

Sustainability opportunities workshop report

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About this report

This report provides a summary of the insights and opportunities we heard from council and agency stakeholders who participated in the North East Link sustainability opportunities workshop, held on 4 December 2018.

Feedback from the workshop is being reviewed by North East Link Project (NELP) to determine how these ideas and opportunities could be facilitated. This information will be provided to parties bidding on the project.

Introduction

NELP is committed to being leaders in sustainability and implementing sustainability principles in the planning, design, delivery and operation of North East Link.

To translate these principles into real outcomes, we need to hear from our stakeholders – we want to know what is important, we want to be able to harness their knowledge and we want to work together to understand the opportunities.

This report documents the outcomes from a stakeholder workshop held on 4 December 2018. All stakeholders in the Technical Reference Group (TRG) for the Environment Effects Statement (EES) were invited to participate (refer Appendix A for members of the TRG and the workshop participants).

The purpose of the workshop was to share knowledge and generate ideas on sustainability opportunities that could be implemented for the North East Link.

Participants were invited to discuss the following key questions:

- Is anything missing from NELP's sustainability themes and high-level objectives?
- What are councils and agencies doing and planning (and what would they like to do) to achieve similar sustainability objectives that could be relevant to the North East Link?
- What measures of success do councils and other agencies use?
- What can NELP learn from past council and agency experience in sustainability on infrastructure projects?



North East Link sustainability themes and approach

Our themes

Our first step in planning for sustainability was to consider the sustainability issues and opportunities most material to North East Link. These themes would set the platform from which we will establish specific objectives and targets.

To determine what issues are most material for North East Link, NELP had considered: the policy context, the project's sustainability opportunities and risks and the interests of stakeholders.

We asked participants to consider our commitments, articulated through our Sustainability Policy, which span environmental, social and economic themes:



1. **Resource efficiency**

Embedding energy, water, material and waste reduction initiatives into the design, construction and operation of the project.



2. **Urban ecosystems**

Protecting and seeking opportunities to enhance natural environments.



3. **Communities**

Making a positive contribution to social, cultural and community health and wellbeing.



4. **Economic opportunities**

Facilitating opportunities for economic development, providing a skilled local workforce and promoting diversity and inclusion.



5. **Climate change**

Playing a part in Victoria achieving its emission reduction targets while preparing for the challenges presented by climate change.

What you said was important

- **Biodiversity** - recognising that the local natural environment contributes to biodiversity in numerous ways e.g. as habitat corridors, through gene diversity, etc.
- **Water** - while minimising water use is an important objective, the project interacts with water in many different ways – its influence on water quality and the potential direct and indirect effects on waterways and catchment health. Waterways are highly valued by communities and have social and environmental value.
- **Active transport** - prioritising active transport by design (through planning the most convenient routes and understanding the key local destinations).
- **Climate** - there is growing awareness around the urban heat island effect. The need to ensure that landscaping is designed to adapt to a changing climate and site specific micro climates should be an important consideration.
- **Future technological change** - anticipating and embracing the benefits of emerging technologies such as in vehicles, pavements and other materials.
- **Education and research** - maximising opportunities to share knowledge, document outcomes and contribute to research across the many aspects of the project.
- **Community feedback** - hearing and acting on community feedback including input into social and community facilities, noise mitigation and local connectivity.

Other issues associated with our approach to sustainability

You also had other feedback associated with our approach to sustainability:

- Ensuring there are commitments to genuine improvements, rather than simply maintaining the status quo.
- Maximising opportunities as well as minimising impacts.
- Data collection mechanisms to measure baselines and long term outcomes. For instance, there is sometimes a gap between EES predictions and actual outcomes, but this is not well researched or understood.
- While our commitments seek to 'reduce' impacts, there is a need for transparency around how these translate into real aspirational and measurable targets.
- Transparency in how sustainability influences the weighting and selection of bidding parties.
- On a project that spans many years, the best practice standards of today will shift over the course of the project. How do we accommodate and drive these improvements in standards over the course of a long term project?
- How do we achieve continuous improvement in sustainability across major project delivery within Victoria? Should we be improving on the benchmarks set by previous projects (such as the performance achieved by the Level Crossing Removal Program).
- How do we identify the importance of scaling targets associated with resource consumption and greenhouse gas emissions? How do we consider the cost associated with sustainability opportunities?



Sustainability objectives and opportunities

NELP has developed objectives around each of the priority sustainability themes.

Participants provided feedback on these objectives and potential measures.

Participants also considered the opportunities that could be explored to achieve these objectives.



Theme 1

Resource Efficiency

We asked you to consider our objectives, potential performance measures and opportunities to 'embed energy, water, material and waste reduction into design, construction and operation'.

