

WESTERN DISTRIBUTOR

Project Outline

December 2015





1. Purpose

The purpose of this document is to inform the Minister for Planning in his consideration of whether to declare the Western Distributor Project (the Project) as “public works” under Section 3 of the *Environment Effects Act 1978* (EE Act).

This document is based on the State’s Concept Design upon which it has based the Business Case for the Project.

This concept design will be subject to more detailed development post business case, which will include extensive opportunity for stakeholder and community consultation and input. This process will involve consideration and assessment of variations or alternatives to certain elements of the concept design such as the length of the tunnel, the location of tunnel ventilation structures or the location of elevated and surface road connections.

This document provides a preliminary screening analysis of the potential environmental, social and economic effects of the Project to be undertaken by or on behalf of the Crown.

The outcomes of this analysis are set out in section 3 of this Project Outline. This analysis indicates that the Project is capable of having a significant cumulative effect on the natural, physical and social environment within and adjacent to the Project corridor.

For that reason the preparation of an Environmental Effects Statement (EES) under the provisions of the EE Act may be warranted.

Authorised person:

Andrew Williams

**Executive Project Director
Western Distributor**

**Department of Economic Development, Jobs,
Transport and Resources**

Project Contact:

**Murray Cullinan
Executive Director
Western Distributor
Department of Economic Development, Jobs,
Transport and Resources
Level 22
1 Spring Street
MELBOURNE 3000**

Phone: 03 8392 5926

Email: Murray.Cullinan@ecodev.vic.gov.au

2. Project Description

2.1. Description

The Western Distributor Project is a proposed new tunnel and elevated motorway connecting the West Gate Freeway with the Port of Melbourne, CityLink and the western edge of the CBD providing an alternative river crossing to the West Gate Bridge. The Project also involves the widening of the West Gate Freeway (from the M80 Western Ring Road (M80) to the West Gate Bridge to boost capacity) and associated road linkages to the M80 and Princes Freeway.

The broad alignment of the Project is shown in Figure 1.

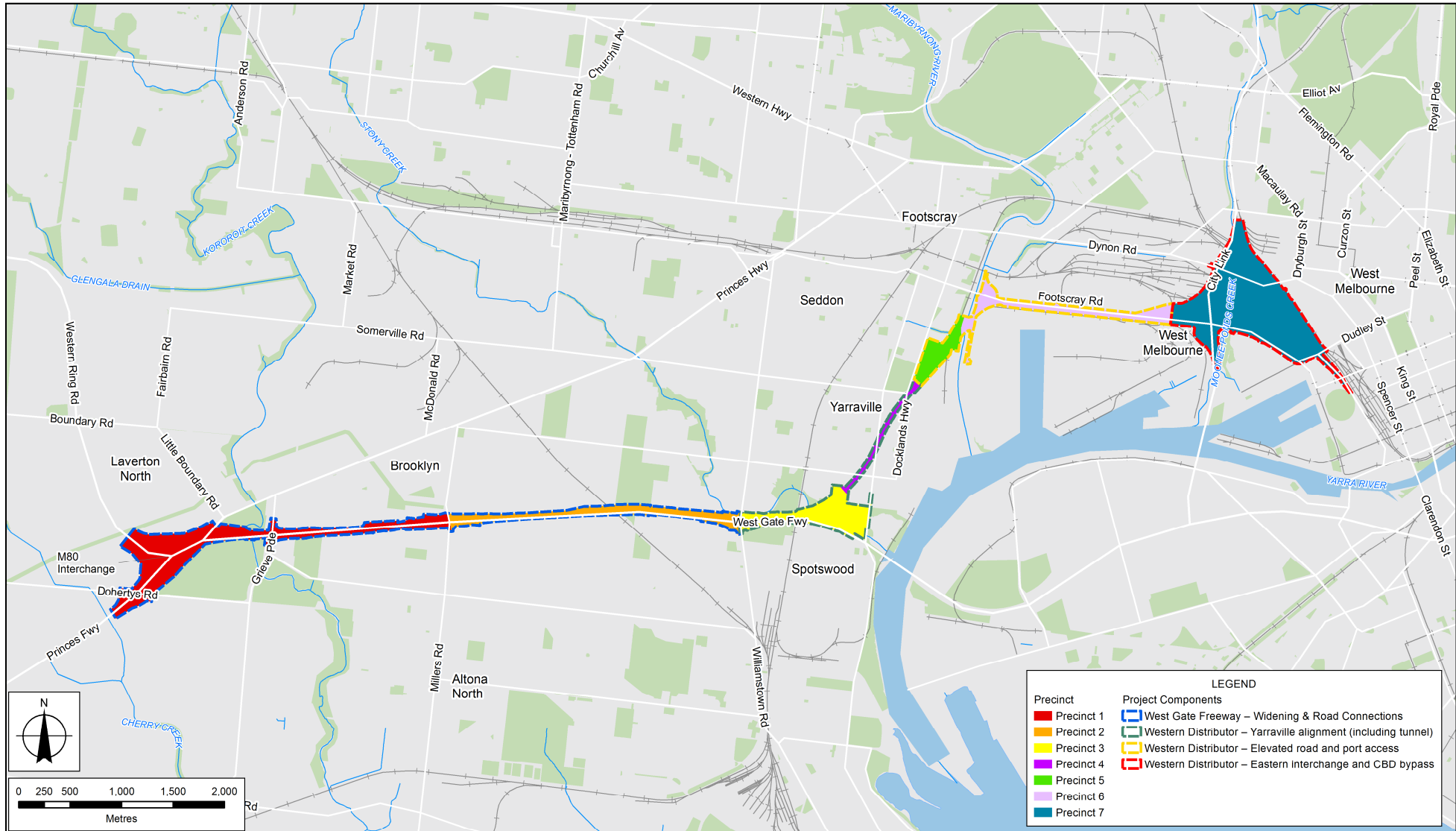
The Project can be separated into four main components:

- West Gate Freeway – Widening and road connections
- Western Distributor – Yarraville alignment (including tunnel)
- Western Distributor – Elevated road and port access
- Western Distributor – Eastern interchange and city bypass.

These Project components are described below in section 2.5, noting that the concept design for the Project is ongoing and the detailed assessment of the Project may involve the consideration of alternatives to some elements of the Project.

The following preliminary activities are proposed to be undertaken before completion of the State approval process for the Project.

- Geotechnical investigations to determine site conditions, including drilling and sampling, installation of stand pipes to monitor ground water level and quality
- Site surveys and environmental site assessment works, including background air and noise monitoring, flora and fauna surveys, and Aboriginal and post heritage investigations.



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Data source: DELWP, Viomap, 2015; GHD, Alignment, 2015.



2.2. Context

The State has established five Project objectives to determine its preferred strategic response for a network solution to address major congestion issues along the corridor:

- Improve network efficiency through increased capacity
- Improve network resilience and redundancy to provide reliable transport alternatives that respond to varying demands or major incidents
- Improve freight and supply chain efficiency through better access to the Port of Melbourne and other major freight and logistics hubs
- Improve amenity for residential communities and safety for road users
- Improve outcomes for the Victorian economy.

The transport related problems in the west are long-standing and well documented. The East West Link Needs Assessment Study 2008 (the Eddington Study) proposed an integrated strategic response incorporating supply, productivity and reform/demand management interventions to meet the transport and liveability challenges in the west.

The case for an integrated strategic response is even stronger now with population, freight, CBD employment and travel demand all exceeding the Eddington Study's projections well ahead of time.

This was highlighted in Project 10,000, the Government's policy for transport augmentation, which identified the need to:

- Reduce congestion costs
- Serve the traffic demands of a growing population
- Improve efficiency of freight movement
- Reduce the duration of peak hour and improve travel time reliability
- Reduce trucks crossing the West Gate Bridge.

In 2008, Melbourne's population was forecast to reach 4.5 million by 2031 – but this is now reality. The updated forecast for 2031 is a city of 5.8 million people.

Despite rail absorbing the majority of the commuter demand growth from the west to inner Melbourne, there remains substantial growth in demand for road trips across the Maribyrnong River, with a sizeable portion freight-related. A new freeway crossing of the Maribyrnong River has become more critical.

Further deferring investment in the road network in the west is not considered to be a viable option. Major investment is required, but timing and staging will be critical so that it does not exacerbate existing congestion issues. Given the challenges in forecasting future traffic demand and population projections, flexibility will be important in developing the most effective transport network to support long-term growth in Melbourne's west.

2.3. Project Benefits

The anticipated project benefits of the Project are:

- Improvements in transport network efficiency and reduced congestion for road users
- Improvements to the efficiency of freight movements
- Greater resilience and redundancy in the transport network
- A more liveable Melbourne
- Economy wide benefits.

2.4. Project Rationale

2.4.1. STRATEGIC CONTEXT

Victoria's heavy reliance on one major west-east road link for cross-city and cross-state travel makes the regional economy highly vulnerable to incidents along the M1 corridor, constraining development opportunities and the ability to manage the State's growth in a balanced way.

An integrated response to transport-related problems and population growth in Melbourne's west has been the subject of a number of major studies and policies including The East West Link Needs Assessment Study 2008, The Victorian Transport Plan, Plan Melbourne and the Government's current policy for the transport network Project 10,000.

Infrastructure Australia, in its 2015 Australian Infrastructure Audit, found that without investment in transport infrastructure Australia's productivity and quality of life is likely to erode, with the cost of congestion set to reach over \$9 billion by 2031. The Audit identified the M1 specifically as part of a heavily congested corridor likely to face capacity constraints in the absence of investment.

The freight and logistics sector in Australia contributes between \$19 and \$23 billion or 8% to the State's total economic activity. Of particular importance to the nation's freight and logistics sector is the Port of Melbourne. Its key role as Australia's largest container port servicing Victoria, Tasmania and parts of South Australia and New South Wales is set to continue. The container freight task is forecast to grow from around 3 million twenty-foot equivalent units (TEUs) in 2015, to over 11 million TEUs by 2046. Increasing road congestion in and around the port negatively impacts the import and logistics supply chain, hurting national competitiveness.

Melbourne also underpins national employment, and is home to a globally focused, knowledge-based service economy. Employment trends and forecasts highlight that these knowledge intensive industries will become increasingly important to Australia's economy in the future.



