

Attachment J

Social and Business Impact Assessment

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Melbourne Airport Jet Pipeline Project

Social and Business Impact Assessment

Viva Energy Australia

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Executive summary

The Melbourne Airport Jet Pipeline Project (the Project) proposes the construction and operation of a new pipeline to form a direct connection between the jet fuel storage infrastructure at Melbourne Airport and the existing Altona to Somerton pipeline. The proposed pipeline would provide faster replenishment of fuel stocks, provide an alternative to current and escalating dangerous goods vehicle movements and provide a more robust fuel supply chain.

This Social Impact Assessment (SIA) has been completed to support the development of the Project under the *Pipelines Act 2005 (Vic)*. The information for this SIA was sourced from desktop sources and evidence from the findings from other technical studies associated with the Project.

The methodology to undertake the SIA included the following key steps:

- Review of government policy and legislation.
- Definition of the SIA study area to capture the areas subject to the Project's socio-economic influences.
- Research on community values, demographic characteristics, and community infrastructure facilities to establish the baseline of the existing conditions within the study area. This assessment considers the local community, the broader airport users, and business park stakeholders.
- Identification of existing community facilities and services, places of special interest, significant community activities and access patterns for residential communities within the study area.
- Risk assessment to identify the issues for assessment proportionate to the identified risk and relevant measures to manage identified risks.
- Impact assessment focused on four themes: properties and businesses intersected by the Project, residential amenity and character, transport and access, and community infrastructure facilities. Safety impacts fall outside of the scope of this assessment and will be considered in the Safety Management Study.

- Development of impact management and monitoring measures to address potential adverse impacts.

The assessment found that the land and area surrounding the Project is predominantly industrial land within the Melbourne Airport Business Park and the Tullamarine industrial area. The suburbs that the Project intersects are characterised by population growth, an aging population, and high levels of disadvantage.

Community infrastructure facilities located with a 1 km area of the Project included:

- Educational and early childcare facilities
- Open space and natural areas with amenity value that enable passive recreation opportunities
- Training and sports venue
- Small parks and linear reserves that service residential catchments.

This assessment has concluded that it is unlikely that the Project will create significant or long-term social impacts on existing communities and traders. The risk assessment and subsequent impact assessment found that the Project's construction activities have the potential to result in temporary social impacts to the nearby residents, traders, general community and community infrastructure facilities, including:

- Temporary amenity impacts such as closures of shared user paths and change in access especially in locations where the proposed construction technique is via trenching. A temporary reduction in the local amenity could lead to disruption to daily activities at residences and businesses and reduced enjoyment of outdoor areas, mainly within the local study area. The likely amenity impacts on road users and residential and business areas are anticipated to occur over a 12-month period.
- A temporary reduction in the local amenity could lead to reduced use and enjoyment of nearby community facilities and services, such as sports venues, open spaces, and outdoor areas near the Project's construction corridor.

- Most of the proposed pipeline route is in road reserves, which are unlikely to support development and land use changes. Therefore, it is unlikely that the Project will create a significant or long-term impact on existing or proposed land uses. The land would be generally returned to its previous use post-construction activities with an easement of 7 m to 10 m required to protect the pipeline for operational and maintenance requirements.
- Temporary and intermittent increase in travel time experienced along existing roads at locations intersected by the proposed construction corridor.
- The Project intercepts regionally significant industrial land within Melbourne Airport Business Park and the Tullamarine industrial area. The Project will not reduce industrial land; however, a temporary disturbance may occur to industrial uses during construction.
- Land access requirements to conduct detailed investigations and develop, construct, and operate the pipeline would result in a temporary demand on the time of the traders, landowners, and leaseholders to engage with the Project. The type of access and nature of associated activities would vary throughout the life of the Project.

The recommended measures to avoid, minimise and mitigate social impacts to residents, the community, and users of community infrastructure facilities during the Project construction phase include:

Management plans:

- Develop and implement management plans to minimise amenity impacts to communities and businesses, including Safety Management Plan (SMP), Construction Environment Management Plan (CEMP), and Dust Management Plan.
- Develop and implement Traffic Management Plans to manage potential impacts on local access during construction.
- Develop and implement a Construction Environment Management Plan (CEMP) to manage noise, vibration, visual, and air quality impacts on traders directly adjacent to the alignment, community facilities, recreation areas, and sports venues.
- Ensure the CEMP outlines a communication and engagement approach that aligns with the procedure set out in the Pipeline Consultation Plan (PCP) and allows for meaningful and consistent consultation with the community and stakeholders.
- The development of a Business Disruption Engagement Plan in line with the Victorian Small Business Engagement Guidelines should be considered.

It is anticipated that following the implementation of the Project's management plans (including SMP and CEMP) and proposed mitigation measures, the Project's construction would have minor residual social impacts on residential amenity and community facilities.

There are limited operational activities during the Project's operational phase, the risk and subsequent impact assessment found that the Project's operational activities would result in insignificant social impacts. Consequently, any potential impacts can be addressed through the SMP and an Operational Environmental Management Plan (OEMP) and no additional management measures those included in would be required during the Project's operational phase.

Further stakeholder engagement:

- Continue consultation with key stakeholders such as Australia Pacific Airports Melbourne (APAM), Department of Transport (DoT), Rail Projects Victoria (RPV), Brimbank City Council and Hume City Council to discuss expected impacts and potential mitigations.
- It is recommended to undertake trader consultation to verify and better understand potential impacts on businesses and traders near the alignment. The purpose of this consultation would be to identify the type of business, operating hours, delivery, access, and parking requirements and assess anticipated impacts during construction and operation.
- Inform traders of the critical project activities, including construction commencement and the proposed construction program, as outlined in the Pipeline Consultation Plan.

