

Metro Tunnel Project: Facilitating best practice sustainability outcomes

How the Metro Tunnel Project is leading the industry by integrating best practice sustainability requirements into planning approvals and delivery contracts

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Introduction: Who am I?

Urban Planner

Environmental and Land Use Planning and Approvals, for the facilitation of large infrastructure projects in Victoria.



I believe that we build the future that we imagine, and with new challenges comes new opportunities

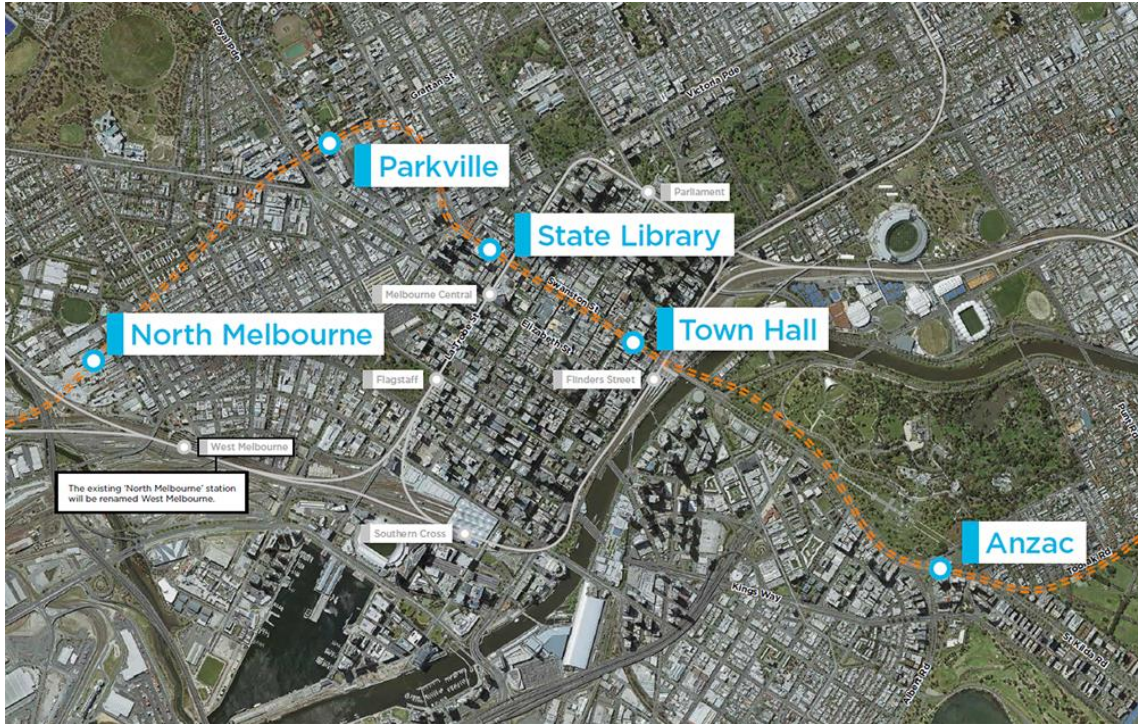
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Examples of integrating sustainability

- 1 Knowledge sharing**
- 2 Embedded sustainability into approvals**
- 3 Bid-backs increase sustainability targets in the tender contract**

Infrastructure Sustainability
Infrastructure that is designed, constructed and operated to optimise environmental, social and economic outcomes of the long term - ISCA