Our commitments

- Reduce the lifecycle impacts of materials, like concrete, asphalt and steel
- Reduce use of potable water and recycle and reuse water
- Reduce waste and excavated material

Potential performance measures:

- % CO₂-e reduced from base case due to material choices
- % of water used from non-potable sources
- % of total waste diverted from landfill

Our potential opportunities were:

- Trial emerging sustainable materials
- Consider Water Sensitive Urban Design as a way to manage and treat stormwater
- Investigate alternative water sources
- Reuse excavated spoil for beneficial uses
- Salvage and reuse materials for community purposes (for example high value trees into art installations, community gardens and local building projects)
- Repurpose waste materials for use in the project.

You asked us to consider additional commitments to:

- Reducing the use of materials as a first step to resource efficiency
- Reducing the life cycle impacts of all materials used on the project (and not just concrete, asphalt and steel)
- Integrating biodiversity outcomes into Water Sensitive Urban Design and increasing permeability
- Specifying the use of sustainable alternatives wherever possible
- Designing for adaptability to future changes.

You also suggested specific opportunities:

- Water capture and reuse off roads
- Utilise Council's waste stockpiles, such as glass and asphalt
- Set minimum % of recycled material to be used (such as plastic and glass)
- Install furniture made from recycled materials (such as park benches made from recycled plastics)
- Salvage and reclaim timbers that are removed for the project
- Use "E-Crete" (low carbon concrete) for footpaths
- Contribute to WSUD projects across council areas
- Investigate using the Bolin Bolin Integrated Water Management Project as an alternative water supply
- Develop an integrated water management plan for the project in consultation with DELWP's Integrated Water Management Working Group

- Seek partnerships to trial innovative use of resources and processes such as: solar energy generation; biofuels to power machines; use of geopolymer/zero carbon concrete
- Design stormwater retention as local features
- Use stormwater harvesting for vegetation establishment
- Consider WSUD opportunities that go beyond 'business as usual'
- Investigate the use of biosolids in concrete and pavement
- Use de-watered groundwater (construction and operation) to supplement wetlands.

What we'll do

- We have revised our "resource efficiency" objectives.
 - Reduce the use and lifecycle impacts of all materials, including concrete, asphalt and steel
 - Reduce water use and maximise the use of alternatives to potable water
 - Reduce waste and maximise the sustainable reuse of excavated material
- We are investigating the targets and the requirements to embed into contracts that will drive resource efficiency. These include targets for Portland cement in concrete, potable water use reduction, best practice management of waste and use of recycled materials.

Theme 2

Urban Ecosystems

We asked you to consider our objectives, potential performance measures and opportunities in 'facilitating opportunities for economic development, provide a skilled local workforce and promote diversity and inclusion'.



Our commitments

- Enhance biodiversity and habitat links
- Support local urban forest strategies.

Potential performance measures:

- # habitat creation
- # habitat improvement
- % increase in canopy cover
- # areas protected and actively managed
- Bird species abundance/diversity in restored areas
- WSUD performance measures
- Healthy waterways targets.

Our potential opportunities were:

- Tree planting species selection to contribute to ecological function including consideration of habitat for fauna species and pollinator species
- Contribute to maintaining habitat corridors for core habitat/source populations on the Yarra Floodplain. Use rope ladders and tunnels alongside habitat improvement and creation
- Contribute to programs that improve terrestrial and aquatic habitats (e.g. using removed trees as snags in waterways)
- Contribute to biodiversity research and knowledge sharing.

You asked us to consider additional commitments to:

- Contribute to long term sustainability of key water bodies (such as the Banyule billabong)
- Mitigate effects of construction on fauna (such as noise and lighting)
- Support biodiversity and urban forest strategies
- Contribute to protection and enhancement of waterways

- Replanting programs to not just focus on trees alone, but must recognise the ecological contribution of understory and aquatic vegetation
- Minimise urban heat island effect
- Aim to first avoid and then minimise habitat loss
- No net loss of canopy cover (preferably an increase if possible)
- Ongoing monitoring regimes both during and post construction
- Adopt a net gain approach.

You also suggested specific opportunities:

- Prioritise retaining high value trees (even if in small pockets) beyond the actual road footprint
- Seek to offset vegetation loss within the local area by working with affected local governments to locate opportunities
- Purchase suitable properties in Manningham, Banyule, Boroondara and Whitehorse to plant or preserve vegetation offsets within the local area
- Consider genetic diversity of vegetation and drought tolerant plants and trees to increase resilience to climate change
- Contribute to restoration projects for Bolin Bolin Wetlands and Banyule flats, Koonung Creek, Yarra River and Plenty River
- Enhance wildlife habitat and access around Plenty Gorge and Plenty River junction
- Consider Council's targets on catchment management to inform targets set for North East Link
- Consider the design of new street lighting and construction lighting to minimise impacts on fauna.

