and a premium transport and community hub.

The ground-level station entrance and concourse provide pedestrians with easy access across the lowered rail line, connecting Post Office Place and Hartington Street for the first time in 100 years with a dedicated pedestrian path, plus extra new paths through the precinct and a bus interchange next to the station.

Glenroy LXR also achieved an 'Australian First' for low carbon paths and pavement initiative – EcoPACT Zero and Emesh mix.

Preston excels in sustainable governance and innovative engineering

– **Winner 2023 Excellence in Governance Award, ISC**

– **Winner 2023 Project Excellence Award, Australasian Rail Industry (ARI) Awards**

The Preston LXP scooped the 2023 Excellence in Governance Award at the ISC Annual Gala Awards, which celebrates sustainability best practice in infrastructure.

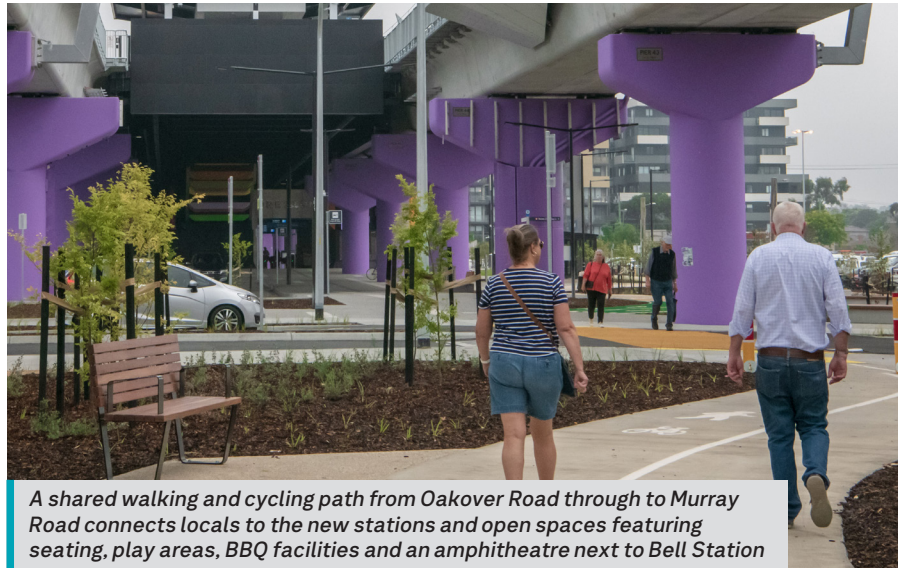
Delivering the sustainable outcomes and transformations needed to shape lives through infrastructure, the judges' feedback noted that embedding all stakeholders in the governance framework from early on was excellent and ensured a well-rounded approach across a range of desired outcomes.

Completed in 2022, the complex rail infrastructure upgrade successfully removed four level crossings, constructed two kilometres of elevated rail viaduct and established two premium stations and precincts, while creating extensive open spaces in Melbourne's inner north.

NWPA used effective governance mechanisms, such as optioneering partnerships, continuous improvement and early community engagement. The strategy fostered key initiatives such as Aboriginal engagement and design, along with single-line running, radiant heat curing and local community-developed solutions.

The project also won the Infrastructure Project Excellence Award at the 2023 Australasian Rail Industry (ARI) Awards, overcoming the challenges of working in a narrow rail corridor and maintaining access to a train maintenance facility on the rail line during construction.

The team collaborated with a diverse range of stakeholders to deliver two innovative engineering solutions – Single Line Running and Radiant Heat Curing – resulting in the efficient delivery of a large-scale project with minimal disruption to the train network and local community.



A shared walking and cycling path from Oakover Road through to Murray Road connects locals to the new stations and open spaces featuring seating, play areas, BBQ facilities and an amphitheatre next to Bell Station



Bell and Preston stations incorporate Aboriginal design initiatives that create meaningful and inclusive spaces like yarning circles, as well as motifs and artwork

The Preston level crossing removal project removed four level crossings and opened two new stations – Bell and Preston – unlocking around three MCGs of open space and creating vibrant and sustainable community precincts.

John Holland Awards

- Winner, Young Achiever of the Year, NWPA
- Winner, Community Impact, NWPA

2023 Young Achiever of the Year, Sajitha Srivelan, Sustainability Advisor, NWPA



NWPA rising sustainability star Sajitha Srivelan

Sajitha is an inspiring and emerging leader with an ambition to transform the construction industry. Just three years after starting as a Graduate Engineer, she led sustainable delivery across our projects and worked closely with our partners at the University of Melbourne Faculty of Engineering and Porous Lane to spearhead the use of permeable pavement (a sustainable alternative to porous concrete and asphalt) at East Pakenham Station car park.

Sajitha also organised an NWPA E-mesh Validation Program to debunk myths circulating in the industry about the performance of e-mesh, a recycled plastic fibre that replaces steel mesh in concrete. At the Pakenham LXP, she coordinated a trial pour next to standard concrete to compare its performance. The team concluded that under controlled conditions e-mesh performed the same as standard concrete and shared these findings with the wider industry.

In conjunction with other projects, Sajitha coordinates John Holland's Emerging Sustainability Infrastructure Professionals (ESIP) group and is leading its expansion into other states.

To encourage more students from diverse backgrounds into engineering, Sajitha initiated a partnership with social enterprise Young Change Agents (YCA) that led to an innovative Industry Entrepreneurship Program. As a result, NWPA quadrupled the number of students engaged on work experience, reduced project resource requirements from five days to six hours and accrued nearly \$10,000 of social procurement spend.

2023 Community Impact Award, Keon Parade, NWPA

Innovative engagement with 'hardly reached' stakeholder groups won the award for Community Impact at the 2023 John Holland Awards.

The Keon Parade Communications & Stakeholder team led an industry-changing process involving engagement in multiple languages with local cultural groups and people living with disability. With a focus on inclusivity, they adapted communications to meet diverse stakeholders' specific needs and developed bespoke measures that LXP other alliances can adopt across their projects.

'Hardly reached' audiences are community groups or individuals who have historically been overlooked or under-represented in communication and engagement efforts.

'Hardly reached' stakeholder groups included the Endeavour Foundation, Alawi Mosque, PRACE, and Ability Works (as detailed in Partnerships in Inclusive Design), who were all directly impacted by construction at the Keon Parade project.

LXP has formally approved our work with Ability Works as an innovation for future projects. We are proud that we have gone above and beyond in our engagement efforts, making a genuine difference in the lives of those who are often overlooked or underrepresented.

In collaboration with the Endeavour Foundation, which employs and supports people living with disability, NWPA installed specialised corflute signs that provided clear and concise boarding instructions at shuttle bus stops. Information was carefully customised to differing comprehension levels and site familiarisation walks guided staff through disrupted project areas and allowed them to raise concerns. Endeavor Foundation members felt well-informed about upcoming changes and helped to alleviate their anxiety and clarify any confusion they might have. NWPA worked with Endeavour Foundation to tailor comms to suit their needs, not ours.



Project information provided in Arabic helped Alawi Mosque plan for upcoming disruptive activities

At the Alawi Mosque, NWPAs communications team provided project information in Arabic and English and collaborated with the mosque’s leadership group to foster a positive relationship and clearly communicate upcoming disruptive activities.

For the PRACE adult community education centre located close to the project, the team developed interactive information sessions and organised site walks with interpreters available in Farsi, Somali, Mandarin, Vietnamese and Arabic to ensure a full understanding of the project.



Industry-leading engagement with ‘hardly reached groups’ such as the Endeavour Foundation

“We were delighted when the Keon Parade level crossing removal project team approached us to engage with and inform us about the process to remove the level crossing and build a new station at Keon Park. The provision of interpreters to ensure our English as an Additional Language (EAL) students were across the changes was greatly appreciated. A beautiful morning tea was the cherry on top! We look forward to ongoing communication with the team as the project gears up.”