Plan Melbourne forecasts a 2031 population of between 5.85 and 6.15 million people (an annual growth rate of between 1.7% and 2%). If transport congestion and uneven accessibility to employment, services and recreational opportunities persist, the city's liveability and competitiveness over the coming decades is at risk.

The rate and pattern of population growth will increase pressure on Melbourne's already strained infrastructure and service systems. This is particularly evident in Melbourne's west, which has a less developed arterial road network but is growing at twice the rate of the rest of Melbourne. Wyndham in the outer west is Melbourne's fastest growing municipality, growing at 4% a year, with 200,000 new residents expected in the next 15 years.

A network analysis has indicated that projected population growth and anticipated increases in commercial activity along the M1 will increase traffic volumes and exacerbate existing congestion problems on the M1 and, without action, could cause congestion and safety problems on other parts of the road network.

The west's proximity to inner Melbourne should be a major advantage, but poor links and congestion mean local residents have much longer travel times to reach employment opportunities than other residents. Existing and forecast employment growth in inner Melbourne and the south-eastern suburbs is expected to widen this gap between where the jobs are, and where people live, driving up demand for CBD and cross-city trips.

The western suburbs and regional cities of Geelong, Ballarat, Bendigo and Bacchus Marsh could become increasingly isolated from a wider range of employment opportunities without better links to the city and south-east. Employers will also suffer from a reduced pool of potential workers.

As well as a workforce participation challenge for the city, the diminishing performance of the transport network and growing congestion with population and freight growth is a significant productivity challenge.

2.4.2. PROJECT NEED

The four key problems with major economic and liveability consequences to be addressed by the Project are:

- Heavy reliance on one major river crossing (the West Gate Bridge) for cross-city travel and freight movement which makes the city's economy highly vulnerable to one-off incidents
- The western suburbs and regional cities of Geelong, Ballarat, Bendigo and Bacchus Marsh becoming increasingly isolated from Melbourne's CBD through poor transport connectivity and growing demand
- Congestion means residents have greater travel times to work and fewer employment opportunities within reasonable travel times compared with residents in other parts of Melbourne

- Transport and land use conflicts in the west from a growing freight task are reducing amenity and constraining development opportunities for urban growth and renewal.

Heavy reliance on the M1 makes the State and national economies highly vulnerable to short-term and long-term strategic risks when this road becomes unavailable for use. Even a minor traffic incident on or near the West Gate Bridge can have a severe, costly and disruptive effect to the import and export supply chain – bringing traffic across the inner west to a halt and spreading across Melbourne's entire transport network. VicRoads figures show current traffic volumes on the West Gate Freeway to be in the vicinity of 200,000 vehicles per day. Daily trips on the West Gate Bridge have increased by 80% since 2003. Business, commuter, freight and leisure travel on this critical route is unreliable, with regular delays across the day and week with long queues along the M80, CityLink and the Princes Freeway.

The M1 is the only continuous strategic road connecting the west of Melbourne to the east and is heavily congested. There are limited crossings of the Yarra and Maribyrnong Rivers, with the West Gate Bridge carrying 65% of all trips that cross the Yarra and Maribyrnong Rivers from the west. This places great pressure on the M1, the West Gate Bridge and feeder arterial roads.

The supporting arterial road network is sparse, disconnected and poorly configured for travel between the Port of Melbourne and areas west of the Melbourne CBD, with large numbers of trucks using unsuitable roads in residential areas to access the Port.

The development of Webb Dock as a container port and the doubling of capacity at Swanson Dock, further intensifies truck traffic on arterials in the inner west and on the M1, eroding performance of one of the nation's most critical arteries.

Despite the closer proximity to the city in the west, there are five times as many jobs within a 30-minute travel range for people living in Melbourne's east. City of Wyndham residents are in range of 117,000 jobs within a 30-minute trip compared to 588,000 jobs for Monash residents, despite both being 25 kilometres from the CBD.

A journey to work (CBD) in the AM peak from Wyndham or Melton can take over 70 minutes, and up to an hour from the inner west. There is also a clear difference in access to essential services, such as hospitals and education facilities for residents in the west.

The job imbalance is driving the demand for trips from the west to central Melbourne and further east. On top of this increased traffic is a significant increase in the volume of freight moving around and through the region, competing for road space at peak times.



Every day, an estimated 20,000 trucks are driving through the inner west's residential streets, especially in Footscray and Yarraville. This is forecast to rise by up to 80% by 2031 with increasing freight traffic, further reducing neighbourhood amenity.

While historically the west's land use has been shaped by large tracts of land for industrial, freight, logistics and manufacturing businesses, it is becoming increasingly incompatible with a shift to a more diverse services based economy.

Plan Melbourne (currently under review) recognises future growth should be accommodated through increased medium and high density development, instead of expanding outwards beyond Melbourne's fringe.

Improving neighbourhood amenity in the inner west would encourage urban renewal and increased densification through residential investment, but requires redistributing traffic to spur new residential and mix-use development to capitalise on the area's proximity to the CBD.

As the west grows and changes, shifting to higher value land uses will support its urban renewal and development. Regeneration opportunities in the central Footscray precinct, along the Tottenham and Sunshine rail corridors, and in the East Werribee employment precinct have already been identified.

2.5. Project Components

This section describes the key components of the Project's concept design, noting that the design of the Project is ongoing and detailed assessment of the Project will include consideration of alternatives to certain elements such as the longer tunnels, the location of ventilation structures or the location of elevated or surface road connections.

2.5.1. WEST GATE FREEWAY – WIDENING AND ROAD CONNECTIONS

West Gate Freeway – Widening and Road Connections is comprised of the following components:

- Widening, associated pavement rehabilitation and carriageway separation of the West Gate Freeway in both directions. This will provide overall capacity of 6 lanes in each direction (additional 2 lanes each way) between Williamstown Road and M80, configured as 3 lanes on each of the separated carriageways
- Separated carriageways with braided connections with the following features:
 - Eastbound – The outer carriageway destined for the Western Distributor and inner carriageway destined for the West Gate Bridge with grade separated connections at each end as well as a flyover connection from the outer to inner carriageway near the standard gauge freight railway overpass (west of Williamstown Road).

Arterial road connections provided along the outer carriageway

- Westbound – The outer carriageway destined for M80 and the central carriageway destined for Princes Freeway West, with grade separated connections to both carriageways from the Western Distributor and the West Gate Bridge. Williamstown and Millers Road access via the outer carriageway and Grieve Parade access from the central carriageway via a braided flyover of the M80 carriageway.
- Strengthening of bridges along the West Gate Freeway to accommodate High Productivity Freight Vehicles (HPFV) at higher mass limits
- Separation of carriageways via a solid safety barrier, provision of emergency lanes in the central carriageways and stopping bays along the outer carriageways
- Posted speed of 100 km/h from M80 to west of Williamstown Road
- Replacement of two existing pedestrian bridges spanning over the West Gate Freeway in the vicinity of Wembley Avenue and Rosala Avenue
- Upgraded concrete and Perspex noise walls along the West Gate Freeway
- Subject to detailed design, relocation or replacement of a number of high voltage transmission towers alongside the West Gate Freeway.

2.5.2. WESTERN DISTRIBUTOR – YARRAVILLE ALIGNMENT (INCLUDING TUNNEL)

The Western Distributor alignment through Yarraville is comprised of the following key components:

- Rebuilding of the Williamstown Road interchange bridges
- New west-facing ramps for vehicles to access Hyde Street to and from the elevated connection
- Two tunnels approximately 15.5 m diameter and 1.6 km in length ultimately catering for three traffic lanes in both directions, (operating only as two lanes with shoulders initially), constructed using a Tunnel Boring Machine (TBM)
- Southern portals on the north side of the West Gate Freeway between Beverley and Hyde Streets
- Northern portal east of Whitehall Street, north of Somerville Road, west of the Maribyrnong River.



2.5.3. WESTERN DISTRIBUTOR – ELEVATED ROAD AND PORT ACCESS

The crossing of the Maribyrnong River and the alignment along Footscray Road is comprised of the following key components:

- Bridging across the Maribyrnong River, including:
 - A central carriageway connecting the tunnel and Footscray Road
 - On- and off-ramps to and from Mackenzie Road to provide direct access to the Port of Melbourne (to/from West Swanson Dock)
- Twin viaducts in both directions above Footscray Road
- Eastbound viaduct connection to Appleton Dock Road at the existing intersection with Footscray Road (to access East Swanson Dock, Victoria Dock, Appleton Dock)
- Return westbound viaduct connection from Footscray Road
- Grade separated shared user facility for pedestrians and cyclists at Appleton Dock Road, Footscray Road and Mackenzie Road intersections.

2.5.4. WESTERN DISTRIBUTOR – EASTERN INTERCHANGE AND CITY ACCESS

The Western Distributor alignment at the eastern end of the Project is comprised of the following components:

- Inbound and outbound connections to CityLink
- Access via ramps onto Footscray Road with additional connections to Dynon Road and Wurundjeri Way. Final resolution of scope will include consultation with Melbourne City Council, other stakeholders and the community.

As part of the Project it is proposed to introduce a Freeway Management System (FMS), with ramp metering upgrades (increased storage provisions) for the West Gate Freeway, Western Distributor and Princes Freeway West, including metering of the West Gate Freeway/CityLink connections (East-to-North and North-to-West).

This FMS would also involve the installation of a Lane Use Management System (LUMS) and supporting Intelligent Transport System (ITS) along the West Gate Freeway and Western Distributor, including adjacent sections of the Princes Freeway West and M80.

2.6. Project Precincts

The broad alignment of the Project has been divided into seven precincts as shown in Figure 1. A description of these precincts and the key works proposed in each precinct, subject to further design and assessment, is set out below.

2.6.1. WESTGATE FREEWAY – WIDENING AND ROAD CONNECTIONS

Precinct 1 – M80 Interchange to Millers Road

North of the West Gate Freeway, land uses generally comprise open space areas west of Grieve Parade and along the margins of the Kororoit Creek. East of Grieve Parade land uses are generally industrial and commercial in nature.