Landowner engagement:

- Inform landowners and leaseholders of the critical project activities, including construction commencement and the proposed construction program, as outlined in the Pipeline Consultation Plan.
- Establish land access and easement agreements with landowners and occupiers regarding the use of existing roads, tracks, lots, selection of new access routes, and any property-specific measures to be followed during construction and operation before any construction works commence.

1 Introduction

The Melbourne Airport Jet Pipeline Project (the Project) is a proposed new pipeline to form a direct connection between the jet fuel storage infrastructure at Melbourne Airport and the existing Altona to Somerton pipeline. The pipeline would be 350mm in diameter and approximately 6.7 km in length.

Viva Energy Australia (Viva Energy) is the proponent of the Project. Viva Energy is one of Australia's leading energy companies and supplies approximately a quarter of the country's liquid fuel requirements. The Project has been designed to support the growing fuel needs at Melbourne Airport.

The key objectives of the Project are to:

- help meet the increasing demand for jet fuel and support future growth at Melbourne Airport
- increase the supply security of jet fuel which will contribute to the Victorian state economy
- reduce the reliance on road transport for jet fuel supply with fewer trucks required to deliver fuel to the airport.

1.1 Purpose

The purpose of this report is to identify and assess likely social impacts arising from the Project and propose mitigations to the expected effects. This assessment, in conjunction with other technical studies, will inform the preparation of the Pipeline Licence Application to the Victorian Minister for Energy, Environment and Climate Change for consideration during the planning approvals process.

The report uses recognised social impact assessment methodology, including describing the social baseline, identifying social impacts, considering options for management, mitigation, and monitoring of impacts.

1.2 Scope

In the context of this report, an impact is considered a change to the existing situation that can be attributed directly or indirectly to the Project. Impacts can include both adverse changes, and beneficial outcomes.

This report documents the process and outcomes of the SIA for the Project. Specifically, this report:

- Describes existing social conditions, values and characteristics of local communities and stakeholders to broaden the understanding of the social environment and establish a baseline to measure potential impacts.
- Identifies and assess the potential social impacts and risks associated with the Project.
- Focusses on impact on the local community, the broader airport users, and business park stakeholders.
- Recommends mitigation strategies to manage the identified risks.

1.3 Assumptions and limitations

The following list outlines the limitations and assumptions made in the preparation of this assessment:

- This assessment has been prepared based on publicly available information only.
- No consultation has been undertaken with key stakeholders and landowners, in preparing this report. Viva Energy Australia has and will be undertaking consultation throughout the development and construction of the Project. Details of the Project are current as of March 2023.
- The audit of community facilities does not consider service provision, demand for function or fitness for purpose of individual facilities. This assessment does not investigate access to privately provided services or consider service capacity or demand.
- This assessment has been prepared as part of a suite of technical investigations. While external impacts such as changing land use, land acquisition and local traffic or economic changes may also impact on the

local community, this is not included in the scope of this report and may be addressed in other technical studies and in subsequent stages of investigation.

- Demographic profiles of the existing residential community used data from the 2016 Census of Population and Housing and the 2021 Census of Population and Housing as available.

Industrial zones and retail centres within the study area, and where possible, individual businesses that are confirmed to be currently operating in close proximity to the alignment have been identified. Due to limitations of a desktop assessment, and the availability and quality of data, this assessment does not include a comprehensive list of all individual businesses and traders in the study area. As outlined in Section 7, it is recommended to consult with traders and business to accurately capture current business details and assess anticipated impacts.

1.4 Link to other technical studies

Findings of the technical studies detailed in Table 1-1 provided evidence and informed this SIA:

Table 1-1 Link to other technical studies

Technical Studies	Relevance to this SIA
Construction Noise and Vibration Impact Assessment	Findings from the report have informed the SIA on matters relating to potential noise and vibration impacts on sensitive receptors, residential amenity and character and community infrastructure facilities.
Land Use and Planning Assessment	Findings from the report have informed the SIA on matters relating to potential impacts to landowners, community facilities and business environment.
Traffic Impact Assessment	Findings from the report have informed the SIA on matters relating to impacts arising from increase in (heavy) traffic and (temporary) closures of roads, shared user paths and pedestrian walkways.
Construction Dust Assessment	Findings from the report have informed the SIA on matters relating to potential air quality and human health impact.
Historic Heritage Desktop Assessment	Findings from the report have informed the SIA to understand any potential impacts to historical heritage which may raise community concerns.

2 Project description

The Project proposes the construction and operation of a new pipeline to form a direct connection between the jet fuel storage infrastructure at Melbourne Airport and the existing Altona to Somerton pipeline that follows the southern boundary of Tullamarine (located south of the Western Ring Road (M80)).

The pipeline would commence at a section of the Altona to Somerton pipeline located south of the Western Ring Road (M80) (near the Airport Drive exit) and link into the existing Melbourne Airport joint user hydrant installation (JUHI) facility (located at Marker Road, Tullamarine). Figure 2-1 below shows the proposed pipeline alignment.



Figure 2-1 Melbourne Airport Jet Pipeline Project location (Source: ESRI)

2.1 Project overview

The proposed pipeline comprises approximately 6.7 km of buried jet fuel pipeline. The pipeline will be buried for its entire length to a minimum depth of 1200mm below ground level (bgl). Areas where the pipeline will be buried at a greater depth include under existing roads along the alignment, under Steele Creek North and in several other sections to be constructed using horizontal directional drilling (HDD).

At a minimum, pipeline marker signs will be installed along the pipeline route at each change of direction, at fence lines, at foreign service crossings, and both sides of road, rail, and creek crossings.

The Project will require a 20 m wide construction corridor (Right of Way (ROW)) (where feasible), and a permanent final easement of 7 - 10 m as provided for under the *Pipelines Act 2005* (Vic) for operation.