– Marina, PRACE Coordinator

Industry Awards

Winning Entries



Bell to Moreland

Winner of the Future Places Award, 34th Banksia National Sustainability Awards



Bell to Moreland

Commendation for the Great Places Award, Planning Institute of Australia (PIA) National Excellence Awards

Glenroy

Four Silver Awards in the Better Future GOV Design Awards:



- Urban Design
- Architecture – Community & Civic
- Architecture – Transport
- Architecture – Public Realm



Glenroy

Silver Medal for Architecture – Public & Institutional, Better Future Melbourne Design Awards



Glenroy

Winner Accolade in Architectural Design category, Good Design Awards



Keon Parade

Community Impact Award, John Holland Awards



Preston

Excellence in Governance Outcomes, ISC Awards



Preston

Infrastructure Project Excellence, Australasian Rail Industry Awards

Finalists



Sajitha Srivelan (Sustainability Advisor)

Young Achiever Award, National Association of Women in Construction (NAWIC) Awards, Victoria



Glenroy

Low carbon paths – Concrete Institute of Australia (CIA) Award for Excellence in Concrete



Glenroy

Low carbon paths – Sustainability & Environmental Excellence Award, Australasian Rail Industry Awards



Preston

Engineers Australia Award for Project Excellence



Preston

Infrastructure Project Excellence, Australasian Rail Industry Awards



Preston

Sustainability and Climate Award, John Holland Awards



Preston

Project of the Year (over \$200m), John Holland Awards

Installation of the final L-beam for the Pakenham project, near Racecourse Road



Strategic Objectives: The Five Greats

The Alliance recognises that surrounding ecosystems will be affected by the construction and operation of our projects. Our aim is to minimise harm to the environment and enhance local ecosystems.

In this section, NWPA highlights strategies implemented in 2023 to drive Great Change for the environment, including initiatives in climate change management, resource use efficiency, waste and recycling, ecological sustainability and biodiversity.



Sunrise at Maidstone TMF

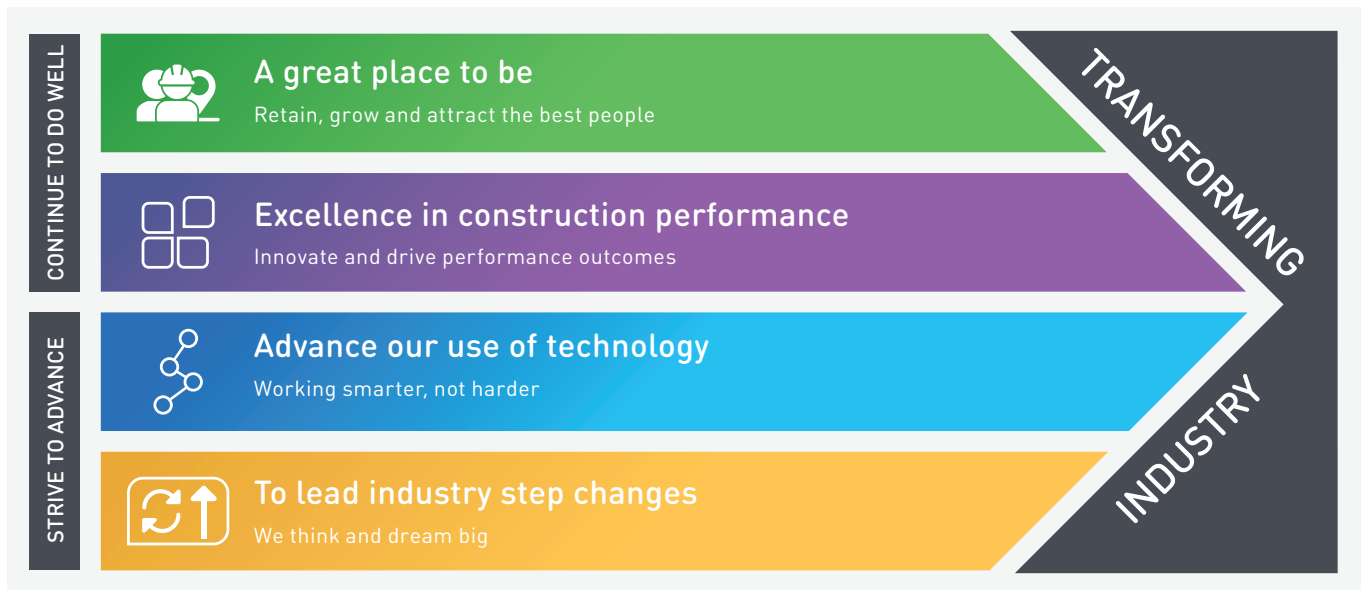
NWPA 2023-2025 Strategic Plan

Transforming industry by continuing to do well and striving to advance

To stretch ourselves beyond outstanding performance toward industry-leading, we developed a 2023-2025 Strategic Plan that engages and empowers all Alliance staff to challenge the norms, question the status quo, explore new technologies and work smarter not harder.

The Plan is founded on four goals and a suite of supporting

initiatives that reflect our outstanding level of performance and increased focus on leading industry step changes. Our Plan also aligns with the core values and strategic direction of our key Alliance partners and stakeholders – LXP, John Holland, KBR, MTM, V/Line and DTP – and reaffirms our commitment to improving our one-team approach across the Alliance and leading the way across the industry.



Transforming industry by continuing to do well and striving to advance

1.0 A great place to be

Retain, grow and attract the best people

Great places are made up of great people. Our aim has always been to empower our people to help shape how we operate. We support a one team culture, recognise outstanding performance, offer diverse career progression pathways, provide social and professional networking opportunities, and ensure we look after your wellbeing.

3.0 Advance our use of technology

Working smarter, not harder

Our goal is to, not only understand our current use of technology, but to explore how we can improve utilisation to better support what we do. We will standardise the way we capture, monitor and view data so that it is available to the right people at the right time. We will implement a digital engineering approach that will be efficient, fit-for-purpose and future-proof.

2.0 Excellence in construction performance

Innovate and drive performance outcomes

NWPA has delivered outstanding construction outcomes through our rigorous and consistent approach across everything we do. We will continue to push for excellence by finding greater efficiencies in our methods, focusing on refining development phases, advancing an agile procurement approach, and ensuring strong completion of projects. These efficiencies not only help LXP achieve their broader goals, but also enable us to maintain a profitable and sustainable program.

4.0 To lead industry step changes

We think and dream big

We want to achieve great things in our industry. Our ambition is to lead step changes in construction, rail infrastructure, sustainability, and corporate social responsibility. We will strive to build greater gender equality, as well as stronger engagement with Indigenous suppliers and social enterprises. We will standardise designs and approach signalling differently. We will continue to create technological innovations and sustainability outcomes to lead industry step changes.

Four key initiatives support our sustainability commitments

Great Places: Sustainability in Design

Victorian-first radiant heat curing drives a circular solution at Keon Parade

Building on our successful partnership with subcontractor Civil Infrastructure Group (CIG) at the Preston LXP, we engaged them at Keon Parade to implement their innovative Australian patented methodology that accelerates the in-situ curing of concrete.



CIG's innovative methodology drives circular economy outcomes at Keon Parade

CIGCURE is a mobile system that combines external insulation and internal concrete heating.

The internal concrete heating is undertaken by pumping hot water through PEX piping installed throughout the structure. The controlled pumping of hot water initially heats the concrete to accelerate strength gain. As required, the system pumps cold water through the concrete to control differential and maximum temperatures, significantly reducing the chance of cracking.

The innovation facilitates the early stripping of formwork and falsework, while maintaining the quality requirements of Australian and Department of Transport & Planning (DTP) specifications.

Essentially, controlled heat is applied internally by automatically pumping hot and cold water through cross-linked polyethylene (PEX) piping installed throughout the structure.

The Victorian-first innovation ensures compliance with relevant VicRoads specifications, reduces overall program duration and therefore costs, and has the potential to reduce occupation durations.

Major benefits of structures being cast in situ include:

- Reducing costs associated with lifting, handling and installation of precast elements
- Reducing costs due to less handstands and access tracks required for heavy crange
- Eliminating costs associated with transporting precast elements to site
- Reducing reliance on limited precast suppliers in the market.

Sustainability outcomes include:

- Achieving high early strength without the need for higher cement content
- Reducing water and/or energy consumption compared to heat curing using steam
- Reducing the amount of formwork due to reduced stripping times.

Pakenham Station showcases industry-shaping sustainability

Pakenham Station's iconic high-tech roof has achieved industry-shaping sustainability through groundbreaking digital fabrication technology that reduces environmental impacts by minimising the use of raw materials.



Pakenham's new premium station features 14 skylights and a striking roof brought to life by cutting-edge technology

The canopy (representing to undulating hills of Pakenham) showcases the power of computer-generated technology to ensure efficient manufacturing and save time and materials.

To bring the roof to life, the design and construction team started by creating a mould for the 258 roof panels and then used two very large format computer numeric control (CNC) machines, the largest in the southern hemisphere, to cut the master patterns directly from a 3D file, which were then sanded to a polished surface.



Pakenham Station's impressive roof is made of reinforced thermoset (RT) that minimises the project's emission footprint by 2%

In a further win for sustainability, the project team worked with suppliers to change the original aluminium roof product to reinforced thermoset (RT), which minimised the project's emission footprint by 2%.