On the southern side of the Freeway, west of Grieve Parade, land use is dominated by open space areas, including Altona Regional Park and the margins of Kororoit Creek. East of Grieve Parade land uses are a combination of industrial activities, recreation and public open space activities, and residential activities from Kemp Street to Millers Road. Some limited acquisition of commercial land may be required to facilitate ramp realignment.

As described in section 2.5 above, the works proposed in Precinct 1 include: widening of the West Gate Freeway, widening of the existing bridge over Kororoit Creek, additional ramps to and from the Princes Freeway, the M80 and Grieve Parade (east-facing ramps), and components of the eastbound and westbound separated carriageways.

On the westbound collector/distributor, the braided connection lies east of Grieve Parade.

Precinct 2 – Millers Road to Williamstown Road

On the northern side of the West Gate Freeway from east of Millers Road to the Sunbury rail freight line, the land use is dominated by commercial and industrial activity. The Bacchus Marsh Junction-Newport railway line runs underneath the West Gate Freeway, diagonally bisecting the Precinct. East of the railway line the land use is predominantly recreational (including Mclvor Park), and then residential through to Williamstown Road. On the southern side of the Freeway, the land use is predominantly residential between Millers Road and Kyle Road. Beyond Kyle Road the land use is a combination of power infrastructure (Brooklyn Terminal Station) and brownfield industrial sites as far as the railway line and New Street. Beyond New Street, the land use is a combination of residential activities and recreation assets through to Williamstown Road.

Between Millers Road and Williamstown Road the proposed works are a combination of road widening, the eastbound and westbound collector/distributors, east and west-facing ramps at Millers Road, and the elevated braided connection from the eastbound collector/distributor to the lanes that are dedicated to traffic crossing the West Gate Bridge.



Traffic from the West Gate Bridge westbound that wishes to exit at Millers Road or Grieve Parade will enter the westbound collector distributor west of Williamstown Road.

2.6.2. WESTERN DISTRIBUTOR – YARRAVILLE ALIGNMENT (INCLUDING TUNNEL)

Precinct 3 – Williamstown Road to the Southern Tunnel Portals

North of the West Gate Freeway and east of Williamstown Road, the land uses are predominantly residential with some pockets of industrial and commercial activity, supplemented by recreation assets such as the West Gate Golf Course and Hyde Park Reserve (Stony Creek). The Williamstown railway line runs north-south through the middle of Precinct 3. South of the Freeway, land use between Williamstown Road and the Williamstown Railway line are predominantly residential, along with recreation assets such as Donald McLean Park and the West Gate Golf Course. East of the railway line and Hall Street, the main land uses are comprised of brownfield industrial sites and commercial and industrial activities.

Within Precinct 3, the proposed works include: elevated structures linking the two collector/distributors to the tunnels under Yarraville, elevated ramps connecting the West Gate Freeway and Hyde Street to provide for placarded or oversized loads that cannot use the tunnels, at grade road connections, and excavated approaches to the tunnel portals.

Precinct 4 – Yarraville Tunnel

Land uses within Precinct 4 include power infrastructure (Jemena Terminal Station), residential properties on Hughes, Beverley, Stephens and Hyde Streets, and community facilities such as the Yarraville Community Centre.

The works proposed in this precinct include two bored tunnels running in a generally north-easterly direction. The proposed location for the southern portals is within an area of vacant land south of Stephens Street/Francis Street and west of Hyde Street, next to the Jemena Terminal Station.

The proposed location of the northern portals is east of Whitehall Street, north of Somerville Road, and west of the Maribyrnong River.

Acquisition of both commercial and industrial land along with the transfer of Crown Land from reserved land status to road will be required.

Precinct 4 would include a substantial area devoted to lay-down and construction areas associated with the tunnelling works.

Across both Precincts 3 and 4, between the Brooklyn and Yarraville (Jemena) Terminal Stations, a number of high voltage transmission towers on the northern side of the West Gate Freeway would be either relocated or removed. In the latter case the power lines would be laid underground. Any potential underground powerline route has yet to be determined.

Subject to detailed design, and Environment Protection Authority Victoria (EPA) approval, tunnel ventilation structures would be located at or near the tunnel portals.

2.6.3. WESTERN DISTRIBUTOR – ELEVATED ROAD AND PORT ACCESS

Precinct 5 – Northern Tunnel Portals to the Maribyrnong River

Between Whitehall Street and the Maribyrnong River, the land use in the immediate vicinity of the proposed works is predominantly commercial and industrial, with significant areas devoted to container storage. Precinct 5 also includes rehabilitated brownfield industrial land with a prior history of contamination.

Between the northern portals and the Maribyrnong River, the works would include cut and cover approaches to the portals, at grade roads, and elevated approaches to the bridges over the Maribyrnong. Precinct 5 would also include a substantial area devoted to the launching of the TBM, and lay-down and construction areas.

This will involve the temporary and permanent acquisition of industrial and commercial land to facilitate construction and operation.

Precinct 6 – Maribyrnong River Crossing, Footscray Road Viaduct and Port Access

The land use in the vicinity of the Footscray Road viaduct is dominated by activities associated with the Port of Melbourne and its related freight movements. To the north of Footscray Road the predominant land uses are associated with transport logistics. South of Footscray Road all of the land is utilised for Port activities.

Within Precinct 6, it is proposed to construct three bridges across the Maribyrnong River. These would include a central six-lane carriageway connecting the Yarraville tunnel and Footscray Road, and on- and off-ramps from the tunnel connecting to Mackenzie Road on the eastern bank of the Maribyrnong River to provide access to the Port of Melbourne.

Between the Maribyrnong River and Moonee Ponds Creek, the proposed works comprise a six lane elevated viaduct along Footscray Road, with connections east and westbound to CityLink. A connection from this elevated viaduct would also be provided to the Port of Melbourne at Appleton Dock Road.

A clear span over the Maribyrnong River is the preferred option to minimise environmental impacts on the Maribyrnong River. However, the design of these bridge structures is subject to further investigations, and may include pier(s) located within the Maribyrnong River.



2.6.4. WESTERN DISTRIBUTOR – EASTERN INTERCHANGE AND CITY ACCESS

Precinct 7 – Eastern Interchange and City Access

Land use within Precinct 7 is dominated by road and rail infrastructure. The dominant components are CityLink in the vicinity of Moonee Ponds Creek, and the rail yards north of Footscray Road up to the North Melbourne escarpment. South of the proposed Dynon Road-Wurundjeri Way link is the proposed E-Gate urban renewal area.

Subject to detailed design, the proposed works associated with the eastern connections include ramps connecting the elevated structure on Footscray Road with CityLink.

Connections would also be provided to the arterial road network on the western and northern sides of the Melbourne CBD.

2.7. Project Schedule and Delivery

Indicative timings for the delivery of the Project are:

2015-2016

- Business case preparation
- Project design
- Community and stakeholder consultation
- Project Outline and submission to the Minister of Planning
- Scoping Requirements issued by the Minister for Planning
- Preparation and exhibition of environmental impact assessment and planning documentation
- Start of procurement process.

2017-2018

- Completion of planning and environmental assessment
- Decision on environmental assessment and obtaining approvals
- Completion of procurement process for project delivery
- Contract award and commencement of construction.

2.8. Relevant Legislation

2.8.1. COMMONWEALTH LEGISLATION

A referral will be submitted to the Commonwealth Department of Environment under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for a determination as to whether or not the Project is a “controlled action” that requires assessment and approval under the EPBC Act.

The Victorian EES process has been accredited as being a suitable form of assessment under the assessment bilateral agreement between the Victorian and Commonwealth Governments. Consequently, if

the Project requires an EES and is determined to be a “controlled action” under the EPBC Act, the EES process can be used to assess the impacts of the Project on Matters of National Environmental Significance (MNES).

2.8.2. STATE APPROVALS

The Project will require a range of approvals or consents under Victorian legislation, including:

- Planning scheme amendment(s) and permits (if required) under the *Planning and Environment Act 1987*
- An EPA works approval under the *Environment Protection Act 1970*
- Permit for the removal of listed flora and/or fauna under the *Flora and Fauna Guarantee Act 1988*
- Permits under the *Heritage Act 1995*
- Consents under the *Road Management Act 2004* for freeway connections and works on a road
- Consents and licences to undertake works near waterways under the *Water Act 1989*
- An approved Cultural Heritage Management Plan under the *Aboriginal Heritage Act 2006*.



3. Preliminary Issue Identification and Response

3.1. Approach to issue identification

The potential environmental, social and economic impacts of the Project have been broadly identified using the following:

- Previous reports and available information derived from investigations into proposed major infrastructure projects within or in relatively close proximity to the Project corridor, including the Eddington Study 2008, West Link, and Truck Action Plan 2009
- Preliminary scoping assessments undertaken by a range of experienced technical specialists
- Preliminary discussions with key stakeholders such as the Cities of Melbourne, Maribyrnong and Hobsons Bay, Melbourne Water, the Victorian Environmental Protection Authority, Heritage Victoria, Port of Melbourne, VicTrack, VicRoads, and Melbourne Planning Authority
- Relevant legislation, policy and guidelines that apply to the Project, primarily the statutes listed in section 2.8.

The aim of this issue identification process was to:

- Clearly identify the potentially significant impacts associated with the Project
- Gain a clear appreciation of the scale, magnitude and anticipated duration of those impacts
- Identify potential mitigation options available to address adverse impacts
- Identify those impacts where further investigation is required to characterise or understand the scale, magnitude and duration of the effects, or additional mitigation options
- Prioritise areas of further investigation.

3.2. Overview of Potentially Significant Environmental Effects

The potentially significant environmental effects are outlined below against the asset groups set out in Table 3.

Built Form and Open Space

The potentially significant environmental effects in relation to the built environment and open space are principally related to the impacts associated with temporary or permanent acquisition of land to facilitate the Project. Consequential adjustments will need to be made to local connectivity, and the appropriate zoning for the land post construction. There are also opportunities available for the reconfiguration of mixed use and industrial zoned land to achieve a degree of value capture post construction, particularly in the vicinity of the northern portals in Yarraville.