- Consider species selection and the resilience of proposed species (or gene pool) to tolerate climate change.
- Explore habitat creation that is integrated with the project's built structure e.g. building Microbat nesting tubes or boxes into noise walls.
- Contribute to a management plan for ongoing monitoring of Bolin Bolin Wetlands (in consultation with Parks Victoria)
- Support citizen science projects in the local area (such as community-based bird surveys)

What we'll do

- We have revised our "urban ecosystems" objectives to elevate the importance of water quality and waterway health:
 - Protect and enhance biodiversity and habitat links
 - Seek opportunities to improve stormwater quality and contribute to improvements in waterway environments
 - Support local urban forest outcomes
- We are talking with councils, Melbourne Water, DELWP and other relevant land managers in developing a Native Vegetation Offset Strategy and a Tree Canopy Replacement Plan.
- The Tree Canopy Replacement Plan will aim to replace the loss of canopy cover and achieve a net gain in tree canopy cover by 2045.
- We will be requiring contractors to adopt water sensitive urban design and integrated water management principles into stormwater water treatment design.

Theme 3

Communities

We asked you to consider our objectives, potential performance measures and opportunities for 'making a positive contribution to social, cultural and community health and wellbeing'.



Our commitments

- Enhance open space, active transport opportunities and community facilities
- Respect and promote cultural and historic heritage values.

Potential performance measures:

- Length of bicycle and walking paths created
- # commuter cycling time improvements
- Community satisfaction (measured by surveys)
- # and diversity of community participants
- Participation of Traditional Owners.

Our potential opportunities were:

- Provide new bike paths and walking tracks with shading to improve connections and access for communities
- Embed Indigenous knowledge and values into project design through engagement with the Wurundjeri
- Contribute a cultural values study to help identify and describe cultural values not usually captured as part of the standard planning/design process
- Identify sustainable design opportunities for community facilities being reinstated
- Work with water authorities and Councils to identify opportunities and develop alternative water sources for sports facilities
- Better use the project's community hubs for additional community activities.

You asked us to consider additional commitments to:

- Enhancing transport connectivity

without trading off biodiversity

- Prioritising sustainable and active transport modes in design rather than as an afterthought (for example, this could be through direct routes for cycle paths, priority signalling, etc.)
- Supporting local social enterprises
- Minimising air quality and noise impacts
- Providing opportunities for community to share knowledge and ideas, contributing to enhanced community connections.

You also suggested specific opportunities:

- Link active transport pathways to feeder roads and keep gradients low to encourage cycling and walking
- Maintain and enhance connections to nearby major projects (such as the Chandler Highway bridge upgrade and the level crossing removals in the project area)
- Examine opportunities for enhanced cycling paths and linkages in growth corridor areas along Plenty River and across Greensborough Bypass and Diamond Creek Road
- Include a roundabout at the junction of Greensborough Bypass and Diamond Creek Rd/Civic Drive to increase safety and traffic flow
- Underground powerlines and other services to facilitate leafy boulevards to increase walkability and reduce urban heat
- Implement relevant opportunities in the Cultural River Precinct Structure Plan (CRPSP) and/or Yarra Strategic Plan
- Contribute to research by documenting the environmental health impacts of the project (against predictions) and the

effectiveness of controls

- Incorporate public health and exercise/workout equipment in open space areas
- Provide education and information displays about environment and cultural heritage of the area
- Create physical and nature connection through open space and land bridges
- Apply Green Star Ratings to buildings
- Funding for 'celebrating' the Yarra River, such as signage, murals and artwork and mobile apps that enhance connection and understanding of the Yarra River.
- Contribute to the Wurundjeri Rangers program to actively manage Bolin Bolin wetlands and Yarra River
- Consider other opportunities to contribute to the Wurundjeri's goals for the natural environment in the local area.

What we'll do

- We are working with cycling and walking representatives from communities along the corridor to develop a report on walking and cycling priorities for bidders to consider when developing their designs.
- The design process will consider relevant sustainability opportunities which will form part of the Cultural River Precinct Structure Plan (CRPSP) and Yarra Strategic Plan.
- We are developing cultural values maps in collaboration with the Wurundjeri to guide the design of the project. We are working with DELWP and Melbourne Water in the development of these plans.

Theme 4

Economic Opportunity

We asked you to consider our objectives, potential performance measures and opportunities in 'facilitating opportunities for economic development, provide a skilled local workforce and promote diversity and inclusion'.