The change delivered:

- Lower emissions than the original design
- Better performance for the canopy soffit
- Fewer interruptions to station operations due to reduced maintenance requirements.



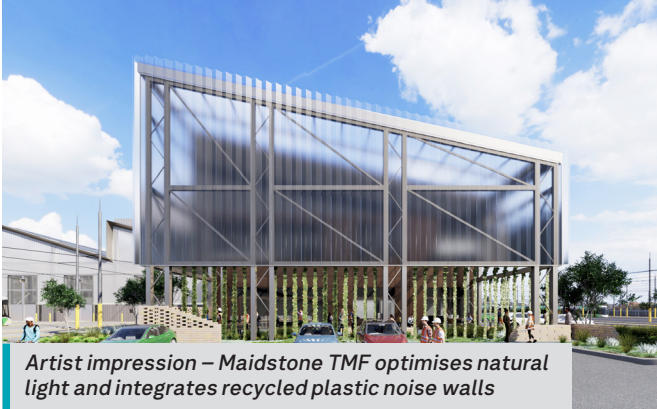
Solar panels installed on the Pakenham Station roof save about 37 tonnes of carbon a year

On the station roof, 80 solar panels provide a 27.6 kWh solar panel system that powers the station. The panels are made from monocrystalline silicon and produce around 38,974kWh a year, saving 37 tonnes of carbon annually, and equating to around \$11,000 savings in operational electricity costs.

Another 7.9kWh system has been installed on the East Pakenham Station canopy, saving around 10.3 tonnes of carbon emissions each year.

Setting the benchmark for sustainable tram maintenance facilities in Victoria

Maidstone TMF's design integrates community feedback for a modern and sustainable facility that will maintain, clean and stable a new fleet of Victorian-built Next Generation G Class trams that provide a more accessible, comfortable and energy-efficient journey for passengers starting in 2026.



Artist impression – Maidstone TMF optimises natural light and integrates recycled plastic noise walls

Designed by Melbourne architects, the project embeds sustainability through:

- A large solar panel
- Materials that optimise natural light
- Recycled plastic noise walls
- Landscaping with drought proof planting
- LED lights
- Reclaimed asphalt pave in new pavement areas
- Sustainable concrete mixes
- Rainwater tanks to harvest 80 megalitres annually to wash the trams.

Great Places: Enhancing Ecology

Cardinia Men's Shed Pakenham provides safe sanctuary for endangered bandicoots

In collaboration with the Cardinia Men's Shed Pakenham, specially made bandicoot boxes provide endangered species living along the rail corridor with refuge from predators like foxes.

Remote sensor cameras set up by the Project Ecologist/ Environmental Scientist confirmed sightings of endangered Southern Brown Bandicoots living to the east and west of Princes Bridge and prompted the team to reach out to the Men's Shed, which had built boxes for the Healesville Koo-Wee Rup Road upgrade works.

After carefully building the boxes, Men's Shed members visited the East Pakenham site to see where they had been installed along the rail corridor and in the landscaped area between Deep Creek and Pakenham Creek.

The boxes will provide a safe sanctuary for the bandicoots and other wildlife until landscape plantings are sufficiently established to create a natural shelter.

Cardinia Men's Shed Pakenham supports local men in their retirement through activities and working groups that provide a powerful tool to promote their health and wellbeing and foster meaningful social interaction.



Collaboration with Cardinia Men's Shed Pakenham spearheaded the construction of the protective bandicoot boxes



Pre-establishment of vegetation, boxes were installed along the rail corridor protect endangered Southern Brown Bandicoots from predators

Maidstone TMF salvages NWPAs largest collection of native fauna

Hundreds of native animals relocated to safety during demolition and clearing works at the Maidstone TMF included brown and tiger snakes, blue-tongued lizards, skinks, geckos, and ringtail and brushtail possums.

The team found the native fauna in vegetation, trees and buildings, and under concrete slabs on-site, and called on the Project Ecologist and a licensed fauna handler to safely relocate them to suitable habitats nearby. It is believed to be the largest collection of fauna salvaged on one of our projects.



Skink Rink at TMF



Retained vegetation zone at TMF

Collect, store, reuse, repurpose – Pakenham and Maidstone TMF focus on reducing resource consumption

Capturing, storing and reusing rainwater in site facilities at Pakenham and Maidstone TMF has reduced water consumption and minimised environmental impacts during construction.

Having 2 x 10kL tanks at each crib facility ensures we are maximising our rainwater capture and reuse during construction.



Reducing potable (drinkable) water is a crucial component of site establishment and ongoing construction works at Pakenham (left) and Maidstone TMF (right)

At Maidstone TMF, the team repurposed a used shipping container as a trade waste tank, which compared to the traditional approach of hiring or purchasing a new tank made from virgin steel reduced costs, material use and carbon emissions, with an estimated carbon footprint reduction of seven tonnes of CO₂-e.

In collaboration with the local water authority, the team ensured the recycled tank was approved for use, converted water into a quality that complies with trade waste quality standards in order to discharge from site to sewer.



Repurposing a shipping container as a trade waste tank resulted in an estimated carbon footprint reduction of seven tonnes of CO₂-e

The system's adaptability allows for potential reuse and replication on future NWPAs projects, offering a durable and low-maintenance solution.

Together, these sustainable solutions demonstrate NWPAs commitment to reducing environmental impacts and resource consumption across our projects.

Great Places: Heritage in Design

Preserving migrant history at Maidstone TMF

In 2023, the only Nissen Hut in Victoria still located on a migrant hostel site was carefully relocated alongside its larger cousin, the Romney Hut.

The historically significant prefabricated Nissen Hut demonstrates the typical residential accommodation provided to migrants in the early 1950s and may still evoke an emotional response that recalls the primitive conditions in which they were initially accommodated.

Following approval from Heritage Victoria, the hut was lifted via a bespoke methodology that enabled it to be moved to a new location during a short road closure from Central Park Avenue to Blair Street.

Detailed planning, the development of a steel frame that protected the historical hut during its relocation, construction of a new concrete slab in the balance of site, tree trimming, road closures and crane operations all formed part of the process.





The Construction Collective (TCC) committee. Top row (left to right): Jade Lim, Jackie Chen and Anna Rose. Bottom row (left to right), Tiffany McMahon, Stephanie Vilar, Alex Keppell and Annastasia Marchio

Great People: Workforce and Inclusion

Our Workforce

NWPA is committed to creating a diverse and inclusive workforce that represents the communities we work in.

We continue to collaborate with a network of industry specialists to support people facing barriers to employment and provide them with access to job opportunities on our projects.



Pakenham workforce

In 2023, NWPA's workforce statistics included:

- Trainees/Apprentices/Cadets engaged: 185
- Major Project Skills Guarantee (MPSG) remaining on track across the Program: 10%
- Overall person hours worked: 2,898,387
- Average female participation rate: 32%
- Females in a leadership or managerial role: 23.8%

In 2023, NWPA engaged with 305 priority jobseekers:

- 73 economically or socially disadvantaged people
- 61 individuals living with a disability 'employed' or 'engaged'
- 132 Aboriginal and/or Torres Strait Islander people
- 39 long-term unemployed or retrenched.

The Construction Collective

The Construction Collective (TCC) is a network within the North Western Program Alliance (NWPA), creating a safe environment for all members to understand the projects we deliver and the different careers that are out there, contributing to the delivery of major infrastructure jobs.

The aim of The Construction Collective is to remove the notion that “you can’t be what you can’t see” by hearing from females in senior management positions in our industry.

The TCC was formed in 2021 and continues to regularly come together to inspire and encourage females to pursue and progress their careers in the construction industry. The TCC puts together a calendar of events and initiatives, open to both men and women, with the notion 'you can't be what you can't see' at its heart.

2023 initiatives have included a schedule of guest speakers – often females in senior management positions in our industry, to share their stories on how they've overcome certain obstacles in their career – as well as Coffee Roulette, a program to help people connect and build networks across the Alliance.

Diversity and Inclusion

International Women's Day – 8 March

International Women's Day was celebrated with project-based panel discussions at Keon Parade, Pakenham and the Maidstone TMF.

NWPA's panelists shared stories of their time in the industry, including their challenges and triumphs. Our brave team members shared their experiences and advice, while answering questions from our hosts and from the floor.



IWD Panel discussion at Pakenham with (l to r) Eliza King, Jaime Fleming, Hajarah (Haji) Shafiq, Trent Olsen and Alex Keppell

Another highlight of the week was NWPA's virtual conversation with Jo Farrell, General Manager of a large-scale commercial construction company and founder of Build Like a Girl, a not-for-profit organisation that aims to encourage, recruit and retain women in the construction industry.