2.2 Project components

The Project comprises the following key operational components:

- A new pipeline to transport jet fuel. The pipeline will be approximately 6.7 km in length and fully buried for its entire length to a minimum depth of 1200 mm bgl) with a minimum 7 to 10 m permanent final easement.
- Pig launcher and receiver sites located at each end of the pipeline. These are used to launch instruments during initial commissioning of the pipeline to clear any debris or water and during operation to record any defects in the pipe.
- An impressed current cathodic protection system (ICCP) to protect the pipe. The ICCP is a system which comprises anode beds and power supply.
- Inlet and outlet metering station which provides flow analysis for the leak detection system.

2.3 Pipeline construction

2.3.1 Construction areas

Before construction can commence, work areas will be set up. Work areas include the construction ROW, HDD entry and exit sites, temporary laydown areas for equipment, and construction material stockpiles. The following sections outline the types of construction areas required for the Project.

Right of way (ROW)

The construction area will, where feasible, comprise a 20 m wide ROW corridor along the pipeline alignment. The activities and facilities within the ROW would include access tracks and heavy vehicle and machinery turn around areas. The construction ROW will be clearly identified and fenced off where required to prevent unauthorised access into the construction corridor.

HDD and thrust boring entry/exit locations

HDD and thrust boring will require construction areas of approximately 70 m by 70 m for exit locations and 70 m by 90 m for entry locations. These broader construction areas will also provide for the site offices and temporary laydown areas.

Entry locations require this area for truck access and movements, site offices and facilities, pipe stringing, HDD machine, HDD drill rod storage, HDD power pack, generators, drilling mud pump, spoil stockpiling and plant movements required to load and remove excess spoil.

Exit locations require area for truck access and movements, site offices and facilities, HDD drill rod storage, a winch, and a winch power pack.

Temporary laydown and material stockpiling areas

Material excavated during construction of the pipeline is expected to be either stockpiled on the side of the trench or stockpiled within the HDD and thrust boring entry/exit locations.

Laydown and pipe stockpiling locations will need an area of approximately 120 m by 65 m. Pipe will be stacked in ten 2 m high and 5 m wide bundles, with each bundle containing 40 lengths of 18 m pipe.

2.3.2 Construction methods

Pipeline construction is proposed to commence in Q3 of 2024 and the pipeline is proposed to be operational by Q3 of 2025. This is subject to Viva Board approvals, land access, finalisation of design, award of Contracts and procurement timeframes and is subject to the grant of project approvals within certain timeframes.

Works are proposed to be undertaken between 7am to 6pm Monday to Friday and between 9am and 1pm on Saturdays. When constructing using HDD, it is proposed that horizontal boring will occur for 24 hours a day for the duration of the HDD works. Once these activities are complete, works will revert back to normal hours.

The Project will use a combination of HDD, thrust boring and open cut trenching as the primary construction methods used to install the pipeline. The following sections outline the proposed construction methods for the Project.

Open cut trenching

Trenching is anticipated to be required for approximately 2.825 km of the alignment. It will be completed using specialised rotary trenching machines and/or excavators to dig a 1 m wide trench to a minimum depth

of 1.2 m. If rock is encountered during trenching, a rock breaking process such as the use of rock saws/hammers and/or blasting may be required to excavate the trench.

Horizontal directional drilling

HDD is a trenchless construction method used in more complex or environmentally sensitive areas. Specialist operators drill a hole beneath the surface at a shallow angle, and then pull a welded length of pipe through the hole without disturbing the surface. These operations are carefully planned, are highly engineered and undertaken to minimise disturbance to properties and roads in environmentally sensitive areas or to address construction issues.

Approximately 3.725 km of HDD is required for the Project. HDD will be undertaken at the following locations:

- Under the Western Ring Road (M80), Steele Creek and Tullamarine Park Road (a total length of approximately 875 m).
- Section along airport drive and underneath Sharps Road (a total length of approximately 175m)
- Section along Airport Drive and underneath Link Road (a total length of approximately 1900 m)
- Under Mercer Drive (a length of approximately 50m)
- Under the Tullamarine Freeway (M2) (a length of approximately 125 m)
- Under Quarry Road and an area of stockpiled fill material at the northern section of the pipeline alignment (a total length of approximately 600 m).

HDD requires the excavation of an exit pit, approximately 3m x 3m x 3m, on the opposite side to where the drilling rig is set up to contain drilling fluids used in the drilling process. A smaller entry pit approximately half the size of the exit pit is excavated on the drilling rig side. These pits will be located in the larger HDD entry and exist site locations.

Thrust boring

Thrust boring is another trenchless construction method that involves simultaneously jacking a pipe horizontally through the ground while removing the soil by rotating auger. Thrust boring is ideal for developed areas, protected areas, and other crossings where excavations are either undesirable or unfeasible, such as underneath main roads.

Approximately 50 m of thrust boring will be required for the Project. Thrust boring will be undertaken under the southern entrance to the Value Car Park, adjacent to Value Park Bus Stop G (a length of approximately 50m).

2.4 Operation

When commissioned, the pipeline would be owned and maintained by Viva Energy. A final easement of 7 to 10 m will be required for operational and maintenance requirements of the pipeline. Following the reinstatement of land as part of the pipeline construction, the land would be generally returned to its previous use. Excavating or erecting permanent structures or buildings over the underground pipeline would be prohibited in accordance with the *Pipelines Act 2005* (Vic) and pursuant to easement agreements with landowners.

The Project has been designed with an operational life of 40 years. When in operation, instruments (metal loss detection tool) will be used to record any defects in the pipe (wall thickness reduction or other defects such as dents caused by third party interference). This will occur initially every 10 years and then as the pipeline ages it may be necessary to run the metal loss detection tool ever 5 years.

Negligible volumes of traffic are expected during operation.

3 Legislation

The legislation relevant to this SIA is summarised in Table 3-1. Refer to the Project Land Use and Planning Assessment for further information.