Overview of the Metro Tunnel Project

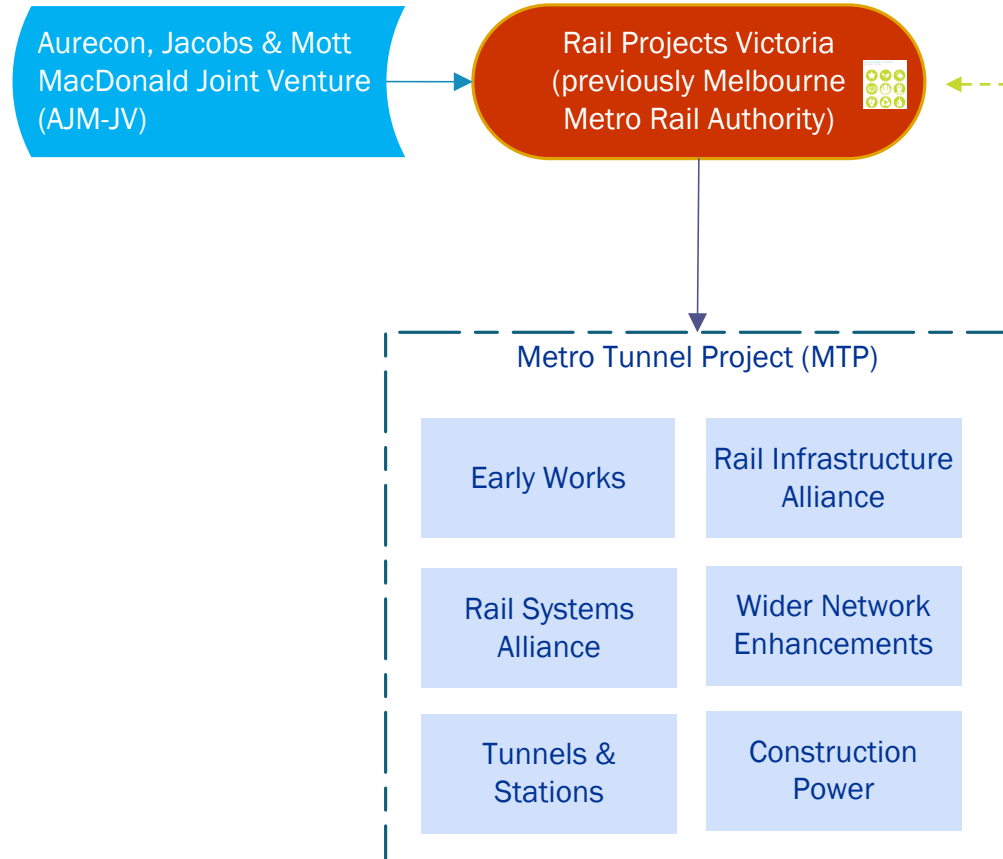


TUNNELS & STATIONS



Delivery Model : Where sustainability fits

TECHNICAL
ADVISORY



- + Excellence (ISCA and GBCA accreditations)
- + Urban Ecology and Vegetation
- + Climate Resilience
- + Supply Chain
- + Communities
- + Workforce
- + Energy
- + Materials and Waste
- + Water

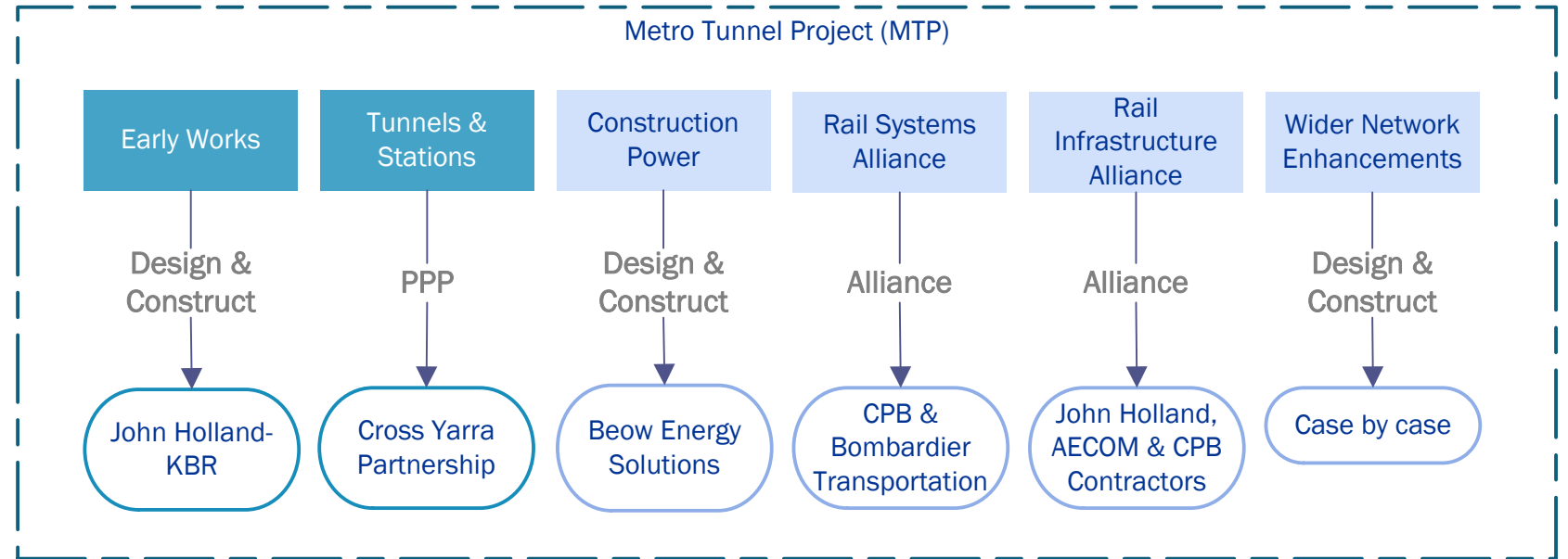
Sustainability Targets

- + 20 % reduction in greenhouse gas emissions over the infrastructure lifecycle
- + 15 % reduction in material life cycle
- + 36 % reduction in Portland cement content
- + Minimum 20 % reduction in total water replacement of portable water over the infrastructure lifecycle
- + 5 Star GBCA Green Star rating for all underground stations
- + Leading Score of 70 ISCA IS 'Design' and 'As Built' rating
- + Implement initiatives that generate positive social outcomes to strengthen the economic, social and environmental well-being of the community.

Delivery Model – Packages of Works



EARLY WORKS



Best Practice is...