Keon Parade builds an inclusive culture

LGBTQIA+ awareness training at the Keon Parade site office reaffirmed our commitment to creating a safe and inclusive workplace where our employees feel empowered to confidently be themselves.

The 90-minute session emphasised the importance of creating an inclusive workplace culture and provided information on the lived experience of members of the LGBTQIA+ community, including issues associated with gender identity, gender expression and sexual orientation.

The awareness training provided an overall understanding of why LGBTQIA+ workplace inclusion is important to NWPA, explored challenges often faced by our LGBTQIA+ employees and raised awareness of the impact a positive culture has in our workplaces.

We encourage our people to become allies to stand up and speak out. Allies assist in extending and growing an employee network and fostering greater collaboration and more diverse voices to support LGBTQIA+ inclusion.

The Resilience Project

Building resilience to develop and sustain positive mental health

In 2023, the Resilience Project together with Hope Assistance Local Tradies (HALT) delivered a series of emotionally engaging sessions and provided evidence-based wellbeing strategies that supported our Keon Parade workforce and staff to develop and sustain positive mental health.

To make the topic of mental health more accessible, the Resilience Project and HALT shared their own stories and journeys and encouraged participants to focus on three key pillars that have been proven to cultivate positive emotion in our everyday lives – Gratitude, Empathy and Mindfulness.

Resilience Project Partner and Facilitator, Martin Heppell, also outlined practical strategies to bounce back from adversity when faced with life's inevitable challenges.



From left: Safety Lead Brett Halls, Resilience Project Partner and Facilitator Martin Heppell and Project Manager Sarah MacNish

Wear It Purple Day – the right to be proud of who you are

Wear It Purple is such an important day for the LGBTQIA+ community at NWPA and beyond.

The 2023 theme Write Your Story promoted visibility, community and acceptance of young people who identify as LGBTQIA+. It emphasised the importance of personal expression and individuality, and encouraged young people to embrace their unique perspectives and share their stories with others, all crucial to safety and physical and mental wellbeing.

At NWPA, we're proud of our diverse, supportive and inclusive culture. We heard from staff and the workforce about the significance of this day for them and encouraged everyone to show their support for the LGBTQIA+ community and be part of a movement that has the potential to save thousands of lives.

Wear It Purple Day was established in 2010 in response to global stories of teenagers taking their own lives due to bullying and harassment and lack of acceptance of their sexuality or gender identity. It is now an international movement that lets young people in the LGBTQIA+ community know that they are supported, loved and accepted and have the right to be proud of who they are.



Wear it Purple Day 2023



NAIDOC Week

To celebrate NAIDOC Week in 2023, NWPAs held special viewings of *The Last Daughter*, an 87-minute feature documentary that shares the deeply moving story of Brenda Matthews' journey to unearth the truth about her past and reconcile the two sides of her family.

Held annually in the first week of July, NAIDOC Week has a long history of activism and celebration. It stands for National Aborigines and Islanders Day Observance Committee, and dates back to the 1920s and the fight for better living conditions and rights for Aboriginal and Torres Strait Islander people.



Be a Voice for Generations: National Reconciliation Week

To mark National Reconciliation Week in 2023, NWPAs hosted a live broadcast with special guest Jimmy Kyle.

Jimmy presented from our former Lonsdale Street office, and the live stream was broadcast out to the project sites, where teams gathered as one and watch the presentation on a big screen, before enjoying a morning tea from local social benefit suppliers.

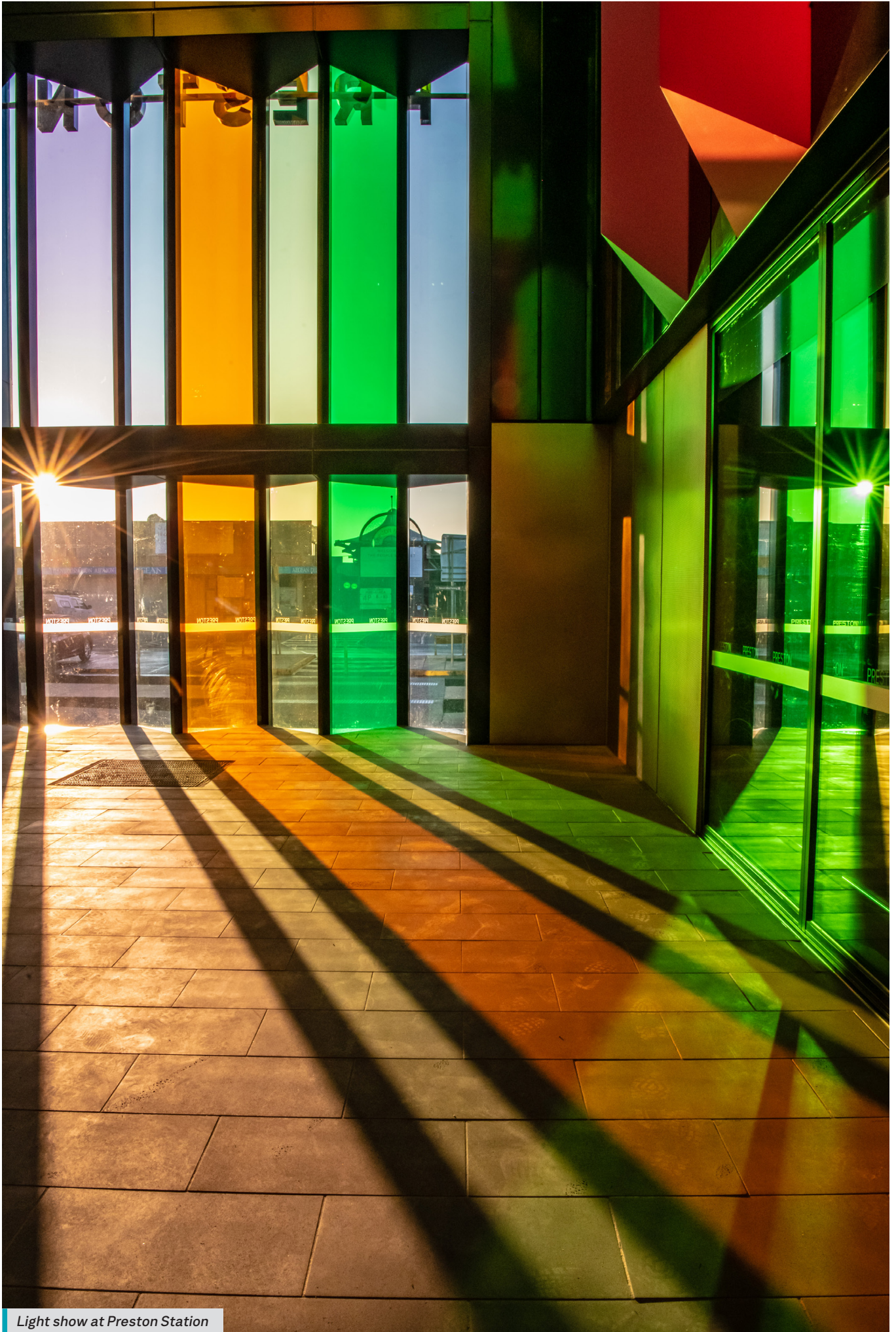
Jimmy is a proud Thungutti man, from the mid-north coast of New South Wales. He is also a Melbourne-based alternative singer/songwriter and the frontman of the band Chasing Ghosts.

Jimmy gave a powerful presentation that captivated the audience, covering the historical injustices against Indigenous Australians and the impacts that remain today. His strong message put the onus on each of us to find our own way to reconcile with the past and walk side by side with Aboriginal people on the journey towards a better future.



National Reconciliation Week 2023

National Reconciliation Week (NRW) runs from 27 May – 3 June each year and commemorates two significant milestones – the successful 1967 referendum, and the High Court Mabo decision respectively.



Light show at Preston Station

Great People: Safety

Safety and Wellbeing

Hard-hitting 'This is Why' safety campaign launched at Pakenham

A powerful 'This is Why' toolbox presented by psychologist Chris Shen reminded everyone in our high risk industry that we're all responsible for safety and need to remember why we're going to work in the first place – because of our family.



Psychologist Chris Shen presents a hard-hitting 'This is Why' toolbox to Pakenham staff and workforce

The 'This is Why' campaign reinforces the critical importance of maintaining a positive safety culture on-site and drives home the traumatic consequences of workplace incidents – on workmates, family, friends, witnesses and responders.

A video of Patrizia Cassaniti, who lost her son Christopher in a tragic workplace incident in 2019, just four days after his 18th birthday, laid bare the devastating impact on her and her family and the inherent danger of outdated beliefs like 'she'll be right mate'.

