

APPENDIX 11

ENVIRONMENTAL,
SOCIAL AND ECONOMIC ISSUES

Appendix 11 - Environmental, social and economic issues

1. Preliminary issue identification

The following table summarises the potential issues identified in the Project Outline¹. The Minister for Planning used the Project Outline as the basis to declare the Project under the *Environmental Effects Act 1978*. The Minister for Planning has released Final Draft Scoping Requirements for the EES following public comment and these represent the boundaries of the EES scope. The following issues from the Project Outline summarise the key potential issues likely to be investigated in detail during the course of preparing the EES.

Table 1- Summary of key preliminary environmental, social and economic impacts

Theme	Key issues
1. Land Use and Community	
1.1 Land use and planning	1.1.1 Complete or partial permanent acquisition of buildings and other potential sites.
	1.1.2 Temporary occupation, excavation and subsequent rehabilitation of public open space and other land for construction purposes.
	1.1.3 Permanent loss of public open space and consequent loss of that public open space.
	1.1.4 Temporary occupation, excavation and subsequent rehabilitation of public open space for construction purposes.
	1.1.5 Potential use of public open space for associated Project infrastructure.
1.2 Economics and business	1.2.1 Potential impacts to businesses in the CBD and inner Melbourne arising from the Project during construction and operation.
	1.2.2 Potential displacement of businesses due to acquisition of commercial properties.
	1.2.3 Changed traffic, bicycle and pedestrian routes potentially affect business visibility/patronage.
	1.2.4 Changed traffic, bicycle and pedestrian flows potentially affect business visibility/patronage during construction.
	1.2.5 Potential impacts from the occupation of commercial sites within the Project alignment for construction purposes.
1.3 Social and community	1.3.1 Potential impact on traffic movement for local communities during Project construction.
	1.3.2 Potential impact on traffic movement for local communities during operation.
	1.3.3 Potential loss of community facilities during Project construction.

¹ MMRA, *Project Outline* (2015).

Theme	Key issues
	1.3.4 Potential changes in amenity around station boxes and project infrastructure.
	1.3.5 Temporary impacts on pedestrian and bike paths.
	1.3.6 Potential displacement of residents from acquisition of properties or changes in access during Project construction.
	1.3.7 Potential displacement of residents from acquisition of properties or changes in access arising from Project operation
	1.3.8 Temporary loss of public open space during construction.
	1.3.9 Potential for localised disruption and changes to public events during construction.
	1.3.10 Potential temporary effects on places with particular cultural, recreational or aesthetic values during construction.
1.4 Landscape and visual	1.4.1 Potential permanent impacts where there are above ground structures associated with stations and ventilation stacks and the removal of vegetation.
	1.4.2 Potential temporary impacts of construction activities and compounds.
2. Cultural Assets	
2.1 European heritage	2.1.1 Potential impacts of vibration from construction and operation on heritage structures above or adjacent to the tunnels and station sites.
	2.1.2 Potential impacts of vibration from operation on heritage structures above or adjacent to the tunnels and station sites.
	2.1.3 Potential impacts of construction and operation on known and unknown sites of European heritage and archaeological sites.
2.2 Aboriginal heritage	2.2.1 Potential impacts of construction and operation on known and unknown sites of Aboriginal heritage.
3. Amenity	
3.1 Noise and vibration	3.1.1 Potential amenity impacts created by operational noise from train movements and rail infrastructure.
	3.1.2 Potential amenity impacts created by noise from construction.
	3.1.3 Potential vibration from train.
	3.1.4 Potential vibration during construction.
3.2 Air quality	3.2.1 Potential temporary impact of dust and other emissions from the tunnel, station and portal construction, including from traffic movements, construction and spoil management.
	3.2.2 Potential emissions from ventilation shafts and other infrastructure associated with tunnels and stations.
	3.2.3 Potential odour from the excavation of spoil from tunnelling and excavation for construction.
4. Earth Conditions	
	4.1.1 Potential impacts of flooding and overland flows.

Theme	Key issues	
4.1 Hydrology	4.1.2	Potential impacts on water quality during construction
4.2 Groundwater and contamination	4.2.1	Potential impact of works in areas which are contaminated as well as the associated removal and disposal of soil.
	4.2.2	Potential impact of ongoing secondary compression of Coode Island Silt could impact construction and operation phases of project.
	4.2.3	Potential impacts of groundwater levels on project infrastructure due to climate change and flood events.
	4.2.4	Potential impacts of groundwater drawdown associated with pre and post construction dewatering
5. Ecology		
5.1 Arboriculture (trees)	5.1.1	Potential removal and/ or relocation of street trees for construction.
5.2 Terrestrial Flora and fauna and habitat	5.2.1	Potential removal of trees in locations where they provide habitat
5.3 Aquatic Flora and fauna and habitat	5.3.1	Potential impact on listed fish species within the Yarra River including protected nationally listed species.
6. Connectivity		
6.1 Traffic and transport	6.1.1	Temporary traffic impacts due to construction vehicle movement during tunnel and station construction.
	6.1.2	Temporary disruption to tram, motor vehicle, bicycle and pedestrian traffic during station construction.
	6.1.3	Temporary disruption of street access to the health and education precinct in Parkville during construction.
	6.1.4	Temporary disruption to vehicle and pedestrian movement and access across the Project area during construction.
7. Greenhouse Gas		
7.1 Greenhouse gas	7.1.1	Potential reduced greenhouse gas emissions as a result of the mode shift from private car to trains and trams.

2. Network disruptions and interim changes

2.1. Road and other disruptions

During the course of construction, a number of road closures and other disruptions will be required and these will vary in length and severity. Disruptions to the road network will primarily occur at the new stations, portals and tunnel staging sites, and may include:

- Potential temporary severance for the construction zones
- Permanent changes, for example to support new station entrances
- Construction traffic

- A number of key roads have the potential to be affected for construction zones, including:
 - Arterial roads: potential temporary lane occupations on St Kilda Road and Royal Parade
 - Local roads: potential full width occupations of sections of various streets in proximity to the stations and portals.

Truck movements may also have a significant road impact, particularly at the following locations:

- Arden Station site, which will be the largest staging site on the Project
- Secondary tunnelling site at either St Kilda Rd or Fawkner Park
- Each of the five new stations and the two portals.

Truck routes and traffic volumes will be assessed in detail through development of the EES.

The Project will also likely result in a number of key permanent network changes, the most notable being the narrowing a portion of Grattan Street to accommodate station entrances, and parts of Royal Parade and St Kilda Road to accommodate tram / train interchanges.

2.2. Rail network disruptions

A range of rail network disruptions and interim changes will occur during the construction of the Project. These are primarily expected to affect the Frankston, Sandringham and Cranbourne / Pakenham Lines and involve overnight, weekend and potentially extended disruptions, generally of an order similar to or less than recent major projects.