In terms of public open space the Project may have adverse effects during the construction and operation phases. This applies particularly to Hyde Street Reserve adjacent to Stony Creek in Yarraville where public open space may be acquired for the southern tunnel portals.

These impacts can be offset by reconfiguration of open space areas, the addition of open space using land acquired for construction purposes but not required during the operational phase, and significant enhancement through revegetation, landscape and design improvements and development of enhanced cycling and pedestrian connections.

Business and Commercial Assets

Businesses operating within and adjacent to the Project corridor are potentially impacted during both the construction and operational phases.

Construction activity and access to construction sites and lay-down areas will place pressure on parts of the local road network. This may necessitate temporary road closures, and changes to local accessibility and connectivity.

Both temporary and permanent acquisition of some commercial and industrial properties will be required, principally in the vicinity of the northern portals. This will lead to either temporary or permanent relocation of certain businesses.

During the operational phase businesses within and adjacent to the corridor can expect to derive benefits from improved travel times, an increase in the reliability of business to business connections, improved freight efficiency and greater accessibility to local and regional markets.



Social and Community Assets

Adverse social impacts generally occur where a major infrastructure project interfaces with residential, commercial and recreational areas.

Construction activities can result in temporary impacts that particularly affect communities adjacent to the Project area. Impacts include:

- Amenity impacts e.g. noise, visual, dust, odour and vibration
- Site occupation and spoil management
- Construction traffic impacts
- Temporary changes to accessibility and connectivity within communities.

Potential longer term social impacts on communities adjacent to the Project are likely to include:

- Open space in the inner west is limited and project elements may reduce the amount of useable public open space in the area or compromise open space values
- Potential impacts on recreational facilities including the West Gate Golf Course, Stony Creek Reserve, McIvor Reserve and Donald W McLean Reserve
- Changes to cycling and walking routes and trails, particularly Federation Trail in the vicinity of West Gate Freeway and Stony Creek
- The potential for widening of the freeway may lead to a reduction in the separation distance between some residential areas and the freeway. This may reduce amenity for these residential areas through increased noise, changes in air quality and loss of landscaping and screening
- Changes to accessibility and connectivity through loss of local street connections, relocation of pedestrian over bridges, re-routing of bicycle and pedestrian pathways, and re-distribution of traffic on the local road network.

Urban Form and Visual Landscape Assets

The Western Distributor Project corridor lies within a combination of urban landscapes and precincts, ranging from open space areas associated with rivers and streams, parks, reserves and recreational areas, through residential environments and areas of industrial and commercial development with long histories of development in Melbourne's inner west.

Those areas of current and former industrial activity have generally been considered to have low landscape and visual significance. However, recent growth in residential and mixed use commercial activities has led to higher community expectations relating to visual amenity. In addition there are significant areas of existing or proposed urban renewal within close proximity to the corridor, including the Arden-Macaulay, North Dynon, and E-Gate precincts.

The West Gate Freeway component traverses a combination of residential and industrial or commercial environments. In certain locations, it will place pressure on residential amenity through the widening of the freeway, the need to relocate and reconfigure access ramps and noise walls, and the possible removal of landscape buffers.

The Project does however provide significant opportunities for enhanced accessibility that will benefit new urban renewal projects on former industrial sites in close proximity to the Freeway.

While the elevated structures and at-grade components linking the West Gate Freeway to the tunnel portals and Hyde Street could have a significant impact on the existing Hyde Street (Stony Creek) Reserve, at the same time, the Project creates an opportunity to reconfigure the reserve and incorporate features that would assist in mitigation of adverse impacts. Mitigation measures could include the integration of Hyde Street Reserve with Francis Street via Hughes Street, Lorimer Street and Stephens Street.

The proposed bridge across the Maribyrnong River would have limited impact on urban form within the immediate vicinity, but could have a visual impact over a relatively wide area depending on the nature of its design. A design concept based on a clear span of the river provides the opportunity for a dramatic structural engineering and architectural response, and an opportunity for a positive integration of project elements into the surrounding urban environment.

The elevated structure on Footscray Road will become a significant element in the local urban environment. This should establish a memorable arrival sequence when approaching the city from the west providing drivers with a unique elevated view of the city when traversing the structure over the Maribyrnong River.

The extent to which this structure impacts on urban form will depend on the future use options for the land immediately north of Footscray Road and currently occupied by the Melbourne Markets site, which is in the process of being de-commissioned.

There are significant areas of existing or proposed urban renewal within close proximity to the corridor, including North and South Dynon precincts, E-Gate and the Arden-Macaulay precincts. These urban renewal precincts are potentially affected by changes to accessibility and traffic flows in the vicinity of the north-western side of the Melbourne CBD.

Aboriginal Cultural Heritage Assets

The Project is being constructed through a highly modified urban environment, nevertheless there is potential for Aboriginal places (archaeological sites) to occur within the Project area. If present, Aboriginal places will most likely occur in proximity to waterways, but may also occur in pockets of relatively undisturbed land away from water. Due to the modified nature of the Project area the potential for undisturbed Aboriginal places to occur is low.



No registered Aboriginal places have been identified in the Project area.

An examination of the Aboriginal Cultural Heritage Register and Information System (**ACHRIS**), maintained by the Office of Aboriginal Affairs Victoria, was undertaken on 28 September 2015. This indicated that six areas of cultural heritage sensitivities associated with Kororoit Creek, Stony Creek, Moonee Ponds Creek, the Yarra River and the Maribyrnong River dissect, or occur in proximity, to the Project area. They have been variably disturbed/modified in the post contact period, affecting their archaeological potential. The Kororoit Creek and Stony Creek corridors appear to be less modified in parts of the Project area and may contain Aboriginal cultural heritage. This is supported by the presence of numerous Aboriginal places in the Kororoit Creek corridor adjacent to the Project area.

If present, Aboriginal cultural heritage will most likely comprise stone artefact scatters in surface or subsurface deposits. However, the presence of other types of cultural heritage, such as freshwater shell middens and hearths, cannot be ruled out. A possible art site (VAHR 7822-0437) has been registered in proximity to the Project area, on the west bank of Kororoit Creek.

The Aboriginal cultural heritage values of the Project area will be investigated and assessed through the preparation of a Cultural Heritage Management Plan (CHMP), which is a mandatory requirement of the *Aboriginal Heritage Act* 2006 for this Project. The CHMP will also provide site specific (if needed) and contingency measures that will need to be complied with during the life of the Project.

Historic Heritage Assets

The Project boundary intersects or is in close proximity to a number of heritage places, predominantly associated with Melbourne's industrial and maritime history. These include archaeological sites listed in the Victorian Heritage Inventory (VHI), as well as sites included in the Schedule to the Heritage Overlay under the Maribyrnong and Hobsons Bay planning schemes, and a small number of Victorian Heritage Register (VHR) sites. Of these, it is noted that relatively few sites are actually within the Project boundary.

At its western end the Project boundary is in close proximity to the VHR-registered Main Outfall Sewer (H1932); this is also included in the Victorian Heritage Inventory (H7822-0273) and is reflected in the Heritage Overlay HO2 in the Wyndham Planning Scheme.

West of Williamstown Road in Yarraville, the Project is located in close proximity to the former Bradmill Factory (HO125), which is included in the Schedule to the Heritage Overlay of the Maribyrnong Planning Scheme.

In the vicinity of the proposed southern portal (abutting or in close proximity) are a number of archaeological sites included in the VHI associated with the Stony Creek and its backwash. Also in close proximity in the same area are the Jemena Yarraville terminal station (HO130) and the Old Yarraville Primary School (HO37),

both of which are included in the Schedule to the Heritage Overlay of the Maribyrnong Planning Scheme, and various buildings and structures on the Vacuum Oil Company Ltd Depot site (HO130 in the Hobsons Bay Planning Scheme). Just south of the southern portal is the VHR and VHI-registered Spotswood pumping station (H1555; H17822-0145).

While in tunnel, the Project abuts the Yarraville Gardens site (HO138) and abuts or intersects with a series of further industrial sites on the Maribyrnong River in Yarraville and Footscray; these are the Cumming Smith site (HO179, demolished), the Powder Magazine (HO177), Mowlings Soap and Candle (HO178) and Barnett Glass & Rubber (HO78). Some distance east of the Project boundary is the VHR-registered CSR complex (H1311; HO75) and the VHI-registered Yarraville Sugar Refinery wharves (H7822-0527; HO75).

There are a number of archaeological (Heritage Inventory) sites adjacent to the Maribyrnong River near the proposed river crossing. A number are within the Project boundary while others fall outside it. Those that are within the boundary are the VHR listed Saltwater River Crossing and Footscray Wharves H1397 (also Heritage Overlay HO50), the Sims Street unidentified timber slipways and boyard (H7822-0487), the Shepherd Swingbridge abutment foundations (H7822-0434) and the Botterill and Fraser slipways, concrete landing and boyard (H7822-0442).

There may also be archaeological sites in the Maribyrnong River, such as the shipwrecks Ecina Bow (S199) and an unidentified Maribyrnong River mud hopper barge wreck (S781), and there may be others not previously identified.

In the vicinity of the proposed Footscray Road elevated structure and CityLink are the VHI-listed archaeological sites the West Melbourne Rubbish Tips (H7822-0312) and the Dudley Flats rubbish dump and ash tipping site (H7822-0167).

At the eastern end of the Project boundary the North Melbourne Locomotive Shed is identified in the Heritage Inventory (H7822-0166).

Also at its eastern end the Project boundary intersects with a proposed Heritage Overlay precinct. Amendment C207 to the Melbourne Planning Scheme proposes to apply the Heritage Overlay to the Moonee Ponds Creek and Infrastructure Precinct (proposed HO1092); this amendment has been considered by an independent Panel (reporting in January 2014) however the amendment has not yet been gazetted.



Impacts on heritage sites could be minimised by avoiding physical or visual impacts on sites where possible and through a range of other measures. These would include expert archaeological investigations, management of impacts associated with vibration and ground settlement, a program of community involvement in heritage and archaeological investigations, and provisions in the Environmental Management Plan (EMP) for specific processes to be followed if a previously unknown heritage site is found during construction. Actions to mitigate losses where destruction occurs would include the preparation of measured drawings and an archival photographic record.