We need to combat complacency, feel empowered to speak up and look out for each other.

'This is Why' was launched across NWPAs project sites and the broader LXR program in 2023.



Live from Pakenham – HALT co-founder Jeremy Forbes hosts R U OK? Day broadcast

An R U OK? Day presentation by HALT (Hope Assistance Local Tradies) co-founder Jeremy Forbes raised awareness about mental health and encouraged everyone to have regular, meaningful conversations that could literally change a life.

In a live broadcast from Pakenham to all NWPAs sites, Jeremy sat down with Pakenham Communications & Stakeholder Engagement Manager Sally-Ann Nadj to talk about suicide prevention, developing good listening skills, and knowing what to say and when to say it.

The core message was to listen without judgement and use open-ended questions like 'Can you share with me what's going on for you?' or 'How long have you been feeling this way?' as good ways to encourage someone to open up.

Following the broadcast, NWPAs continued its partnership with HALT to encourage everyone to take care of their mental and physical health during the busy and often challenging end-of-year period.

Painter and decorator Jeremy Forbes co-founded HALT in Castlemaine following the suicide of a local tradie in 2013.

Since then, the grass-roots organisation has provided tradies and apprentices with the tools they need to start having conversations about mental health and to support their mates when they're going through tough times.

In March 2023, the Pakenham Safety Team embarked on a transformative collaboration with HALT to conduct Mental Health toolboxes for the workforce.

The partnership continues to have a profound impact in fostering a culture of wellbeing across the project and offering ongoing assistance to those in need.



HALT co-founder Jeremy Forbes hosted a live R U OK? Day presentation to all NWPAs sites



Rail Safety Week at Pakenham reminded everyone to Stand Back, Look Up and Stay Rail Safe

Stand Back, Look Up and Stay Rail Safe!

NWPA supported our Rail Safety teams to roll out Rail Safety Week toolboxes and pre-start briefings that called on everyone across the rail industry to Stand Back, Look Up and Stay Rail Safe.

Powerful presentations to staff and workforce reiterated that every life lost and injury on the rail network is a tragedy and the impact on family, friends, communities, rail and recovery staff and witnesses can be profound. Together with thousands of near hits each year, these incidents cause trauma, work-related stress and illness to rail and recovery staff.

Rail Safety Week is an important awareness campaign that reminds us to be vigilant about the risks associated with operating railways, whether we're travelling by train or working around them on-site.

Mental Health First Aid Training

In 2023, 15 people across NWPA completed an accredited Mental Health First Aid course that equipped them with the skills and knowledge they need to recognise and respond to a co-worker or other adult experiencing a mental health problem or crisis, until they receive professional help or the crisis resolves.

Grounded in research and guided by those with lived experience, the course supports NWPA's health and wellbeing culture and helps to provide a mentally healthy and supportive workplace.

NWPA Mental Health First Aiders are all trained and accredited in Mental Health First Aid, however they are not mental health professionals. They provide practical guidance and pathways to seek care and their support can range from having an initial conversation through to linking them with external support services to seek appropriate professional assistance they need.

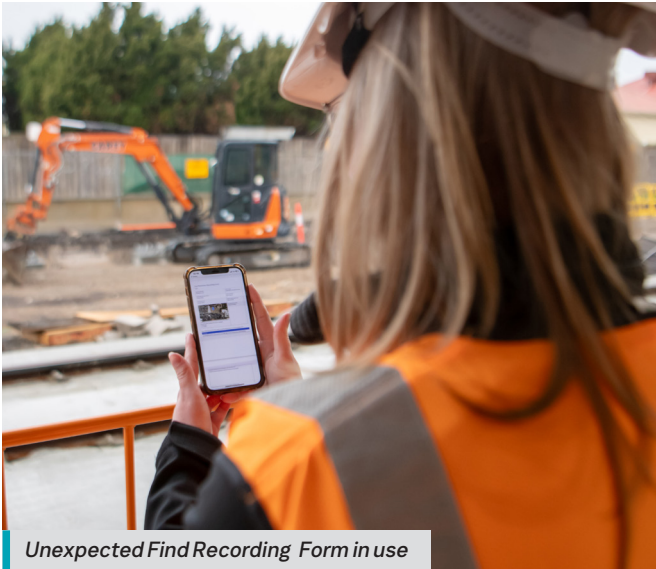


Piling works at Keon Parade

Great Network: Innovations and Adoption

App for unexpected finds at Maidstone TMF

An Unexpected Find Recording Form implemented at the Maidstone TMF streamlined the reporting of low significance archaeological findings and increased the quality and speed of information documentation and communication.



Unexpected Find Recording Form in use

Originally used by the South Eastern Program Alliance, NWPA developed an online version of the unexpected finds form to further optimise the reporting process. The innovative solution delivers:

- Faster recommencement of construction works post discovery of low-significance unexpected finds
- Better consistency and quality of information to satisfy low-significance unexpected finds reporting requirements
- Less time spent liaising with project archaeologists due to the capture of high quality information.

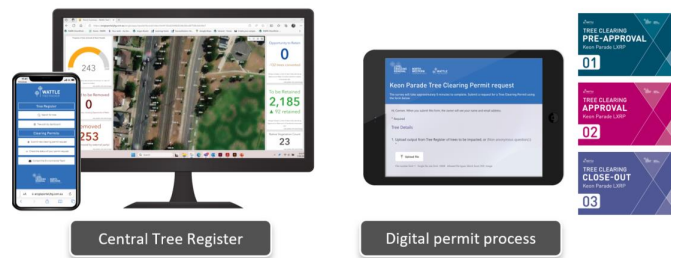
Benefits have also included improved productivity, clear and consistent record keeping and faster liaison and information processing between NWPA and the Project Archaeologist using the smart survey platform ArcGIS Survey123.

Unexpected finds are traditionally dealt with on a case-by-case basis that can result in construction stand-down times of up to four hours. This initiative streamlines the process used to identify, capture, and record information on low to medium significance artefacts found in areas not listed on the Victorian Heritage Inventory (VHI).

Innovative app saves trees, time and cost at Keon Parade and Maidstone TMF

An innovative digital tree-clearing tracker developed by NWPA’s Environment team has reduced the risk of environmental incidents and saved trees, time and costs at Keon Parade and Maidstone TMF.

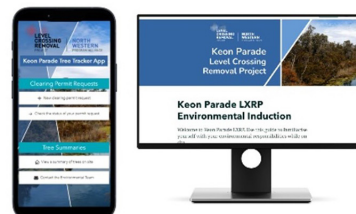
The transformative solution significantly improves standard tree removal processes by utilising Geographic Information Systems (GIS) to provide an accurate spatial context of tree locations and storage of data in a centralised, accessible platform.



NWPA’s innovative tree tracker app comprises a tree register tracker and digital permit process

Our industry-changing app streamlines the tree removal process to deliver:

- Real time data and geo-location
- Automated dashboard outputs that enhance transparency and shared visibility of overall tree management and environmental performance
- Continuous updates on progress of tree clearing and status of assessed trees
- Fast adaptation to design changes
- Simplified approval checks
- Improved communication between teams and key stakeholders.



Keon Park tree tracker app provides a blueprint for future projects

The industry-changing solution addresses the limitations of the traditional system, which used a static Excel spreadsheet of arborist assessments that had to be re-uploaded to GIS

following any changes and provided data in various formats, including Excel, PDF and Civillo/GIS.

The digital tree tracker also mitigates issues associated with version control, delayed display of changes, increased risk of incorrect tree removal and the risk of removing trees without all relevant approvals being in place.



Keeping two lines operating during the construction of Keon Parade allowed trains to move in both directions at the same time

Keeping trains running while we built Keon Parade

In a first for NWP, an innovative 'dual line running' solution maintained network capacity by providing two operational Mernda rail lines – one above and one below the Keon Parade level crossing – keeping trains running while we built the project.

The solution enabled the city-bound train to run on the new elevated bridge and the Mernda-bound train to run on the ground track directly below. This configuration allowed trains to move in both directions at the same time, avoiding disruption to the train timetable and reducing the need for more rail closures during construction.

Our solution delivered multiple benefits, including:

- Minimising commuter and network disruption
- Reducing bussing requirements
- Avoiding the need for lengthy occupations of the rail line.

Bringing cleaner power to Keon Parade and Maidstone TMF

Using biodiesel to support the decarbonisation of construction activities at Keon Parade and Maidstone TMF has helped to deliver carbon savings, better air quality, healthier sites and energy security.

As of November 2023, Keon Parade had used 3,851 litres of biodiesel that saved three tonnes of CO₂-e, equivalent to taking 15 cars off the road.