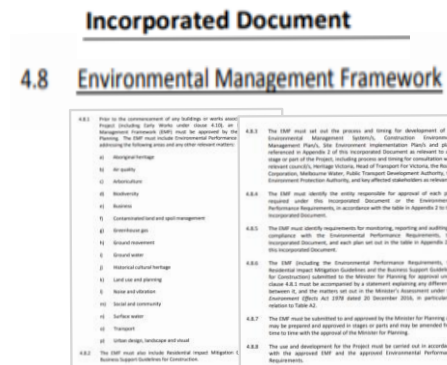
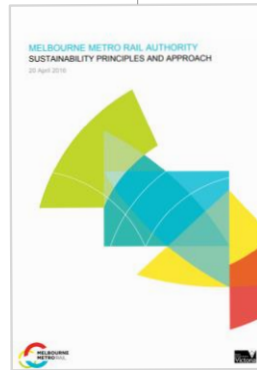
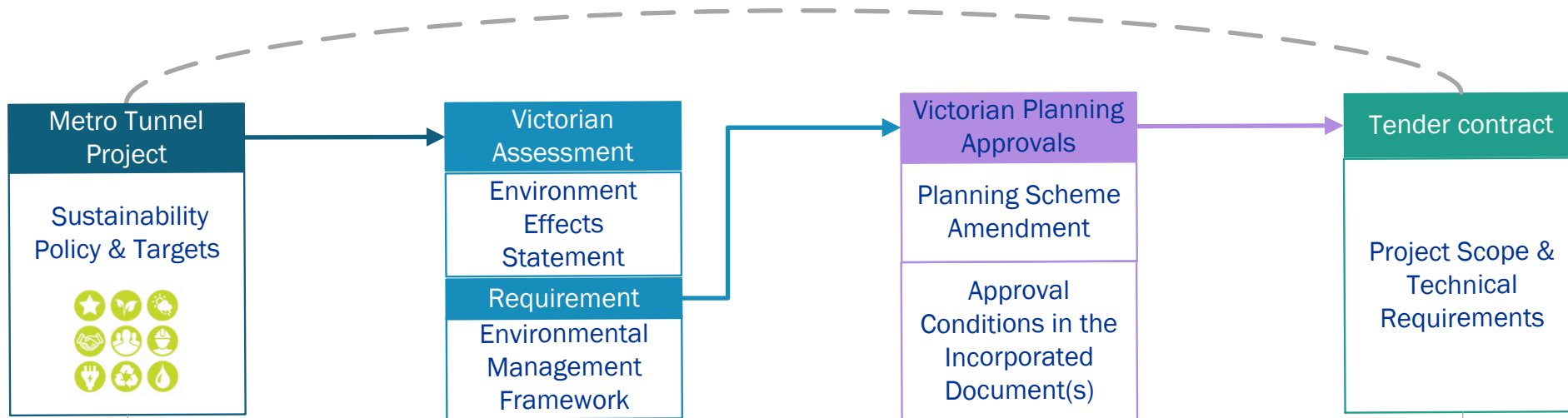
To go beyond current legislative requirements, to achieve better sustainability outcomes than the industry practices

1 Knowledge Sharing

- + **Internal social construction**
 - + Open and constructive culture
 - + Integrated project delivery
 - + Holistic approach (What, How & Why)
- + **Multi-disciplinary**
 - + physical work environment
 - + fluid interactions & cross pollination
- + **Attract talent & train**
 - + Attract skilled professionals
 - + Upskilling of local workforce
 - + Multi-disciplinary
- + **Lessons learnt approach**
 - + Continuous improvement

2

Embedding sustainability into Approvals



15 Sustainability and Climate Change

15.2.2 Project Co must achieve a certified 'Design' and 'As Built' rating with a minimum IS score of 84 ('LEADING') under the IS Rating Tool (v1.2) for the Works.



Embedding sustainability into the Environmental Performance Requirements of the Environmental Management Plan

No	Environmental Performance Requirements	Precinct	Timing
Greenhouse Gas (GHG)			
GHG1	1. Prior to commencement of main works, develop and implement a Sustainability Management Plan <u>to meet, as a minimum, the Melbourne Metro sustainability targets</u> , including achieving the specified ratings under the Infrastructure Sustainability Council of Australia's Infrastructure Sustainability Rating Tool and the Green Star Design and As Built Melbourne Metro Rail Tool.	All	Design / Construction / Operation
GHG2	1. Monitor and report on how each of the best practice GHG abatement measures and sustainability initiatives identified in the Concept Design is implemented in the detailed design of the Project and whether any additional measures not included in the Concept Design are feasible.	All	Design

3 Tunnels & Stations procurement 'bid-backs'

Tender contract

Delivery partners 'bid-back' contract conditions

Final contract let

IS Rating **70**

84

↓  GHG emissions **20%**

30%

↓  material impacts **15%**

24%

GBCA **5 Green Star** Rating

5 Green Star Rating

Infrastructure Sustainability Rating



It is not only what you do,
it's how you do it

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Summary

1. Clearly define sustainability targets
2. Continuous improvement
3. Voluntarily build it into the legislative process
4. Encourage competitive procurement processes
5. Quantify results / measure success

Take-away

Be a sustainability champion

Advocate for best practice

What we do today will be standard practice in 30 years

Be creative
Take risks
Stay safe

Any Questions?