Contaminated Land Assets

Whilst a large-scale infrastructure project such as the Western Distributor has the potential to disturb contaminated land, it also provides an opportunity to remediate formerly contaminated sites and to provide a better understanding of the nature and degree of contamination of former industrial land in the vicinity of the Project.

Contamination issues are commonly very site specific. A Project-specific assessment would be required at the impact assessment stage, to characterise soil contamination and to estimate volumes and types of waste needing disposal. The investigations will be undertaken particularly for areas where extensive earthworks are required, such as at tunnel portals and piling locations. Construction of the tunnel and other structures would require the removal of spoil, which could be contaminated. Detailed investigations would be undertaken and appropriate avoidance and mitigation measures would be adopted to adequately characterise and manage potential impacts. The soil management approach would be developed to meet EPA requirements.

Groundwater Assets

The construction of the tunnels will involve the extraction, treatment and disposal of groundwater in an environment which has been subject to industrial activity over an extended period of time.

There is a risk that groundwater in the vicinity of the tunnel may be contaminated by hydrocarbons from nearby oil terminals, or from residual contamination from previous industrial activity.

The groundwater quality within the Project area tends to be saline and historically has the tendency for low bore yields. These characteristics have generally resulted in negligible abstractive use of the groundwater resource.

Groundwater would be further characterised as part of geotechnical and contamination studies undertaken to support tunnel and portal design, as well as in the impact assessment and planning investigations.

Groundwater issues can be effectively managed using common construction techniques that are well understood by the tunnel construction industry. Specific measures to manage groundwater and contamination

issues during the construction phase would be set out in both the Environmental Management Framework (EMF) and Construction Environmental Management Plans (CEMPs) (refer section 3.5).

Groundwater management (disposal) would need to meet EPA requirements, and potentially agreement with the local water authority (e.g. trade waste agreement).

Surface Water Assets

The Project would include new bridge works over Kororoit Creek, Stony Creek, the Maribyrnong River and Moonee Ponds Creek. As a general principle, bridge spans over the Kororoit, Stony and Moonee Ponds Creek would be designed to avoid permanent in-stream structures. The significantly greater length of the span over the Maribyrnong River may result in the need for at least one pier. All bridge works would be designed to comply with Melbourne Water's requirements.

Under existing conditions, a 1 in 100 year storm event would result in flooding of some land adjacent to all of these waterways, as well as causing overland flooding in the contributing catchments where the existing drainage network capacity is exceeded. Project works within and adjacent to these waterways would be designed to minimise any increase to the frequency, velocity and/or depth of flooding, and to enhance protection of private and public property where practical.

While these waterways typically experience degraded water quality, Water Sensitive Road Design techniques would be used to minimise the potential for any additional impacts on water quality. This would include the capture and treatment of road runoff prior to allowing it to enter waterways. Sediment and runoff control measures would be implemented during construction. The river and creek banks would be revegetated and stabilised following construction to reduce the potential for erosion and any associated reduction in water quality or bank stability.

Aquatic Flora and Fauna

Freshwater and estuarine waterway corridors within the Project area provide limited habitat for threatened species. While the Maribyrnong River is highly modified, threatened and other aquatic fauna are present or use the river as a migratory pathway, including the Commonwealth EPBC Act-listed Australian Grayling, and the Australian Mudfish, which is listed under the *Victorian Flora and Fauna Guarantee Act 1988* (FFG Act).

In order to protect existing in-stream habitat values, bridge spans over the Kororoit, Stony and Moonee Ponds Creeks would be designed to avoid permanent in-stream structures. Free passage for aquatic species would be maintained along waterways throughout construction and operation and water quality would be monitored and protected through measures specified in any EMPs. Risks to threatened species could be further reduced by avoiding any in-stream or bank works during fish migratory seasons.



Terrestrial Flora and Fauna

The majority of the Project area has been disturbed by industrial and residential development and construction of roads. There are few patches of remnant native vegetation remaining within the Project area generally occurring in fragmented patches, mostly along waterways. These are generally in poor to moderate condition, owing to the extent of past disturbance and abundance of introduced flora species.

Nevertheless, an area of *Subtropical and Temperate Coastal Saltmarsh* occurs along Stony Creek, which is listed as vulnerable under the EPBC Act. Mitigation measures would be developed to avoid the need to remove any of the native vegetation in this area during construction and provide an appropriate buffer zone to protect the Coastal Saltmarsh during construction and operation. Mitigation measures for ongoing management of stormwater runoff from constructed roads would also be developed.

The heavily disturbed nature of the Project area and surrounding urbanised landscape limits its current potential to support threatened fauna populations.

Threatened and migratory bird species have been recorded downstream of the Project area in the Stony Creek Backwash area (e.g. Caspian Tern, listed as migratory under the EPBC Act). The threatened Grey-headed Flying-fox (EPBC and FFG Act listed) and Swift Parrot (EPBC and FFG Act listed) have the potential to utilise flowering eucalypts in public open space and road reserves of the Project area, but these do not support significant population and are not considered critical habitat for species survival.

The Growling Grass Frog occurs in Kororoit Creek well upstream and downstream of the Project area. Small numbers of individuals may disperse along Kororoit Creek through the Project area very occasionally, but impacts on the population are expected to be negligible.

Careful placement of above ground infrastructure, such as surface roads and tunnel portals, would be required to minimise any loss of native vegetation.

Transport Network Assets

As well as potentially delivering broader benefits across the metropolitan transport network, the Project is likely to remove a proportion of heavy vehicle traffic from local and arterial roads in the city's inner west. Associated with this will be enhanced accessibility to the Port of Melbourne.

The potential impacts of the Project on transport and traffic are likely to be:

- Construction phase impacts on local accessibility, traffic movements and temporary road closures
- Potential impacts caused by construction related traffic, particularly from the cartage of spoil generated by tunnelling activity

- Changes to the distribution of traffic within the local road network, particularly in relation to the western and northern parts of the CBD
- Changes to the distribution of arterial traffic in the inner west and in the urban renewal precincts adjacent to the Project area
- Potential benefits from removing heavy vehicles from local streets and arterial roads with a significant reduction in truck movements on Francis Street and Somerville Street in Yarraville, and providing better connectivity to the Port of Melbourne.

Once operating, the Project is likely to result in changed traffic patterns on other roads throughout the inner west. The most significant of these changes would be the distribution of traffic from the end of Footscray Road into the road network on the western and northern side of the Melbourne CBD. This has implications for the performance of arterial roads such as Dynon Road, Dudley Street, and Wurundjeri Way. There are flow on effects in terms of future options for the development of urban renewal precincts, particularly the E-Gate, Dynon Road North, and Arden-Macaulay precincts.

These changes will require ongoing monitoring as well as the development and implementation of appropriate traffic management measures.

Construction activity may have an impact on the West Gate Freeway and the local road network. The management of traffic flows on the Freeway will need to be integrated with the management of construction activity to maintain as far as possible the efficiency of the freeway. Construction activity and access to construction sites and lay-down areas may place pressure on parts of the local road network. This may necessitate temporary road closures, and changes to local accessibility and connectivity.

This will be subject to more detailed design development and amendment post business case, which will include extensive opportunity for stakeholder and community consultation and input, including opportunities as part of the statutory approvals process.

Noise and Vibration

Traffic noise has long been a significant issue in some parts of the Project corridor, especially for residential communities adjacent to Francis Street and Somerville Road in the inner west, and near major freight routes or industrial areas. The anticipated reduction in truck movements within the inner west on arterial roads such as Francis Street and Somerville Street (augmented by continued truck curfews) is expected to result in a noticeable reduction in noise levels.



Other communities may however be exposed to increased traffic noise levels associated with their proximity to the West Gate Freeway widening and new at grade as well as elevated structures that are proposed as part of the Project. Vehicle noise from the existing Freeway is already mitigated using a series of noise walls. It is anticipated that the greater proportion of these would be replaced or relocated, and in certain cases increased in height, to achieve better noise attenuation in line with applicable guidelines and policies.

The widening of the West Gate Freeway and the new Western Distributor will generate construction noise impacts for those residential properties immediately adjacent to and within the vicinity of the Freeway. The relative impact of construction noise will depend on the type of construction activity, the plant and equipment required, and the anticipated hours of operation.

Short-term vibration impacts may also occur for some properties during the construction phase. The potential vibration impacts on any nearby heritage structures, underground services and buildings would require investigation. Regenerated noise from the tunnel boring machine may temporarily affect a small number of individual properties as the machine passes beneath them.

Air Quality

Air quality is an important issue for communities along the Project corridor. In a part of Melbourne once dominated by industrial land uses, a growing residential population now has higher expectations for improved air quality. The Brooklyn Industrial Precinct in particular has a history of dust impacts generated by local industrial and quarrying activity.

The widening of the West Gate Freeway and other construction activity near residential receptors will generate construction dust impacts for those properties immediately adjacent to the Freeway. The relative impact of construction dust will depend on the type of construction activity, the plant and equipment required, and the anticipated hours of operation.

During the operational phase, it is expected that there would be localised improvements in air quality associated with a combination of changes in the composition of the traffic traversing an area along with improved traffic flows. For example, on the West Gate Freeway, a reduction in peak hour congestion and better traffic flows generally, along with improvements in the emissions performance of the overall vehicle fleet over time, can be expected to result in net benefit in terms of vehicle emission impacts.

In the inner west, the reduction in truck movements on suburban streets is expected to result in improvements in near-road air quality, especially in relation to particulates and NO₂ emissions. In other areas, there may be a localised reduction in air quality associated with traffic lanes in closer proximity to existing residential activity (i.e. along the West Gate Freeway).

The tunnel ventilation structures would introduce a new elevated source of air emissions. Recent experience with similar structures on road tunnel projects in Melbourne (CityLink, Domain and Burnley tunnels), Brisbane and Sydney suggests that emissions can be managed in such a way as to meet all relevant air quality criteria. The net change in air quality impact is likely to be very small as incremental vent structure plumes are off-set by reduced surface emissions. This would most likely be demonstrated through a monitoring programme pre- and post-commissioning and approved by EPA Victoria.

Greenhouse Gases

Greenhouse gas (GHG) emissions will unavoidably be produced due to the construction of the Project. These can be minimised through the use of low embodied energy materials and the use of energy efficient equipment.