Delivered to the Keon Parade site by Refuelling Solutions (RFS) mini tankers, B5 biodiesel has powered:

- Light towers
- Telehandlers
- Knuckle-booms
- Excavators
- John Holland trucks.



Powering Maidstone TMF with biodiesel

Biodiesel benefits at Keon Parade include:

- 1,000L self-bunded fuel tank hired through RFS or Green Power Solutions
- B5 biodiesel compatible with all plant and equipment
- Onsite B5 fuel storage avoids trips to the bowser.

To bring cleaner power to Maidstone TMF, a larger and more complex site compared to Keon Parade, the project used over 20,000 litres that saved 54 of CO₂-e, equivalent to taking 11 cars off the road.

Biodiesel is a biodegradable liquid fuel produced from renewable sources like vegetable oils or animal fats. It has physical properties similar to petroleum diesel, but is a cleaner alternative that can be used in many concentrations from 'B5' (95% petroleum diesel and 5% biodiesel), all the way up to 'B100' which is pure biodiesel. B5 and B20 are becoming more common in the construction industry, representing a real shift towards cleaner fuel in Australia.



RFS mini tankers deliver clean power to Keon Parade

Up-cycled railway infrastructure preserves Victoria's rail history



Recycle and reuse – volunteers restore the former railway line between Healesville and Yarra Glen using concrete sleepers from Pakenham

The Pakenham level crossing removal project recycled more than 5,000 concrete sleepers and associated ‘jewellery’ – metal clips which connect rail to the sleepers – with a mega delivery from Pakenham to the Yarra Valley Railway (YVR) in Tarrawarra.

The sleepers from Pakenham are being progressively installed at Tarrawarra to create part of the new section of track. On a good day the YVR volunteers lay around 150m of track, but it's slow and steady work.

The concrete sleepers were moved from the former railway sidings located next to Pakenham Station where a construction blitz saw up to 500 people a day working across the Pakenham site. Crews replaced 7,000 tonnes of ballast under the rails and removed more than 7km of old rail track, while installing new track at the eastern and western ends of the site.

In coming years, the new Tarrawarra Station will be carefully crafted from part of the former Mooroolbark Station building currently being restored by Box Hill Institute students at its Lilydale Campus. Once complete, it will be moved to its new location on the railway.

YVR is a local community organisation run by around 500 volunteers who are currently restoring the former railway line between Healesville and Yarra Glen, which ran freight and passenger trains from 1889 until the last service in 1980. They are restoring the remainder of the rail corridor from Tarrawarra Estate to Yarra Glen, a distance of approximately 10km.

#BeatPlasticPollution – World Environment Day 2023

World Environment Day 2023 urged us to Beat Plastic Pollution and solve the global crisis we're all facing.

It was a stark reminder that our actions on plastic pollution matter and it's time to accelerate this action and transition to a circular economy by:

- Challenging yourself or your project to make a pledge to reduce plastic waste
- Hosting an awareness or clean up event on your project, such as Take 3 Clean Up
- Challenging yourself to refuse, reduce, reuse and recycle
- Starting to use community services like soft plastic recycling programs
- Joining community environmental organisations and learning how to take action in your backyard or local area through initiatives like Sea Shepherd Australia events and the Take 3 Week of Action.

Events held across NWPAs sites highlighted the great work we're doing on our projects to address these challenges and called on our teams to showcase their plastic waste knowledge.

Unnecessary and single-use plastics are polluting our planet at alarming rates. Without urgent action, the estimated 11 million tonnes of plastic currently entering the ocean annually will triple in the next 20 years. Fighting plastic pollution can also help to reduce greenhouse gas emissions.



Transitioning to a circular economy requires us to scale up and speed actions to beat plastic pollution



Winner of the Beat Plastic Pollution game



Keon Parade Site Engineers use Duplo bricks to help children understand construction

Great Engagement: Community

Keeping kids informed at Keon Parade

Armed with hi-vis vests and safety glasses, children at Keon Park kindergarten learnt about construction taking place a block from their kinder. They had reached out to their teachers about the project and were so excited about the visit, they gathered at the door for a sneak peek.

Two Site Engineers and members of the Communications and Stakeholder Engagement team organised fun activities for the 4 and 5 year old class, including show-and-tell with pictures of construction machinery – the switched-on kids knew what most of them were.

As a parting gift the team presented a set of Duplo building bricks, which the kids immediately put to good use.

‘Today at kinder we worked on our own special project using the Duplo bricks. The children created bridges, train stations, police stations, schools, homes, people, and a construction site with bulldozers, concrete trucks and fire hydrants. It was amazing!’

– Keon Park kindergarten teacher Popi Guzzardi.

Cleaning up Pakenham and Keon Parade

Clean Up Australia Day 2023 inspired and mobilised our teams at Pakenham and Keon Parade to improve and conserve our environment, eliminate litter and reduce the amount of waste that ends up in landfill each year.

At Keon Parade, around 40 team members cleaned up litter along Keon Parade, Johnson Street, High Street and the station precinct. They collected over 30 bags of rubbish, two abandoned shopping trolleys filled with wood, two children’s bikes and a No Standing sign.

At Pakenham, volunteers filled 10 bags of rubbish and collected a golf club, a Bunnings cart (which they returned to the store), two large signs and a computer screen.

The volume of rubbish collected in one day was a stark reminder that Australia’s waste challenge continues to grow and that we all need to step up and support solutions that move us toward a circular economy – where everything is a resource and there’s no such thing as waste.



Eliminating litter and reducing waste on Clean Up Australia Day

Transformative communications reach out to Maidstone’s culturally and linguistically diverse (CALD) communities

Maidstone TMF’s Communications and Stakeholder Engagement team reached out to local CALD communities with multilingual construction updates, communications and corflutes in the three most prevalent languages other than English (LOTEs) spoken in the community – Vietnamese, Chinese (Cantonese and Mandarin) and Spanish.

Recognising that Maidstone has one of the lowest levels of English proficiency in Melbourne, they had conducted extensive mapping of CALD stakeholders, community groups and places of worship to ensure the culturally diverse community understood Maidstone TMF’s impacts and appreciated its benefits.

CALD collateral included a notice (corflute) written in English, Chinese, Vietnamese and Spanish alerting the local community to the closure of a footpath and a new detour. It was also sent to multicultural stakeholders and uploaded to the Department of Transport and Planning (DTP) website.

In a first for NWP, the team reached out to CALD media – Il Globo, Vision China Times and the Chinese Post – with a construction update accompanied by a translated version, and have also fostered relationships with local Buddhist temples, churches, small traders and Melbourne’s Living Museum of the West, which documents and preserves stories and images of Melbourne’s west.



Signage in English, Vietnamese, Chinese and Spanish alerts the community to a closed footpath and new detour

Benefiting the whole of NWP, the team arranged for common messages about pedestrian and car park disruptions to be translated into the top nine languages spoken across NWP’s current projects. They are available to project Communications and Stakeholder Engagement teams across the program, who can request new messages and translation into other languages.



Portable EV charger at Pakenham's Sharnet Circuit compound will be deployed on future projects

Great Engagement: Industry Collaboration

Steel reuse at Keon Parade a win for circularity and collaboration

In a collaborative effort between teams, Keon Parade's reuse of 45 tonnes of redundant steel from Pakenham saved \$240k in costs and allowed 13 overhead wiring structures to be installed in the project's first occupation.

The collaboration also delivered a win for circularity with the design of Keon Parade's overhead wiring structures matching the steel no longer required at Pakenham, meaning it didn't need it to be scrapped.

To assess how to best reuse the steel, the team developed a smart methodology that involved taking measurements and conducting condition assessments. They also worked through a number of technical issues associated with bolting and connecting the steel at the interface between the new and reused product. Access to the Camp Road laydown area allowed the steel to be moved and sorted, providing further planning and logistics benefits.

The nature of the galvanised steel protects it from rust, slows down its deterioration over time and allows it to be used for the construction of items like panel and post retaining walls.

Pakenham's site office electric vehicle charger: a first for NWPAA and the industry

Pakenham continued to deliver firsts with a portable electric vehicle (EV) charger installed at the Sharnet Circuit compound, forming part of NWPAA's fleet of plant and equipment to be deployed on future packages of work.

Pakenham was chosen to trial NWPAA's first on-site EV charger due to its distance from the CBD and the length of the project.

The charger is free to use and was initially installed for workforce and staff who own an EV vehicle, however as the initiative is rolled out on other sites it's hoped more people will consider buying an EV for their next car.

Looking ahead, the plan is to replace a number of site vehicles with EVs that can be charged on-site in the same way.