Our commitments

- Employment and training
- Sustainable and social procurement
- Promote sustainability capabilities within industry

Potential performance measures:

- \$ on social enterprises, Victorian Aboriginal businesses and disability enterprises
- % increase in women in the workforce
- % increase in contractors utilisation of health services
- % of sub-contractors participating in sustainability training
- % increase in sub-contractors with sustainability-related credentials

Our potential opportunities were:

- Procure services from social enterprises, Victorian Aboriginal businesses and disability workshops
- Promote women in the construction industry

- Provide training, mentoring and employment opportunities for disadvantaged Victorians
- Promote mental health programs in the construction industry
- Partner with local community groups and institutions
- Build sustainability capability and promote infrastructure sustainability practice within the construction industry.

You asked us to consider additional commitments to:

- A certain percentage of training and employment for local Aboriginal people
- Procuring the services of disability, Aboriginal and social enterprises for employment options
- Providing opportunities for apprentices
- Sourcing materials from local businesses.

You also suggested specific opportunities:

- Encourage contractors to source food locally, from local community gardens and support local food growing opportunities
- Partner with local community groups, schools, Box Hill TAFE and La Trobe University for art and design in construction
- Partner with innovative companies who are using new technologies
- Value capture from the project
- The Edendale Community Farm (Eltham) has a native plant nursery that can provide plants of local provenance and runs volunteer programs
- Support indigenous tourism with the Wurundjeri.

What we'll do

- We are developing our social procurement policy. The policy will respond to the Victorian Government's Social Procurement Framework and the Local Jobs First Act 2003.

Theme 5

Climate Change

We asked you to consider our objectives, potential performance measures and opportunities for 'playing a part in Victoria achieving its emission reduction targets while preparing for the challenges of climate change'.



Our commitments

- Reduce carbon emissions during construction and operation
- Design to be resilient to a changing climate.

Potential performance measures:

- % reduction in CO2 emissions (from a base case)
- Total % of energy from renewable energy sources
- # priority climate change risks reduced

Our potential opportunities were:

- Design to minimise material consumption/efficiency in design, construction and operation
- Optimise energy use through smart technology and sensors
- Consider onsite solar generation for construction and for ongoing operations of the tunnel and other technical systems
- Use non-carbon fuel vehicles (for construction and for operations).

You asked us to consider additional commitments to:

- Carbon neutrality during construction and/or operations
- Using zero carbon materials where possible
- Ensuring sustainability along the supply chain
- Designing for electric vehicles.

You also suggested specific opportunities:

- Partnerships with councils to procure local renewable energy e.g. Nillumbik is developing a feasibility and business case for solar farming on former landfill sites
- Prioritise sustainable modes of transport for contractors and suppliers during construction and in operation
- Use solar and bulk renewables for operational energy use
- Use LED and/or solar lighting
- Green walls to decrease urban heat island effect
- Provide tyre pressure checks to encourage efficiency
- Use electric and/or hydrogen buses on the busway

- Incentivise low emission vehicles through dedicated lanes and/or tolling arrangements
- Design to accommodate future uptake of electric and autonomous vehicles
- Trial solar pavements
- Solar power for monitoring installations.

What we'll do

- We are investigating the targets and the requirements to embed into contracts, that will drive carbon reductions across the project life cycle. This work builds on the Greenhouse Gas Technical Report prepared for the EES.
- A climate change risk assessment has been conducted for the project and adaptation responses have been developed. This is documented in the EES. Contractors will be required to continue to assess climate risk and design for climate resilience.



Next steps

In the coming months we will be:

- Setting our sustainability targets and contract requirements.
- Assessing the feasibility of the sustainability opportunities that you suggested.
- Providing sustainability opportunities to project bidders so that they can consider how they could incorporate initiatives into their designs.
- Having further conversations with stakeholders on sustainability opportunities.

Appendix A: EES Technical Reference Group for North East Link and workshop participants

EES Technical Reference Group

- Aboriginal Victoria
- Banyule City Council
- Boorondara City Council
- Department of Environment, Land, Water and Planning (DELWP)
- Department of Health and Human Services (DHHS)
- Department of Transport (DoT)
- Environment Protection Authority (EPA)
- Heritage Victoria
- Manningham City Council
- Melbourne Water
- Nillumbik Shire Council
- Parks Victoria
- Public Transport Victoria (PTV)
- VicRoads
- VicTrack
- Victorian Planning Authority
- Whitehorse City Council
- Wurundjeri Land and Compensation Heritage Council Aboriginal Corporation
- Yarra City Council

Sustainability workshop participants

- Banyule City Council
- Boorondara City Council
- DELWP
- Manningham City Council
- Melbourne Water*
- Nillumbik Shire Council
- PTV
- VicRoads
- Whitehorse City Council

Note: Melbourne Water did not attend the workshop but provided input to this report separately

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