It is likely that there will be a small reduction in GHG emissions across the Melbourne metropolitan transport network as a result of the operation of the Project. The reduction in vehicle GHG emissions due to more efficient vehicle movements will be offset to some degree over time by operational energy use, particularly for tunnel ventilation and lighting. As noted previously, these operational systems will be a major focus of emissions reduction efforts.

3.3. Initial Characterisation of Impacts

The scale, magnitude and duration of the potential impacts of the Project have initially been categorised as presented in Table 1 below.

Table 1 Characterisation of Impacts

Scale	Immediate locality Precinct Corridor Region
Magnitude of Impact	HIGH: Impacts on an asset, resource or community of high significance or value and which requires specific measures to avoid or mitigate adverse impacts MEDIUM: Impacts on an asset, resource or community of medium significance where standard measures or responses may be suitable to avoid or mitigate adverse impacts LOW: Impacts on an asset, resource or community of low significance where standard measures are available to avoid or mitigate adverse impacts.
Duration	Less than 1 year 1-4 years In excess of 5 years



3.4. Screening and Assessment

Potential impacts were screened to establish the scale, magnitude, and duration of the impact, whether or not the impact was positive or adverse.

The outcome of this process is a framework for prioritisation of issues for investigation through the impact assessment process. Issues for investigation have been prioritised according to the criteria in Table 2 below.

Table 2 Prioritisation Criteria for Further Investigation

Priority	Criteria
A	Level of understanding of the magnitude of potential adverse effects may not at this stage be sufficient to fully characterise the likelihood and consequences of the impacts or inform the appropriate mitigation response.
B	Level of understanding of the magnitude of the potential adverse effects is generally sufficient to characterise the likelihood and consequences of the impacts and inform the appropriate mitigation response
C	Level of understanding of the magnitude of the potential adverse effects is sufficient to characterise the likelihood and consequences of the impacts and inform the appropriate mitigation response

3.5. Preliminary Mitigation Framework

3.5.1. ENVIRONMENTAL MANAGEMENT FRAMEWORK

The mitigation of actual or potential adverse impacts associated with any infrastructure project typically takes place within an overarching EMF. This framework typically involves the following:

- The statutory approvals and consents that would influence the specific elements of various EMPs and measures
- Environmental management objectives, performance requirements and indicators to guide environmental monitoring and management actions
- The outline of one or more Environmental Management Plans for the construction and operational phases
- The environmental management measures committed to by the proponent through the assessment and approvals process, including commitments to mitigate adverse effects and enhance environmental performance

- A proposed programme for evaluating and auditing environmental outcomes, as well as reviewing and revising EMPs
- Arrangements for the management baseline and monitoring data in order to ensure transparency and accountability in the environmental management of the Project.

3.5.2. CONTRACTORS ENVIRONMENTAL MANAGEMENT STRATEGY (CEMS)

The construction contractor(s) would be required to develop and implement a project specific CEMS consistent with ISO 14001: 2004. It is anticipated that this strategy would be developed with reference to a number of CEMPs. These would be developed with reference to the EPA Publication No. 480 *“Environmental Guidelines for Major Construction Sites.”* Where necessary, site or issue specific CEMPs may be developed to address certain environmental values, locations or activities identified as having high or critical environmental risks associated with them.

In addition it is anticipated that the contractor(s) would prepare a number of Construction Traffic Management Plans (CTMPs) to avoid or mitigate adverse impacts associated with construction activity on the local road network and affected communities.

3.5.3. URBAN DESIGN GUIDANCE AND PRINCIPLES

An Urban Design Guidance document would be prepared to guide the planning and design of the proposed Project infrastructure. The aim of the document is to achieve a high quality urban design response which enhances physical and visual amenity and minimises adverse impacts which could result from the proposed Project and its associated structures.

Rather than providing prescriptive urban design solutions, the guidance document would outline a series of urban design principles which are to be achieved.

The principles would provide the benchmarks to which the urban design outcomes should respond, to ensure quality to the standard required. This process also allows for private sector innovation in contributing to outstanding urban design outcomes.

The Urban Design Guidance document would be based upon the following aspirations:

- Achievement of urban design excellence that benefits all of the transport network, its users and the communities and places through which the Project passes
- Maximising the positive impacts and minimising negative impacts resulting from the Project
- Providing thorough integration of high quality urban design with best practice technical solutions.



Table 3 Preliminary Identification of Potentially Significant Effects

Asset Group	Key issue/effects		Scale	Significance of Effect		Assessment Response	Preliminary Mitigation Framework	Priority for Investigation
				Magnitude of Impact	Duration			
1 Built Environment and Community Assets								
1.1 Built Environment & Open Space	1.1.1	Reconfiguration of local street network and pedestrian networks or links	Immediate locality	Medium	1-4	Assessment of local impacts on connectivity and accessibility	UDG CEMP CTMP	B
	1.1.2	Complete or partial permanent acquisition of buildings and other potential sites	Immediate locality	High to Medium	1-4	Assessment of the local impacts arising from the complete or partial permanent acquisition of buildings and land	UDG EMF	A
	1.1.3	Temporary occupation, use and rehabilitation of commercial and industrial land for construction purposes	Precinct	Medium	1-4	Assessment of the impact of temporary occupation and subsequent rehabilitation of commercial and industrial land through land use, heritage, landscape and visual, business and social impact assessments	UDG EMF CTMP	A
	1.1.4	Temporary occupation, use and subsequent rehabilitation of public open space for construction purposes	Immediate locality	Medium	1-4	Assessment of the impact of temporary occupation and subsequent rehabilitation of public open space through land use, heritage, landscape and visual, business and social impact assessments	UDG EMF CTMP	A
	1.1.5	Permanent loss of public open space	Immediate locality	High	5+	Assessment of the impact of project infrastructure through the land use, heritage, landscape and visual, social and socioeconomic impact assessments	UDG CTMP	A
	1.1.6	Impacts on redevelopment potential of land adjacent to or in the vicinity of the Project corridor	Precinct	High	5+	Assessment of redevelopment potential through land use planning, landscape and visual, urban design and business economics impact assessments	UDG CTMP	B
	1.1.7	Benefits associated with potential reconfiguration of the Mixed Use Zone (MUZ) in the vicinity of the southern portals	Immediate locality Precinct	High	5+	Assessment of redevelopment potential through land use planning, landscape and visual, urban design and business economics impact assessments	UDG	A
	1.1.8	Benefits associated with reconfiguration of land uses in the Industrial zone adjacent to the northern portals post construction	Immediate locality Precinct	Medium	5+	Assessment of redevelopment potential through land use planning, landscape and visual, urban design and business economics impact assessments	UDG	C
	1.1.9	Benefits associated with enhanced connectivity to urban renewal precincts	Precinct Region	High	5+	Assessment of improved connectivity benefits through traffic impact, land use planning, urban design and business economics impact assessments	UDG	A



Asset Group	Key issue/effects		Significance of Effect			Assessment Response	Preliminary Mitigation Framework	Priority for Investigation
			Scale	Magnitude of Impact	Duration			
1.2 Business & Commercial Assets	1.2.1	Potential impacts to businesses adjacent to the Project corridor and in the inner west arising from the Project during construction	Precinct Corridor	High	1-4	Assessment of impacts through business economics, land use planning and social impact assessments	CEMP CTMP	A
	1.2.2	Potential impacts to businesses adjacent to the Project corridor and in the inner west arising from the Project during operation	Precinct Corridor	Medium	5+	Assessment of impacts through business economics, land use planning and social impact assessments	EMF	C
	1.2.3	Potential temporary dislocation of businesses due to acquisition of commercial properties	Immediate locality	High	1-4	Assessment of impacts through business economics, land use planning and social impact assessments	EMF	A
	1.2.4	Potential permanent dislocation of businesses due to acquisition of commercial properties	Immediate locality	High	5+	Assessment of impacts through business economics, land use planning and social impact assessments	EMF	A
	1.2.5	Potential benefits to commercial land uses and activities adjacent to the Project corridor and in the inner west during operation	Precinct Corridor	Medium	5+	Assessment of impacts through business economics, land use planning and social impact assessments	UDG	C
1.3 Social & Community Assets	1.3.1	Potential loss of open space and recreation assets or places with particular cultural, recreational or aesthetic value	Immediate locality Precinct	High	5+	Assessment of impacts through the social impact, land use planning, urban design and landscape and visual impact assessments	EMF UDG	A
	1.3.2	Potential impacts on local accessibility and connectivity during the construction and operation phase	Precinct Corridor	High	5+	Assessment of impacts through the social impact, traffic impact, land use planning, urban design and landscape and visual impact assessments	EMF CTMP UDG	A
	1.3.3	Potential changes to residential amenity through noise, air quality and visual amenity impacts during the construction or operation phases	Precinct Corridor	High	5+	Assessment of impacts through the social impact, traffic impact, noise and vibration, air quality, urban design and landscape and visual impact assessments	EMF CEMP UDG	A
	1.3.4	Potential benefits associated with re-distribution of heavy vehicle traffic off residential streets in the inner west during the operation phase	Precinct	High	5+	Assessment through the social impact, traffic impact and noise, vibration and air quality assessments	EMF	A
1.4 Urban Form & Visual Landscape Assets	1.4.1	Temporary impacts of construction activities and compounds	Immediate locality Precinct	High	1-4	Assessment of the potential impacts that construction activities may have on landscape and visual amenity values through the landscape and visual impact assessment	EMF CEMP UDG	B
	1.4.2	Potential impacts on land immediately adjacent to the West Gate Freeway and elevated structures through visual dominance, shading and loss of green buffers	Precinct Corridor	High	5+	Assessment of impacts of elevated structures on urban form, landscape and visual amenity through the urban design and landscape and visual amenity impact assessments	EMF UDG	A
	1.4.3	Potential impacts on landscape values associated with public open space	Immediate locality Precinct	High	5+	Assessment of impacts through the urban design, landscape and visual and social impact assessments	UDG EMF	A