Table 3-1 Relevant legislation

Legislation	Description	Relevance to this SIA
<p><i>Pipelines Act 2005 (Vic)</i> Pipelines Regulations 2017 (Vic)</p>	<p>The <i>Pipelines Act 2005 (Vic)</i> is the primary Act governing the construction and operation of pipelines in Victoria. It is accompanied by the Pipelines Regulations 2017.</p> <p>Section 3 of the Pipelines Act states the objectives of the Act, including:</p> <p>e) to protect the public from environmental, health and safety risks resulting from the construction and operation of pipelines.</p> <p>Regulation 8 of the Pipelines Regulations requires that an application for a licence contains:</p> <p>(vii) identification of the environmental, social and safety impacts arising from the proposed pipeline and pipeline operation, based on the surrounding current land uses and reasonably foreseeable future land uses</p> <p>(ix) outline of the measures to be undertaken to control, mitigate and manage identified impacts arising from the proposed pipeline and pipeline operation</p> <p>Under Section 49 of the Act, the Minister for Energy is required to assess the relative impacts of a proposed pipeline and its environmental, social, economic and safety impacts.</p>	<p>A Licence to Construct and Operate will be required and will need to be approved by the Minister for Energy.</p> <p>The SIA considers the potential adverse impacts of the Project as discussed in Section 6 Impact assessment and provides recommendations to address impacts through construction management plans and engagement with impacted communities and stakeholders.</p>

4 Methodology

4.1 Overview

This assessment was prepared using the following methodology.

- Review of relevant state and local government policy and strategic documents to understand the current role and vision for the local area as well as preferred future directions.
- Demographic profiling of current residential communities within the study area using publicly available data and indicators from the Australian Bureau of Statistics (ABS) 2016 and 2021 Census of Population and Housing.
- Review of the local area access network including roads, public transport routes and pedestrian and cycle access to understand how areas are connected and how this influences accessibility for local communities.

- A desktop audit of community facilities¹, public services and places of special interest drawing on council's database to identify likely locations of community activity, and the distribution of services and facilities that are likely to be accessed by communities within the Project area.
- A desktop audit of industrial zones and retail centres drawing on government and council databases to identify likely locations of businesses and traders.
- Development of a relevant assessment framework which considers the existing local context and possible impacts generated by the Project.
- Scoping and identification of key issues based on the knowledge of the Project team regarding the social impacts of pipelines
- Assessment of potential impacts on local communities against the assessment criteria developed in response to Pipelines Act. Recommendation of management and mitigation measures to address impacts identified.
- The finalised measurement length (ML) of the Project is a 150m buffer either side of the alignment.
- The Australian Standard AS2885 Pipelines—Gas and liquid petroleum (2012) definition on sensitive use locations is only considered in relation to safety impacts. A broader definition of sensitive community and business receptors as set out in Section 4.3 is used to identify community and business impacts.

4.2 Identification of the study area

The following factors were considered in determining the SIA study area. They include, but are not limited to:

- areas that may be affected by vibration, noise, dust, and visual changes
- areas that may be affected by access disruption, transport, and land use changes
- catchment areas that may potentially supply goods and services, community infrastructure facilities, and workforce to the Project.

To capture the socio-economic impacts of the Project the study area was defined as:

- The ABS State Suburb (SSC) Airport West, Keilor Park, Tullamarine, and Westmeadows and Statistical Area Level 1 for Melbourne Airport (21005124801). Potential impacts resulting from the Project are expected to be primarily concentrated in the suburbs of Melbourne Airport, Tullamarine, and Westmeadows where construction will take place and the neighbouring suburbs of Airport West and Keilor Park. The study area is shown in Figure 4-1.
- Community infrastructure facilities and dominant community features within proximity to the Project have been used to assess the risk that these can be influenced by changes in noise, air quality, visual amenity, and land use. An area of approximately 1 km from either side of the pipeline has been used however the Measurement Length (ML) determined by the Maximum Allowable Operating Pressure (MAOP) and the finalised ML is a buffer of 150 meters either side of the pipeline.
- This assessment also considers potential impacts on individuals working at Melbourne Airport and surrounding industrial areas and users of Melbourne Airport located outside the study area that the Project may impact due to disruption of access to services within the study area.

4.3 Sensitive receptors

This report acknowledges the definition of sensitive uses set out in the Australian Standard AS2885 Pipelines—Gas and liquid petroleum (2012) which states:

Sensitive use location class shall be assigned to any portion of pipeline where there is a sensitive development within a measurement length. It shall also include locations of high environmental sensitivity to pipeline failure.

¹ The Victorian Government recognises that community infrastructure facilities as vital to 'creating healthy community, supporting inclusion, and enhancing the wellbeing of local residents (Victorian Government, 2010).

The sensitive use location class identifies land where the consequences of a failure may be increased because it is developed for use by sectors of the community who may be unable to protect themselves from the consequences of a pipeline failure. Sensitive uses are defined in some jurisdictions, but include schools, hospitals, aged care facilities and prisons. Sensitive use location class shall be assigned to any portion of pipeline where there is a sensitive development within a measurement length. It shall also include locations of high environmental sensitivity to pipeline failure.

As identified in the section above, the ML for the Project is a buffer of 150 meters either side of the pipeline.

To ensure a holistic approach in understanding impacts to stakeholder and community impacts, which are likely to occur outside of the ML, this report defines sensitive receptors as locations where land use is of sensitive nature, and where there may be a particular focus on protecting use for human health and wellbeing, local amenity and aesthetic enjoyment.

Sensitive receptors include, but are not limited to:

- land used for residential use
- educational facilities
- health and community facilities
- public facilities and services
- recreational areas.

