ADVANCING SUSTAINABILITY IN INFRASTRUCTURE
EIANZ AND ISCA

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CAPACITY BENEFITS

The Cranbourne / Pakenham line will have 45% more peak capacity with Metro Tunnel and other network improvements.
PACKAGING & PROCUREMENT
MTP PACKAGES

Early Works
- Managing Contract
- Contract awarded June 2016 to John Holland

Tunnels and Stations
- Public Private Partnership (PPP)
- Preferred announced October 2016 to City Yarra Partnership (CYP)

Rail Systems
- Competitive Alliance
- Preferred announced October 2016 to CPB & Bombardier

Rail Infrastructure
- Competitive Alliance
- RFI to be issued to market in November 2017
MILESTONES

2015
- MMRA formed

2016
- EES planning process
- RSA & PPP out to market
- Business Case released
- Early Works contract award
- Fully funded
- Planning approval

2017
- Early Works commence
- RSA bidder selected
- PPP bidder selected
- RIA out to market

2018
ENGAGEMENT WITH ISCA

- MMRA started early engaging with ISCA - Mid 2015
- MMRA became an ISCA member - August 2015
- MMRA Leadership Engagement & Training - Early 2016
- Planning support agreements with ISCA – Dec 2016
- MMRA Development their Sustainability Policy – Dec 2016
- MMRA Develop the 33 Targets across 9 themes
- MMRA Staff ISAP training – Currently 29 Staff trained
• 33 Sustainability Targets focus areas covering Nine broad themes
• Early integration and embedment across various disciplines is key
• Appropriate resourcing, leadership and commitment to sustainable procurement
• Drive innovation
SUSTAINABILITY & ISCA RATING

Sustainability Policy

Sustainability Targets

- ISCA Rating of min. 70:
  - Each works package
  - Whole of Project

- Works package contract requirements
ISCA RATING STRUCTURE

- Early Works
- Tunnels and Stations
- Rail Systems
- Rail Infrastructure

INDIVIDUAL CONTRACT RATING

OVERALL PROJECT RATING
(Weighted average by contract value)
INNOVATIONS & INITIATIVES INVESTIGATED

- Living ‘Green & Blue’ Infrastructure
- Biophilic Design Report and Guidelines
- Direct geothermal heat exchange
- Portland cement reduction Technical Note
**URBAN ECOLOGY**

**METRO TUNNEL LIVING INFRASTRUCTURE PLAN**

**Vision:** Metro Tunnel will demonstrate world-leading excellence to create a living infrastructure legacy for a more liveable Victoria.

The Living Infrastructure Plan will guide the creation of urban landscapes that:

+ are more biodiverse, healthy and climate change resilient;
+ successfully provide ecosystem services that improve the urban environment;
+ add amenity and enhance local character;
+ support liveable, active, healthy and connected communities;
+ provide inspiration, opportunities and case studies to support increased uptake of living infrastructure initiatives in future urban planning, design, engagement and management.

**Targets**

Double tree canopy – Deliver increased biodiversity habitat – Deliver best practice urban water management

**Living Infrastructure Measures and Opportunities**

**Urban Ecosystems**

+ Increased habitat links including pollinator pathways.
+ Biophilic design in & around stations.
+ Biodiversity-friendly design for landscapes.
+ Species selection for resilience & diversity.
+ Tree protection.

**Urban Soils**

+ Best practice soil standards to maximise healthy canopies for urban heat reductions.
+ Soil for sequestration.
+ Soil to maximise soil health and biodiversity.
+ Soil monitoring for climate resilience.

**Urban Water**

+ Best practice stormwater quality treatment in design.
+ All tree plots to filter stormwater.
+ All vegetation supported by passive irrigation.
+ All drainage and alternate water sources designed for climate resilience.

**Engagement, Monitoring and Knowledge Sharing**

Draw from, and support, community knowledge on habitat and local link projects

Draw from, and support, applied research projects to grow practitioner knowledge for this and future projects.
CLIMATE CHANGE

• MMRA’s Climate Change & Adaptation Documentation
  • Sustainability & Climate Change Report
  • Adoption of Climate Change Scenarios and Projections
  • Climate Change Risk Assessment Reference Design Report
  • Design for Climate Change Framework

• Delivery Partners are required to undertake a climate risk assessment and develop and implement a climate change adaptation plan that addresses climate risks to ensure infrastructure, stations and precincts are resilient to the impacts of a changing climate
MATERIALS & WASTE

• Achieve a minimum 15% reduction in materials lifecycle impacts
• Concrete and steel – main GHG contributors
• New materials – Type approvals
• Asphalt – High RAP, Warm, Plastic
• ISCA Calculator – RSA
• Waste Targets – Level 2
TIPS AND LESSONS

- Leadership support and identify a champion
- Set project targets based on identified impacts and match with IS Rating Tool levels
- Identify supporting legislation
- Identify collaboration opportunities