Asset Group			Key issue/effects			Significance of Effect			Assessment Response			Preliminary Mitigation Framework		Priority for Investigation	
						Scale	Magnitude of Impact	Duration							
	1.4.4	Potential impacts on visual, landscape and urban form adjacent to the elevated structures associated with crossing the Maribyrnong River	Precinct Corridor	High	5+	Assessment of impacts of elevated structures on urban , landscape and visual amenity through the urban design and landscape and visual amenity impact assessments	UDS EMF	B							
	1.4.5	Potential impacts on visual, landscape and urban form adjacent to the elevated structures on Footscray Road and the connections to City Link and the city connections	Precinct Corridor	Medium	5+	Assessment of impacts of elevated structures on urban form, landscape and visual amenity through the urban design and landscape and visual amenity impact assessments	UDG EMF	A							
	2 Cultural Assets														
2.1 Aboriginal Cultural Heritage Assets	2.1.1	Potential impacts of construction and operation on known Aboriginal cultural heritage (i.e. possible rock art site at Kororoit Creek)	Immediate locality	High	1-4	Assessment of potential impacts on known sites of Aboriginal heritage arising from construction activities and operation through the Aboriginal cultural heritage impact assessment	CHMP CEMP	A							
	2.1.2	Potential impacts of construction and operation on unknown sites of Aboriginal cultural heritage	Immediate locality	Medium	1-4	Assessment of potential impacts on known and unknown sites of Aboriginal heritage arising from construction activities and operation through the Aboriginal cultural heritage impact assessment	CHMP CEMP	A							
	2.1.3	Potential impacts of construction and operation on broader Aboriginal values (i.e. visual, environmental)	Immediate locality Corridor	High	5+	Assessment of potential impacts on known and unknown sites of Aboriginal heritage arising from construction activities and operation through the Aboriginal cultural heritage, landscape and visual, and flora and fauna impact assessments	CHMP UDG EMF	A							
2.2 Historic Heritage Assets	2.2.1	Potential impacts during construction from vibration and subsidence on heritage structures	Immediate locality	Medium	1-4	Assessment of the potential vibration and subsidence impacts to sites listed on the VHR and VHI and buildings within Heritage Overlays Refer also to item 6.1.1 regarding vibration assessment and item 3.2.4 regarding assessment of subsidence	EMF CEMP	B							
	2.2.2	Potential impacts during construction on other known and unknown sites of historic heritage or archaeological significance	Corridor	High	1-4	Assessment of the potential impacts on known and unknown sites of European heritage through the cultural heritage assessment.	CEMP	A							
	2.2.3	Potential impact of new built form (flyovers, vents, stacks, portals and the like) during the operational phase on known and unknown sites of historic heritage or archaeological significance	Immediate locality Precinct Corridor	High	5+	Assessment of the potential impacts on known and unknown sites of European heritage through the cultural heritage, urban design, and landscape and visual amenity impact assessments Refer also to item 1.4 regarding urban form and visual landscape assets	UDG EMF	A							



Asset Group			Key issue/effects			Significance of Effect			Assessment Response			Preliminary Mitigation Framework		Priority for Investigation	
						Scale	Magnitude of Impact	Duration							
3 Soils and Hydrology Assets															
3.1 Contaminated Land Assets	3.1.1	Potential impacts associated with the excavation of contaminated soil	Immediate locality Precinct	Medium	1-4	Assess the potential for disturbing contaminated ground conditions as part of the contaminated land impact assessment	EMF CEMP	A							
	3.1.2	Potential impacts associated with the treatment and disposal of contaminated soil	Immediate locality	High	1-4	Assess the short and long term impacts of the disturbance, excavation and disposal of contaminated soils through the contaminated soils impact assessment Identify strategies for characterising, storing, handling, treating and disposing of contaminated soil as part of the contaminated land impact assessment	CEMP ESA	A							
	3.1.3	Potential impacts associated with the transport of contaminated soils through communities	Corridor Region	Medium	1-4	Assessment of the risks associated with the transport of contaminated soil from site to a secure landfill through the contaminated soil and construction traffic impact assessment	CEMP CTMP	A							
3.2 Groundwater Assets	3.2.1	Potential impacts associated with the handling and management of extracted groundwater	Immediate locality	High	1-4	Assess the potential short and long term impacts of construction and operation on groundwater quality and identify mitigation measures through the groundwater impact assessment to ensure compliance with EPA Guidelines	CEMP	A							
	3.2.2	Potential impacts associated with potential groundwater contamination from potential spills or leaks during construction	Immediate locality	Low	1-4	Assessment of the impacts associated with accidental spills or leaks associated with construction activity through the groundwater, contaminated land, and surface water quality impact assessments	CEMP	C							
	3.2.3	Potential impacts associated with the potential for the tunnel to contribute to migration of existing contaminated groundwater plumes	Precinct	Medium	5+	Assess the potential short and long term impacts of construction and operation on groundwater movement and quality and identify mitigation measures through the groundwater impact assessment to ensure compliance with EPA Guidelines	EMF CEMP	B							
	3.2.4	Potential impacts associated with the potential for local subsidence associated with aquifer dewatering	Precinct	Medium	1-4	Assess the potential short and long term impacts of construction and operation on groundwater movement and identify mitigation measures through the groundwater impact assessment to ensure compliance with EPA Guidelines	EMF	B							
	3.2.5	Potential impact of ongoing secondary compression of Coode Island Silt could impact construction and operation phases of the Project.	Immediate locality Precinct	High	1-4	Assessment of the potential for construction and operation activities to disturb Coode Island silts through the hydrogeological impact assessment	CEMP	B							



Asset Group			Key issue/effects			Significance of Effect			Assessment Response			Preliminary Mitigation Framework		Priority for Investigation	
						Scale	Magnitude of Impact	Duration							
3.3 Surface Water Assets	3.3.1	Potential impacts on flood frequency, velocity and depth of flooding during the construction phase	Precinct	Medium	High	Assessment of the potential short term impacts arising from construction activity on floodplains and storm water management through the surface water impact assessment	EMF CEMP	A							
	3.3.2	Potential impacts on flood frequency, velocity and depth of flooding during the operational phase	Precinct	High	5+	Assessment of the potential long term impacts arising from operation of the Project floodplains and storm water management through the surface water impact assessment	EMF	A							
	3.3.3	Potential impacts on surface water quality associated with construction activity	Immediate locality	Medium	1-4	Assessment of the potential short term impacts arising from construction activity on floodplains and storm water management through the surface water impact assessment	CEMP	B							
	3.3.4	Potential impacts on surface water quality associated with during the operational phase	Immediate locality	Medium	5+	Assessment of the potential long term impacts arising from operation of the Project on floodplains and storm water management through the surface water impact assessment	EMF	B							
	3.3.5	Potential impact of elevated structures over waterways in relation to shading, vegetation loss and bank stability	Immediate locality	Medium	5+	Assessment of short and long term impacts through the flora and fauna and surface water impact assessments	EMF	B							
	3.3.6	Potential benefits associated with stream bank remediation and riparian vegetation on bank stability and surface water quality	Immediate locality	Medium	5+	Assessment of short and long term benefits of stream bank remediation through the flora and fauna, landscape and visual amenity, and surface water impact assessments	EMF	C							
4 Flora and Fauna															
4.1 Aquatic Flora & Fauna	4.1.1	Potential impacts on freshwater aquatic habitat including Kororoit Creek, Stony Creek and constructed wetlands (M80 Interchange)	Precinct	Low	1-4	Assessment of short and long term impacts through the flora and fauna and surface water impact assessments	EMF CEMP	B							
	4.1.2	Potential impacts on estuarine and inter-tidal aquatic habitat in Stony Creek, Stony Creek backwash, Moonee Ponds Creek and the Maribyrnong River	Precinct	Low	1-4	Assessment of short and long term impacts through the flora and fauna, groundwater and surface water impact assessments	EMF CEMP	A							
	4.1.3	Potential impacts on Australian Grayling and Australian Mudfish through construction activity within the Maribyrnong River and operational impacts of bridge crossings	Region	Medium	5+	Assessment of short and long term impacts through the flora and fauna impact assessment	EMF CEMP	A							
	4.1.4	Potential impacts on available habitat for marine itinerants (i.e. dolphins) in the Maribyrnong River	Immediate locality	Low	1 - 4	Assessment of short and long term impacts through the flora and fauna impact assessment	EMF CEMP	C							



Asset Group	Key issue/effects		Significance of Effect			Assessment Response	Preliminary Mitigation Framework	Priority for Investigation
			Scale	Magnitude of Impact	Duration			
4.2 Terrestrial Flora & Fauna	4.2.1	Potential impacts on Coastal Saltmarsh at Stony Creek (listed as vulnerable under the EPBC Act and vulnerable in Victorian Volcanic Plains (VPP)) and Brackish Wetland (endangered in VPP) at Stony Creek and Moonee Ponds Creek through loss of vegetation and/or changes in hydrology	Immediate locality	Medium	1-4	Assessment of short and long term impacts through the flora and fauna and surface water impact assessments	EMF CEMP	B
	4.2.2	Potential impacts on Mangrove Shrubland (vulnerable in VVP) in the Stony Creek backwash associated with changes in groundwater and surface water hydrology	Immediate locality	Medium	1-4	Assessment of short and long term impacts through the flora and fauna, groundwater and surface water impact assessments	EMF CEMP	A
	4.2.3	Potential impacts on migratory birds through loss or degradation of habitat	Corridor	Medium	1-4	Assessment of short and long term impacts through the flora and fauna impact assessment		B
	4.2.4	Potential impacts on a Ramsar wetland in Port Phillip Bay arising from changes in water quality downstream of the Project	Region	Medium	1 to 4	Assessment of short and long term impacts through the flora and fauna impact assessment	EMF CEMP	B
	4.2.5	Potential impacts on planted riparian woodland through construction activity adjacent to Kororoit Creek	Immediate locality	Medium	5+	Assessment of short and long term impacts through the flora and fauna impact assessment	EMF CEMP	B
	4.2.6	Potential impacts associated with the loss of amenity planting and scattered trees throughout the Project corridor	Corridor	Low	1-4	Assessment of short and long term impacts through the flora and fauna impact assessment	EMF CEMP	C
	4.2.7	Potential disturbance to corridor habitat for Growling Grass Frog in the vicinity of Kororoit Creek	Immediate locality	Low	1-4	Assessment of short and long term impacts through the flora and fauna and surface water impact assessments	EMF CEMP	C
	4.2.8	Potential impact of the loss of foraging habitat for listed species (e.g. Grey Headed Flying Fox, Swift Parrot)	Corridor	Medium	5+	Assessment of short and long term impacts through the flora and fauna impact assessment	EMF CEMP	B
5 Connectivity								
5.1 Traffic and Transport	5.1.1	Potential impacts associated with construction vehicle movements on local street networks, accessibility and connectivity	Region Precinct Corridor	High	1-4	Assessment of the potential impacts of temporary modifications to the existing transport network during construction through the traffic and transport impact assessment	EMF CTMP	A
	5.1.2	Potential impacts associated with construction activity on local pedestrian and cycling connectivity and accessibility	Immediate locality Precinct	High	1-4	Assessment of the potential effects of construction and permanent road changes on the surface transport network for private and public transport and pedestrian movements through the traffic impact assessment	CTMP	B
	5.1.3	Potential impacts associated with the re-distribution of heavy vehicle traffic on the local road network	Precinct Corridor	Medium	5+	Assessment of the potential effects on re-distribution of traffic through the network impact assessment	EMF	B