Recent testing of the EV's capability indicated the Pakenham site office can recharge two cars at a time using the two available pumps, but with some clever scheduling of vehicles and usage this could increase to four to six cars a day.

For the tech minded, Pakenham has installed one of the fastest models on the market – an Ocular Dual Tower three phase 32-amp charger with attached charging cables.

Innovation-sharing across LXRP Alliances

An Innovation Showcase hosted by the Southern Program Alliance (SPA) provided an opportunity for all LXRP Alliance Programs to share their innovations, network, and increase their understanding of the Continuous Improvement KRA 1.0.

NWPA presented three industry-transforming innovations related to social impact, environmental and circular economy:

- Inclusive Experiential Access Design – going beyond industry standards and codes created a more inclusive and empathetic approach to designing rail infrastructure that met the needs of people living with disability at Keon Park Station.
- Interactive and Immersive Spatial Environment Induction and Digital Tree Clearing Process and Tracking System – by building on the digitisation of Site Environmental Plans and ArcGIS story mapping to create an interactive environmental induction for new staff, NWPA was able to digitise its tree clearing permit approval process, which centralised tree data and provided spatial context to engineers to reduce the potential for serious incidents.
- Crushing and Recycling Redundant Conduits – leveraging our supply chain to repurpose redundant conduits as feedstock materials for the manufacture of new products to be used on NWPA projects, we created a circular economy solution that avoided diversion to landfill, minimised the use of skips, aligned with the Victorian Government’s Recycled First Policy and ensured raw materials were available for material production.



Innovating to create a circular economy by repurposing redundant conduits



Young Change Agents, including CALD youth and those disengaged from education, learn how to develop industry solutions in collaboration with our Pakenham team

Great Partnerships

Young Change Agents

In partnership with social enterprise Young Change Agents (YCA), NWPAs supported youth from culturally and linguistically diverse backgrounds to build their entrepreneurial and employability skills.

Led by NWPAs Sustainability Adviser, Sajitha Srivelan, the Pakenham team together with YCA developed and delivered an Industry Intrapreneurship Program that encouraged students from the local ECG Secondary College to develop solutions with an entrepreneurial lens.

The team designed a question for the students to focus on, brought an internal team on board to participate in the process and supported their understanding of NWPAs design and delivery processes.

The aim was for the students to appreciate the nature of the construction-related problem they were asked to solve and how it could add value for NWPAs.

Overall, the program involved six sessions over five weeks. The students visited the Pakenham site and used their understanding to develop solutions associated with diversity, sustainability, technology and the attraction of young people into the industry. Working in teams, they participated in design thinking, user journeys, ideation, validation and prototyping, ultimately pitching their ideas to an NWPAs judging panel.

The winning concept Contechz was an app that allows construction companies to capture designs, progress tracking, subcontractor management and invoicing in one place.

YCA empowers young people to identify problems in their community, reframe them as opportunities and develop solutions with an entrepreneurial lens.

Their aim is to make it easy for schools and teachers to introduce and embed entrepreneurial learning and design thinking and they strive to be a leading example for students as a non-profit social enterprise leading the way in youth entrepreneurship in Australia.

Leading the way in diversity and inclusion with Victoria's only 100% Aboriginal female-owned plant hire business

Owned and operated by Nicole Appleton, NLA Logistics is proud to be the only 100% Aboriginal female-owned plant hire business in Victoria.

They started as a one-truck business in 2016, with Nicole driving the truck herself, and steadily grew to owning over 15 items of their own equipment. NLA now work with over 200 independent contractors and have established businesses in Seaford and Oakleigh.



NLA Logistics is the only 100% Aboriginal female-owned plant hire business in Victoria

NWPA Industry Capability and Inclusion Manager, Quentin Mercier, approached NLA with a view to them working on our projects. He supported NLA through the tendering process and based on their credentials they were awarded a contract at Keon Parade and then Maidstone TMF.

At Keon Parade and Maidstone TMF, NLA have several trucks onsite most days, demonstrating the strong pipeline of work across NWPA.

Nicole started out as an Armaguard truck driver when she was 19 years-old and loved it so much she bought her own pink twin steer Kenworth truck. She set up NLA Logistics in 2016 and now has a fleet of trucks servicing about 100 subcontractors who work for them every day and about 200 subcontractors on the books.

NLA works for over 200 clients, from small companies who use one truck once a year to others who use up to 30 or 40 trucks a day, every day.

Some 50% of their staff and workforce are women.



Kinaway-certified NLA is committed to supporting minority groups across the supply chain

Keon Parade takes CALD engagement to a whole new level

Building resilience to develop and sustain positive mental health

Interpreters engaged to translate Keon Parade presentations into five different languages – Farsi, Somali, Mandarin, Vietnamese and Arabic – significantly raised the bar for CALD engagement across NWPA.

Working closely with not-for-profit adult community education provider PRACE, the Keon Parade Communications and Stakeholder Engagement team coordinated three information sessions across two days at their Reservoir centre.

Together with the five interpreters, they presented to English language classes from beginners to advanced, as well as to PRACE College, a school that provides education opportunities for students aged 15 to 19 as an alternative to the traditional schooling system.



Raising the bar in engagement at Keon Parade

The presentations outlined the benefits and impacts of the project, provided construction updates and detailed the services available to the community during disruptions. This was particularly important for the majority of students who take varying modes of transport around Reservoir, Thomastown and the city.

To clearly explain road closures and detour routes, the Communications and Stakeholder Engagement team shared printed collateral and maps that visually clarified project impacts and enabled the interpreters to describe disruptions in greater detail.

“It was great. The activity humanised the project and provided it with a friendly face that the students know they can talk to. The materials were all super helpful and easy for our students to understand.”

– Marina, PRACE English teacher

To Gather, Together – Indigenous Business Month 2023

The theme of Indigenous Business Month 2023 – To Gather, Together – aimed to ignite conversations about First Nations businesses, and encourage and foster relationships and connections.

Spotlight on HDF Corporation

NWPA took the opportunity to highlight some of the great companies we're working with, including HDF Corporation whose primary mission is to create opportunities for Indigenous individuals, communities and priority jobseekers to create a lasting legacy of generational transformation.

HDF assists their clients with project-specific recruitment, mentoring and training, provides cultural awareness training, and supplies dry hire equipment.



For the Pakenham LXP, HDF provided truck and roller hire equipment and permanent employment for an Indigenous person new to the construction industry through civil construction company iDig Developments.

Through this partnership, they mentored and supported the Indigenous worker, while their contract at Pakenham enabled them to purchase a CAT 12 tonne roller, a 5 tonne Kobelco excavator and a truck and trailer.

iDig delivered a package of work comprising main bulk earthworks and rock placement over a 12-week period on time and within budget. Their scope included excavation, sub-grade preparation and soft spot rectification, construction of covered walkway roofing structures and relocation of a bus depot during occupation works.

Since HDF started operating in 2019, they have played a pivotal role in transforming the lives of numerous Indigenous individuals across a diverse range of industries and roles.

HDF measures success by their achievements and the long-term employment outcomes they deliver for Aboriginal and Torres Strait Islanders, as well as helping contractors meet their social responsibilities.



City view from Preston viaduct

What's Next for NWPA?

NWPA has an exciting year ahead in 2024, marked by significant sustainability milestones for current level crossing removal projects and the delivery of new infrastructure opportunities in the western suburbs.

Melton LXP

Melton level crossing removal project will kick off in 2024, welcoming V/Line as a new Alliance partner with significant experience in rail projects and operations. The transformative project aims to enhance safety and alleviate congestion by:

- Removing dangerous level crossings at Coburns Road and Exford Road.
- Building new rail stations, upgrading track and installing advanced rail systems and infrastructure.

Melton LXP will improve Melbourne's transportation network, create job opportunities and stimulate economic growth in the western suburbs.

Projects in delivery – Pakenham and Keon Parade LXRP and Maidstone TMF

Pakenham and Keon Parade LXRP will be nearing completion in 2024 and we're excited to bring you their final sustainability outcomes in next year's report! And Maidstone TMF is poised to be in full swing of delivery in 2024 with the project scheduled for completion in 2026.

With this expansion in our delivery capability, NWPA demonstrates our commitment to not only removing level crossings but also constructing complex buildings that enhance infrastructure and contribute to the overall development of the community.

Net Zero future

In 2024, NWPA will look to align with VIDA's 2024 Transport Infrastructure Decarbonisation Strategy and LXP's decarbonisation targets to push the industry further towards a net zero future.

With a focus on reducing the impact of materials and construction emissions, we will continue to explore alternative construction materials with lower carbon footprints and implement energy-efficient technologies throughout the lifecycle of our projects.