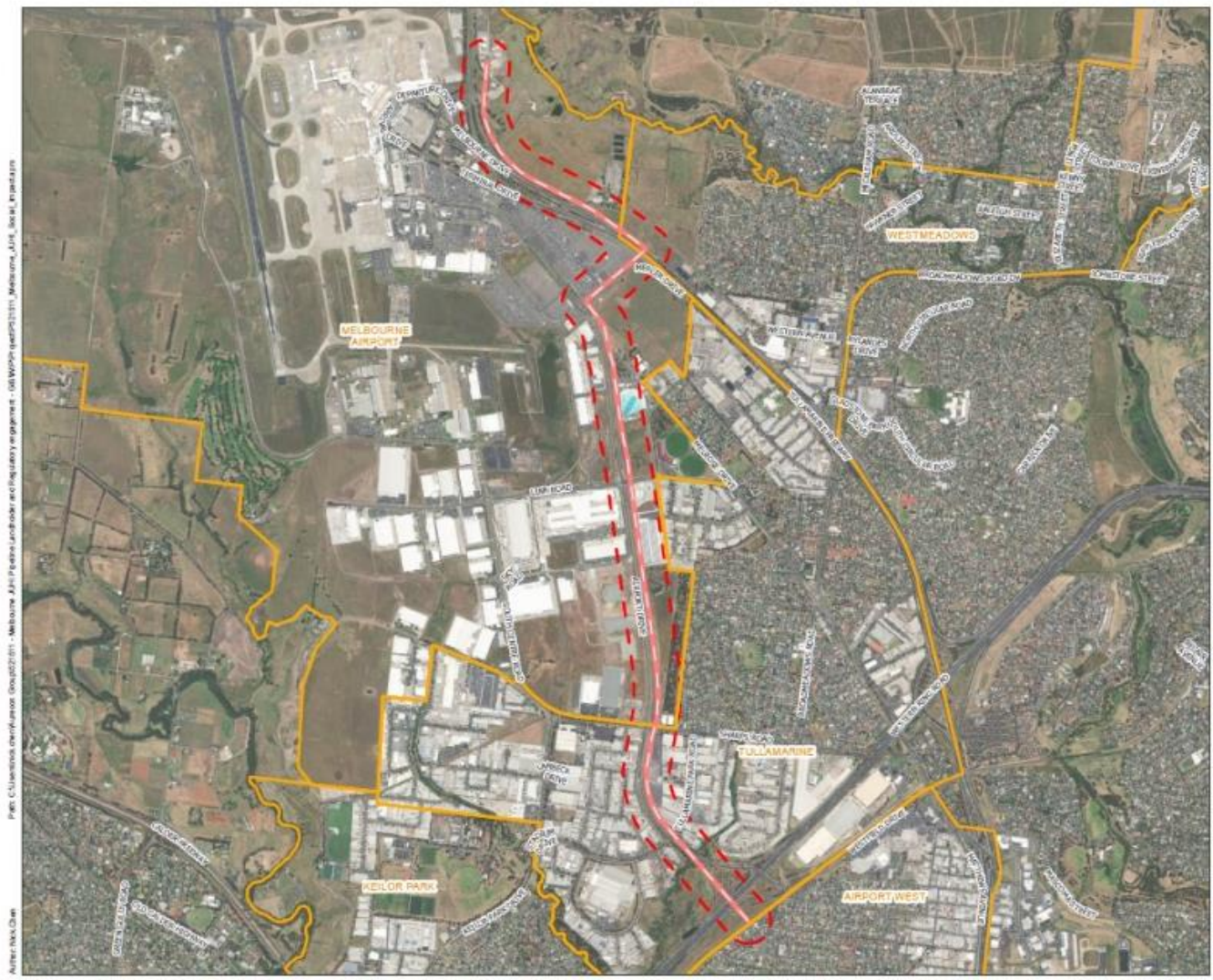
Sensitive business receptors are any location registered as a commercial or retail premise where routine or normal activities occurring at reasonably expected times would experience adverse impact(s) from the Project. These are businesses where the occupants, visitors, and workforce are more susceptible to adverse effects from the Project. This is determined by their proximity to the Project and construction areas as well as the nature of the business and their operating requirements. Businesses that provide services to the community and contribute to community wellbeing (i.e. hotels or recreational services), or have specific access requirements (i.e. warehouses) are more likely to be considered a sensitive receptor than businesses of industrial nature with no specific requirements.

Adverse impacts could include environmental or amenity nuisance issues such as noise, vibration, dust, light and odour, access impacts, and parking areas impacts, potentially impacting the traders, business staff or visitors to the establishment or the way the business operates.

4.4 Non-sensitive receptors

Non-sensitive community receptors are community facilities, residential areas or recreational areas. They may be located outside the ML and their definition is primarily influenced by the proximity to the Project. They are unlikely to experience any impacts during project construction and operation.

Non-sensitive business receptors are business and traders that are unlikely to experience adverse impacts and may be located outside the ML. The definition is primarily determined by their proximity to the Project and construction areas as well as the nature of the business and their operating requirements.



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- Legend**
- MJP Pipeline
 - 150m Buffer from Alignment
 - Locality Boundary

Source:
 ESRI (2022)
 VisMap (2022)
 Aurecon (2022)

Date: 14/09/2022 Version: 1

Melbourne Jet Pipeline
Study Area

Figure 4-1 Social impact assessment study area (Source: ESRI)

5 Existing conditions

This section provides an analysis of available socio-economic data, including demographic and disadvantage indicators. ABS State Suburb (SSC) level data has been used for Airport West, Keilor Park, Tullamarine, and Westmeadows and Statistical Area Level 1 for Melbourne Airport. ABS 2021 census data has been used where available, and instances where ABS 2016 has been used has been specified. Data for Greater Melbourne has been provided for comparison.

5.1 Community profile

A preliminary demographic profile has been undertaken using available data from the ABS 2016 and 2021 Census of Population and Housing and predominant population characteristics are presented below. Different datasets have been utilised to gain a more holistic understanding of the local community and social context. The demographic information contributes to broaden the understanding of existing conditions and can indicate factors such as vulnerability that need to be considered.