Asset Group	Key issue/effects	Significance of Effect			Assessment Response	Preliminary Mitigation Framework	Priority for Investigation
		Scale	Magnitude of Impact	Duration			
	5.1.4 Potential impacts associated with the redistribution of traffic flows accessing the Melbourne CBD	Precinct Region	High	5+	Assessment of the potential effects on re-distribution of traffic through the network impact assessment	EMF	A
	5.1.5 Potential benefits associated with the reduction in heavy vehicle movements through residential areas in the inner west of Melbourne	Precinct Region Corridor	Medium	5+	Assessment of the potential benefits associated with the reduction in heavy vehicles on residential streets through the network impact and traffic impact assessments	EMF	B
	5.1.6 Potential impacts associated with the redistribution of traffic flows across the broader traffic network	Precinct Region	High	5+	Assessment of the potential effects on re-distribution of traffic through the broader network impact assessment		A
	5.1.7 Potential impacts on existing on-road public transport routes	Precinct Region Corridor	Medium	5+	Assessment of the potential benefits and impacts to on-road public transport		B
	5.1.8 Potential benefits to efficient, reliable and equitable access to the Port of Melbourne	Precinct Region Corridor	High	5+	Assessment of the operational performance of the Project to provide efficient, reliable and equitable access to Port of Melbourne		B
	5.1.9 Potential benefits to the transport network associated with improved network performance, travel time savings and freight efficiency	Corridor Region	High	5+	Assessment of the potential effects on re-distribution of traffic through the network impact assessment		B
	5.1.10 Potential impacts on freight rail operations within the Dynon Precinct	Precinct	High	5+	Assessment of construction impact on existing freight rail operation		A
6 Amenity							
6.1 Noise & Vibration	6.1.1 Potential impacts associated with construction noise and vibration including tunnelling activity	Immediate locality	Medium to High (location specific)	1-4	Assessment of the potential construction noise impact and the associated mitigation measures, with consideration to EPA Publication 1254 and 480, as well as NSW Interim Construction Noise Guideline for tunnelling regenerated noise	EMF CEMP	A
					Assessment of the potential impacts to amenity during construction arising from vibration as part of the vibration impact assessment to ensure compliance with Australian Standards AS:2670.2 – Vibration		B
	6.1.2 Potential impacts associated with changes to noise exposure levels for communities adjacent to the West Gate Freeway, the southern portals and Hyde Street ramps	Precinct Corridor	High	5+	Assessment of traffic noise impacts to assess compliance with the VicRoads Traffic Noise Reduction Policy	EMF	A



Asset Group			Key issue/effects			Significance of Effect			Assessment Response			Preliminary Mitigation Framework		Priority for Investigation	
						Scale	Magnitude of Impact	Duration							
6.2 Air Quality	6.1.3	Potential impacts associated with the operation of the tunnel ventilation system and ventilation structures	Immediate locality	Medium	5+	Assessment of the potential noise impacts of locating ventilation and other associated infrastructure within public open space through the land use impact assessment and background noise monitoring to ensure compliance with State Environment Protection Policy (SEPP) N-1 Policy	EMF	C							
	6.2.1	Potential impacts during the construction phase associated with the operation of construction equipment, construction traffic movements and dust emissions	Immediate locality	High	1-4	Assessment of the potential air quality impacts generated by the tunnel, vent station(s) and portal construction through the air quality impact assessment to ensure compliance with SEPP for Ambient Air Quality and compliance with EPA Victoria Environmental Guidelines for Major Construction Sites	EMF CEMP	B							
	6.2.2	Potential impacts associated with the re-distributed traffic flow and the proximity of traffic lanes to residential areas (West Gate Freeway corridor and local inner-west roads) and potential new developments (i.e. E Gate)	Precinct Corridor	Medium	5+	Assessment of the impacts of re-distributed traffic through the air quality, noise and social impact assessments		B							
	6.2.3	Potential impacts associated with emissions to air from tunnel ventilation structures	Immediate locality	Low	5+	Assessment of the potential impacts of locating ventilation and other associated infrastructure within public open space through the land use and social impact assessments. Assessment of the potential air quality impacts generated by the ventilation structures and other infrastructure associated with the tunnels through the air quality assessment linked to a Works Approval Application (WAA) to ensure compliance with the SEPPs for Ambient Air Quality and Air Quality Management and compliance with EPA Environmental Guidelines for Major Construction Sites	EMF	A							
7 Greenhouse Gas															
7.1 Greenhouse Gas	7.1.1	Potential impacts associated with the potential for increased greenhouse gas emissions	Region	Low	5+	Assessment of potential sources of greenhouses gas emissions and longer term emissions profile from construction and operation of the Project	EMF	B							



4. Specialist Studies

To address the effects listed above in Table 3, a comprehensive set of specialist studies will be undertaken.

These studies will inform the development of the reference design in order to avoid or minimise adverse effects on the natural, social or economic environment impacted by the Project.

This work will be undertaken in two phases:

- Existing conditions assessments. To understand the existing conditions within and adjacent to the Project corridor, and the policy context within which the Project will be evaluated
- Impact assessment studies. To understand the potential impacts of the Project and to identify mitigation and management measures associated with the construction and operation of the Project.

The following specialist studies will be undertaken to address the environmental, social and economic issues and impacts identified through the preliminary issues screening process.

Built Environment and Community Assets

- Land Use and Planning
- Business Impacts
- Social and Community
- Landscape and Visual
- Urban Design Framework

Cultural Assets

- Aboriginal Cultural Heritage
- Historic Heritage

Soils and Hydrology Assets

- Contaminated Soils
- Groundwater
- Surface Water

Flora and Fauna Assets

- Freshwater Aquatic Flora and Fauna
- Inter-tidal Flora and Fauna
- Terrestrial Flora and Fauna

Connectivity

- Traffic and Transport

Amenity

- Noise and Vibration
- Air Quality
- Greenhouse Gas



5. Communication and Stakeholder Engagement

5.1. Stakeholder engagement strategy

5.1.1. OVERVIEW

Public participation in the planning and delivery of projects is essential for achieving high quality outcomes and building community support for a project. A Communications and Engagement Strategy is being implemented to raise awareness of the Project and guide engagement with stakeholders in order to build trust, gather information about community values and encourage public participation in the Project development.

The stakeholder engagement strategy is based on the following principles:

- **Open communication** – actively seeking diverse opinions and perspectives to broaden understanding of views and assist decisions on refining the Project
- **Transparency** – sharing information broadly and establishing and maintaining agreed channels for communication and feedback
- **Collaboration** – working to seek mutually beneficial outcomes where feasible
- **Inclusion** – seeking to identify and involve stakeholders in planning and decisions.

5.1.2. KEY STAKEHOLDERS

The Project will attract interest from a broad cross-section of the Victorian community, particularly people who live, work, own land and travel through the Project corridors. Stakeholders with an interest in transport and freight movement, as well as those which play an advocacy role for the development of Melbourne will also have an interest. This strategy is designed to target these and broader categories of stakeholders as outlined below.

- The State Government, including: Department of Treasury and Finance (DTF), Department of Economic Development, Jobs, Transport and Resources (DEDJTR), Department of Environment, Land, Water and Planning (DELWP), VicRoads, and Public Transport Victoria (PTV).
- Other agencies including EPA Victoria, Parks Victoria, Yarra Trams, Metro Trains, Melbourne Water, Heritage Victoria, Office of Aboriginal Affairs Victoria, Port of Melbourne Corporation, emergency services organisations, utility providers.
- Federal Government.
- Local Government, in particular Hobsons Bay, Maribyrnong and Melbourne and Wyndham Councils.
- Private road operators.

- Directly/potentially impacted landowners and business owners.
- Road users.
- Community facilities.
- Media.
- Transport advocacy stakeholders.
- Interest groups.
- Heritage stakeholders.
- Social service providers.
- Culturally and linguistically diverse communities and other potentially disadvantaged groups.



6. Conclusion

The Western Distributor Project is a significant transport project that has the potential to generate significant improvements in transport network efficiency in Melbourne's west and to reduce congestion for road users.

In addition, it is expected to generate improvements to the efficiency of freight movements, and provide greater resilience and redundancy in the transport network.

A significant benefit will be the contribution to a more liveable Melbourne, particularly by removing a significant volume of heavy vehicle movements from residential streets in the inner west.

A project of this scale does have the potential for significant environmental, social and economic impacts. These will primarily be felt in the construction phase of the Project and will be short term. A number of impacts, both positive and adverse will occur during the operational phase of the Project. Unavoidable adverse effects would need to be managed on an on-going basis through the operational life of the Project in accordance with the requirements of Victorian legislation.

It is submitted that the potential effects of the Western Distributor Project, when considered in their totality, could reasonably be considered capable of having a significant effect on the natural, physical and social environment. It is therefore recommended that the Minister of Planning declare the Western Distributor Project to be "public works" under Section 3(1) of the *Environment Effects Act 1978*.