Transformation and AI

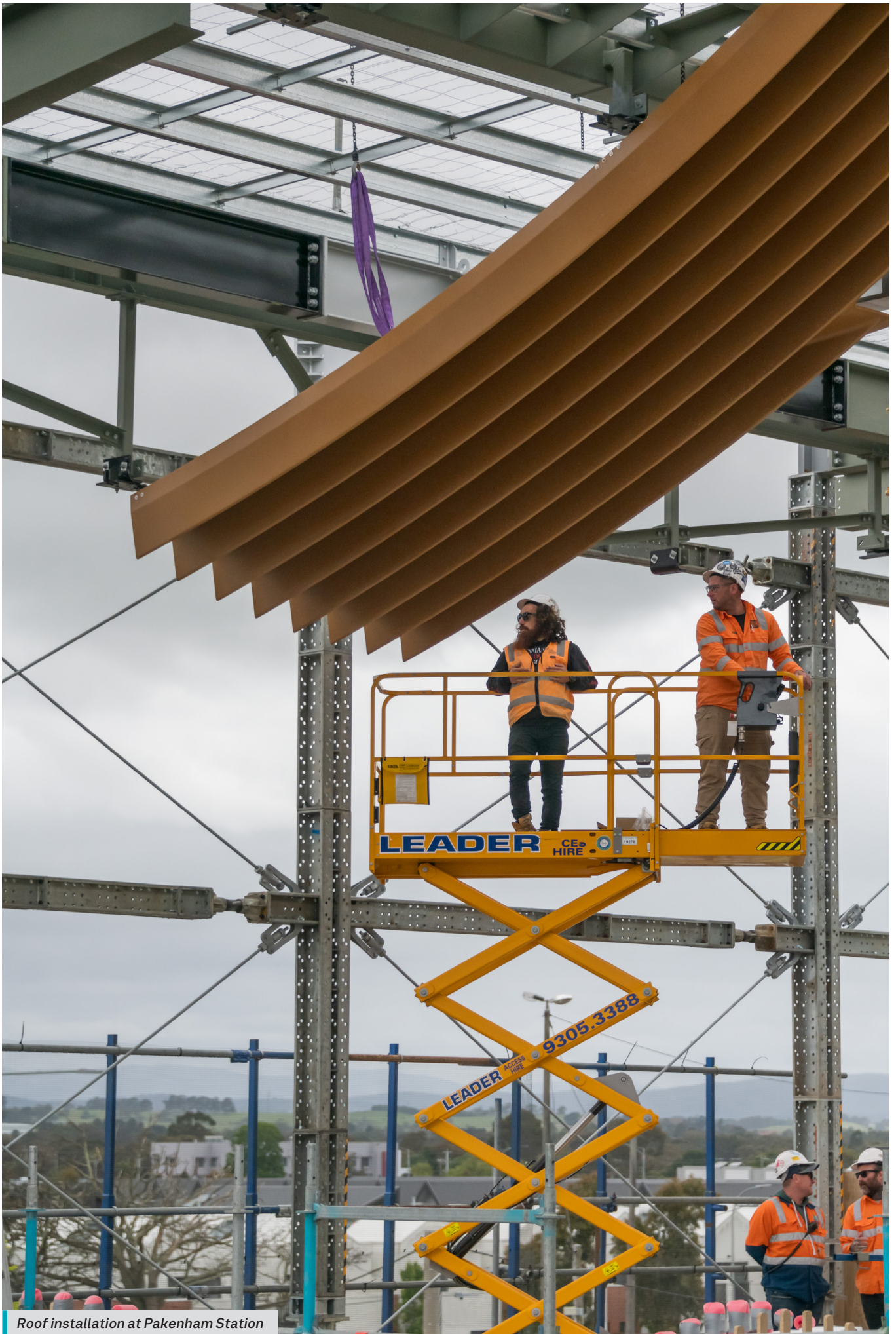
In 2024, we'll continue deep diving into new and emerging technologies like AI to transform industry and optimise the way we deliver our work.

We'll explore and interrogate new systems and tools to price, procure and measure carbon impact with a strong emphasis on economically valuing the social cost of carbon when deciding what materials and fuels to use.

The greater adoption of digital engineering technologies will be at the core of how we operate to drive construction efficiencies and deliver transformative sustainable outcomes.



Maidstone TMF in the works



Roof installation at Pakenham Station

Appendix 1: Sustainability Performance



Complete








In progress

Theme	Objectives	Target	2023 Status		
			Pakenham	Keon Parade	TMF
Governance	Be accountable and transparent on sustainability performance	Publicly report on our sustainability performance annually			
	Have accreditation to ISO 14001 (Environment), ISO 9001 (Quality) and AS/NZS 4801 (OH&S) and will regularly monitor performance	Report sustainability performance quarterly to senior management			
Energy and Carbon	Strive for lower carbon transport	Optimise integration with sustainable access modes including walking, cycling, bus and tram networks			
	Reduce energy emissions and carbon footprint during both construction and operation	Design buildings to achieve at least a 10% improvement over performance requirements set out in the National Construction Code (NCC), Australia's primary set of technical design and construction provisions for buildings			
	Support innovative and cost-effective approaches to energy efficiency, low carbon/renewable energy sources, and energy procurement	Investigate all avenues for renewable energy supply for both construction and operation			
Environmental Performance	Avoid, minimise and offset harm to the environment and loss of biodiversity	Minimise environmental impacts, sources of pollution and environmental nuisance during the works			
	Protect and conserve the natural environment	Comply with or exceed environmental obligations for the project			
Climate Change	Infrastructure, operations and construction will be resilient to the impacts of climate change	Mitigate all extreme and high-priority climate change risks			
		Treat a minimum of 50% of medium-priority risks			

Theme	Objectives	Target	2023 Status		
			Pakenham	Keon Parade	TMF
Water Efficiencies	Minimise potable water consumption	Reduce water consumption in construction and operation compared to BAU			
		Minimise potable water consumption in construction and operation compared to BAU			
	Maximise opportunities for reuse of rainwater, stormwater, wastewater, groundwater	Investigate rainwater harvesting and reuse systems at construction sites and all stations			
Waste	Minimise waste through project lifecycle and maximise beneficial reuse of spoil	Recycle or divert from landfill: <ul style="list-style-type: none"> – 80-100% by volume of spoil – 50-90% by volume of inert and non-hazardous waste – 40-60% by volume of office waste 			
Materials	Reduce materials impacts through sustainable materials selection	Maximise the use of Australian made steel products where possible in line with local content targets			
		5% reduction in materials lifecycle environmental impacts compared to a base case footprint			
		Aim to source materials with an ISC-approved environmental label			
		Procure concrete with high recycled content (supplementary cementitious material, aggregates) where practical and allowed by standards			
Biodiversity	Protect and create biodiversity through appropriate planning, management and financial controls	Minimise vegetation clearing			
		Maximise native landscaping			

Theme	Objectives	Target	2023 Status		
			Pakenham	Keon Parade	TMF
Heritage	Protect and promote heritage through appropriate design, planning and management controls	Maximise opportunities for archaeological research and future interpretation of archaeological finds			
		Opportunities for heritage interpretation identified and implemented at appropriate station precincts			
Liveability	Promote improved public transport patronage by maximising connectivity and interchange capabilities	Stations and precincts designed in accordance with the LXP Urban Design Guidelines			
	Provide well-designed stations and precincts that are comfortable, accessible, safe and attractive	Implement initiatives which will provide tangible benefits to local community groups during the construction period and beyond the construction period			
Workforce	Increase opportunities for employment of local people, participation of local businesses	Utilise apprentices, trainees or engineering cadets for at least 10% of all hours worked			
		Ensure that at least 2.5% of all hours worked are undertaken by Aboriginal or Torres Strait Island employees			
Innovation	Develop innovative solutions and share learnings across LXP	Develop and implement at least five LXP endorsed innovations per project			
Community	Support and enhance social, cultural and community wellbeing	Implement initiatives which will provide tangible benefits to local community groups			
		Create opportunities for local business involvement during the delivery phase			
		Minimise negative impact on the community and local businesses during construction and operation			






Theme	Objectives	Target	2023 Status		
			Pakenham	Keon Parade	TMF
Sustainable Procurement	Influence contractors, subcontractors and materials suppliers to adopt sustainability objectives in their works and procurement	All contractors to be requested to provide their sustainability policy and details of implementation			
		Pre-award evaluation to be utilised to assess sustainable performance of contractors prior to contract award			
		Subcontractors required to report against sustainability targets monthly			
		A minimum of 3% of the overall spend on goods, services and training devoted to social procurement			

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