The demographics outlined in the tables below indicate the following:

- There is a larger percentage of senior (70 to 84) aged population in the study area in comparison to Greater Melbourne.
- The median weekly household income in the study area is well below the \$1,901 of Greater Melbourne, with Tullamarine having the lowest median weekly household income at \$1,404.
- There is a lower percentage of population without a bachelor or higher degree and larger percentage of population without a qualification in comparison to Greater Melbourne.
- There is a higher number of blue-collar workers such as technicians and trade workers, machinery operators and drivers as well as clerical and administrative workers in comparison to Greater Melbourne.
- A higher percentage of population owns their home in comparison to Greater Melbourne, in particular in the suburbs of Tullamarine and Westmeadows.

5.1.1 Demographics

The Tables and Figures below outline the demographics within the study area by identifying population and age, level of education, household types, type of employment and cultural diversity.

Population and age

As outlined in Table 5-1, Keilor Park has the highest population and has the highest median age across the study area. Figure 5-1 highlights that the study area has a higher percentage of Seniors (70 – 84) in comparison to greater Melbourne.

Table 5-1 Population and median age

Indicator	Melbourne Airport SA1	Airport West	Keilor Park	Tullamarine	Westmeadows	Greater Melbourne
Population	126	8,540	2,684	6,578	6,506	
Median age	38	39	42	38	40	37

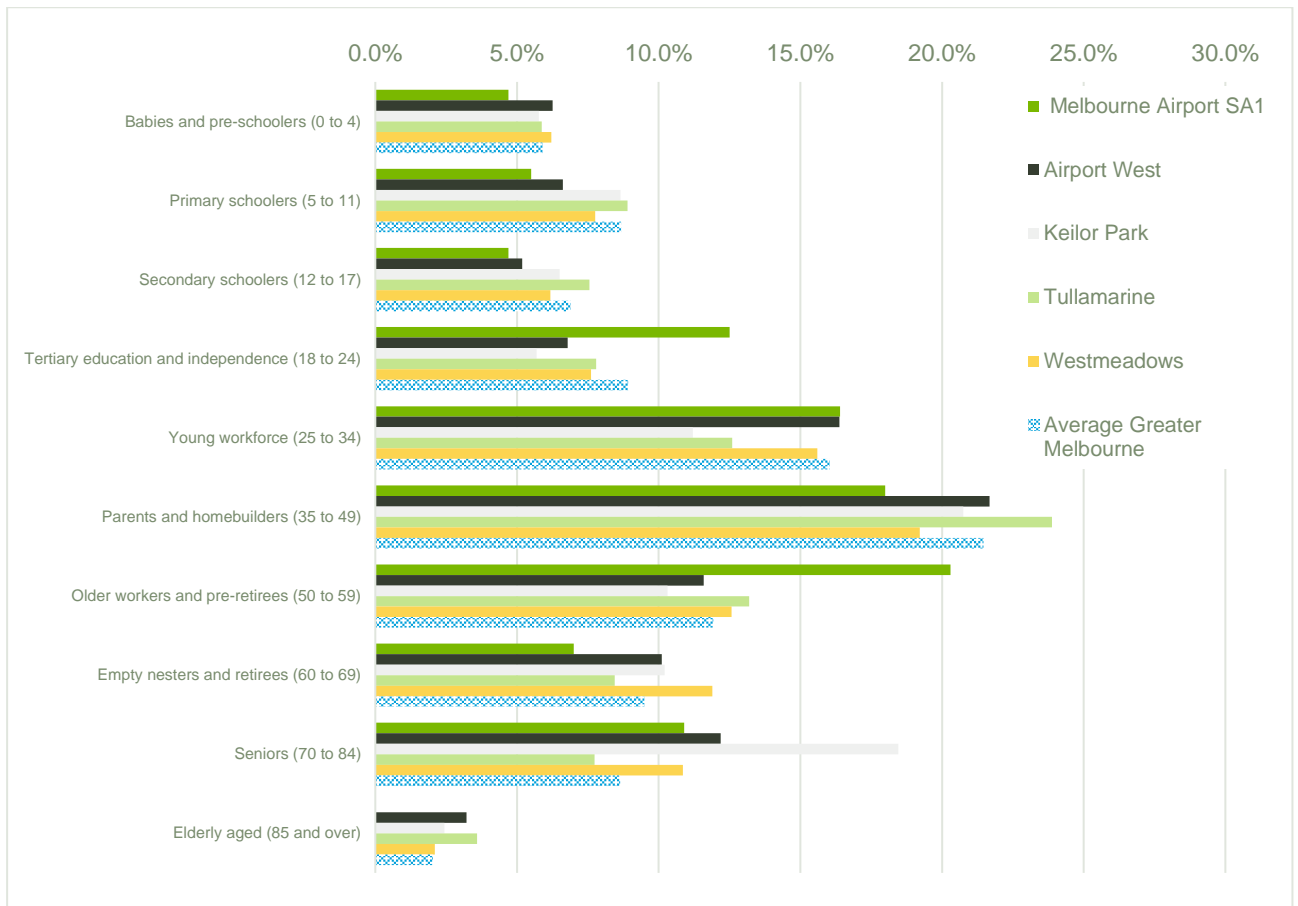


Figure 5-1 Service age groups (2016 & 2022) (Source: Census, 2016, 2021 – Australian Bureau of Statistics²)

Employment

Table 5-2 and Figure 5-2 below provide an overview of median weekly household income, unemployment rate and occupations.

Table 5-2 highlights that the median weekly household income is noticeably lower in the study area in comparison to Greater Melbourne. In addition, in terms of occupations there is a lower percentage of professionals and managers and a higher percentage of technicians and trade workers and clerical and administrative workers.

Table 5-2 Median income and unemployment rate (2016 and 2022)

Indicator	Melbourne Airport SA1	Airport West	Keilor Park	Tullamarine	Westmeadows	Greater Melbourne
Median weekly household income	\$1,437	\$1,761	\$1,468	\$1,404	\$1,564	\$1,901
Unemployment rate	Data unavailable	4.8% ³	6.8%	6.5%	6.5%	6.8% ⁴

Source: Census, 2016, 2021 - Australian Bureau of Statistics

² Airport West is 2016 Census data

³ 2016 Census data

⁴ 2016 Census data



Figure 5-2 Occupations (2016) (Source: Census 2016 - Australian Bureau of Statistics⁵)

Education

Figure 5-3 provides an overview of the highest level of education. The percentage of the population in the study area without a qualification is noticeably higher when compared to greater Melbourne.

Data for Melbourne Airport SA1 was not available.

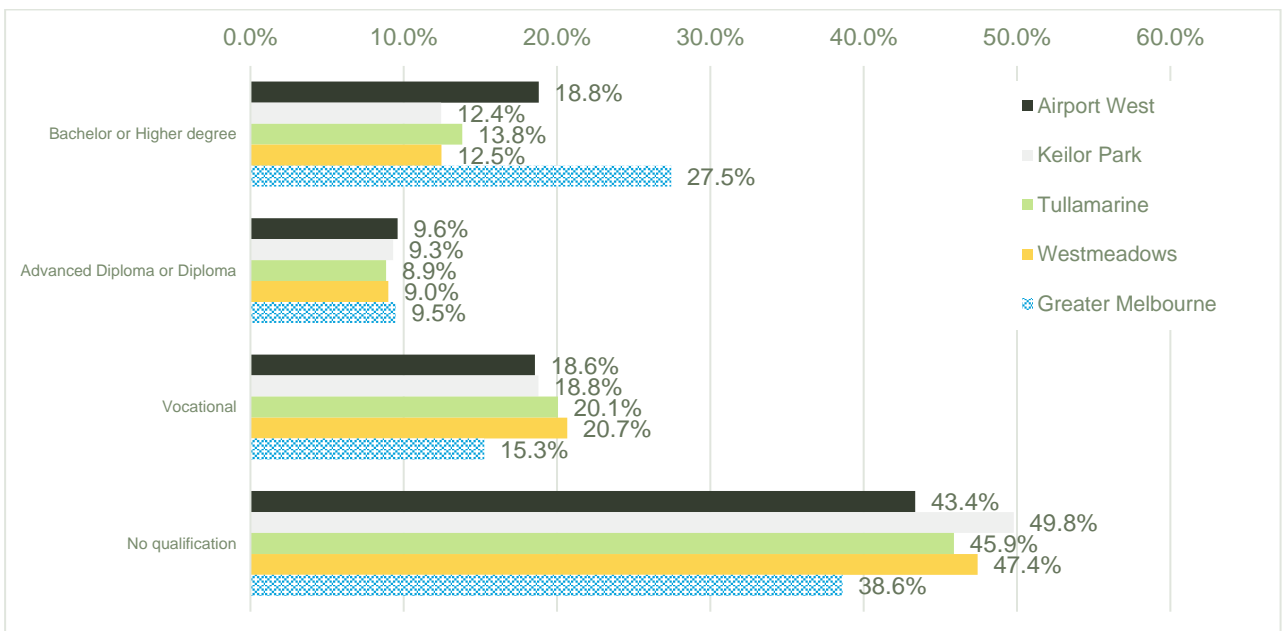


Figure 5-3 Highest level of education (2016) (Source: Census 2016 - Australian Bureau of Statistics⁶)

⁵ Data unavailable for Melbourne Airport SA1- 21005124801

⁶ Data unavailable for Melbourne Airport SA1 - 21005124801

Households

Figure 5-4 and Figure 5-5 below provide an overview of household types and housing tenure in the study area.

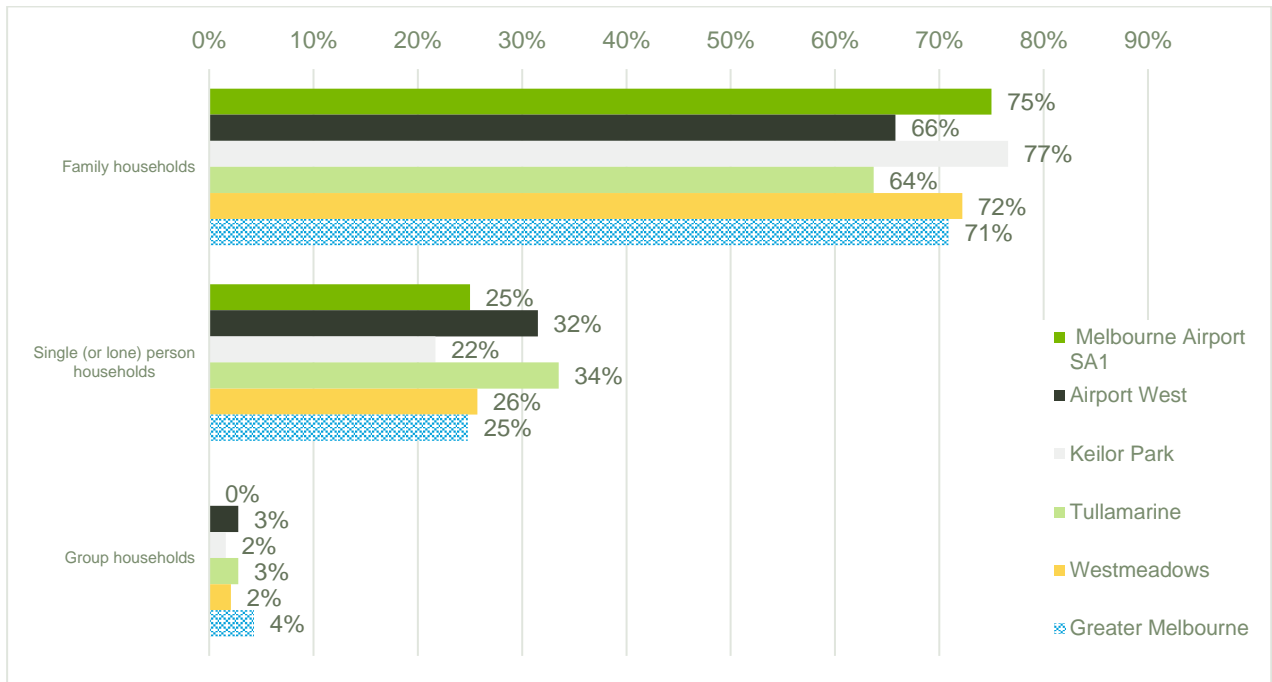


Figure 5-4 Household types (2021) (Source: Census 2021 - Australian Bureau of Statistics)

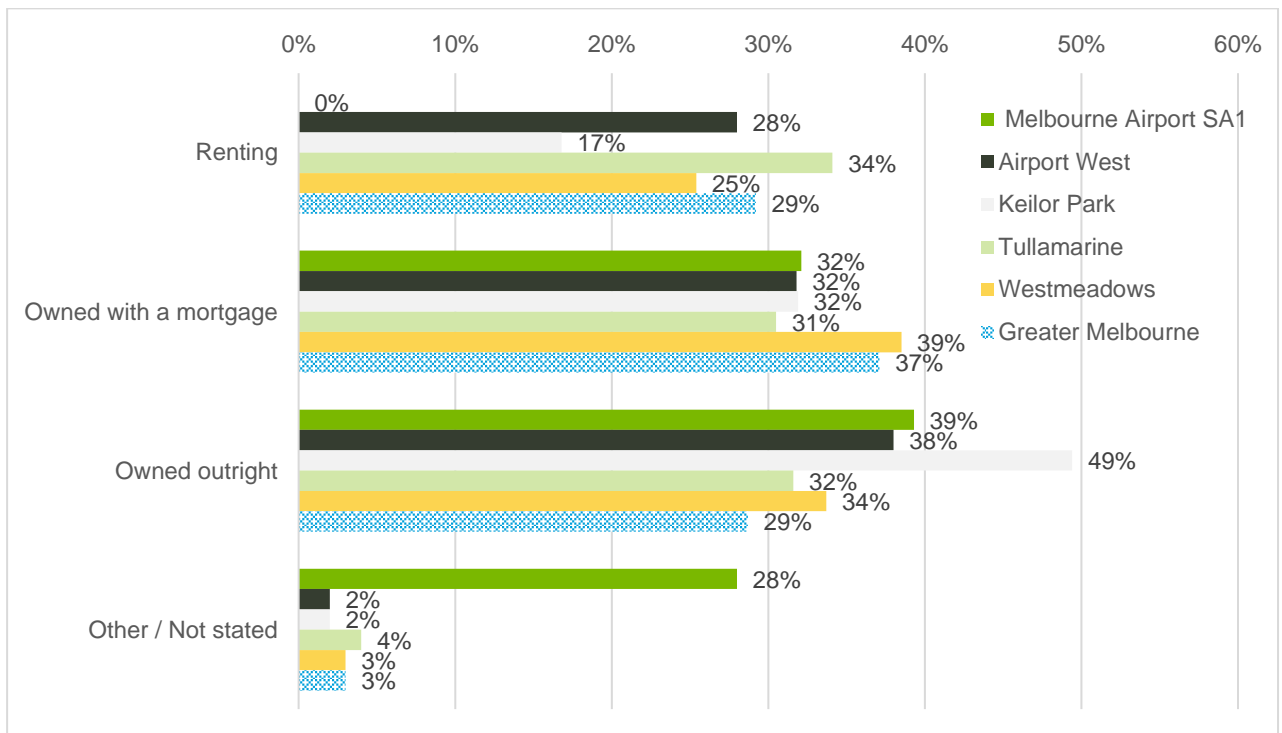


Figure 5-5 Housing tenure (2021) (Source: Census 2021 - Australian Bureau of Statistics)

Diversity

Table 5-3 below highlights cultural diversity within the study area.

Table 5-3 Diversity (2021)

Indicator	Melbourne Airport SA1	Airport West	Keilor Park	Tullamarine	Westmeadows	Greater Melbourne
Aboriginal or Torres Strait Islander	Data unavailable	0.6%	0.3%	0.6%	0.8%	0.7%
Speaks a language other than English at home	Data unavailable	31.9%	42.7%	37.7%	34.2%	37.7%

Source: Census 2021 - Australian Bureau of Statistics

5.1.2 Disadvantage

An analysis of the Socio-Economic Indexes for Areas (SEIFA) 2016 data has been undertaken to understand the level of disadvantage within the communities near the Project area. This is shown in Table 5-4.

The lower the SEIFA score, the higher the disadvantage. The scoring system has a mid-point of 1,000; scores above 1,000 indicate less disadvantage and those below 1,000 indicate more disadvantage.

The SEIFA scores are divided into deciles. The lowest scoring 10% of areas are given a decile number of 1 up to the highest 10% of areas which are given a decile number of 10. The lower the SEIFA decile the higher the disadvantage.

Table 5-4 Socio-economic indexes for areas (SEIFA) (2016)

Indicator	Melbourne Airport SA1	Airport West	Keilor Park	Tullamarine	Westmeadows	Greater Melbourne
SEIFA Score	1061	1021	1000	963	973	1021
Decile	7	6	5	3	4	N.A.

Source: Census 2016 - Australian Bureau of Statistics

The majority of the suburbs within the study area have a score higher than 1,000 indicate a lower level of disadvantage. However, the suburb of Tullamarine where construction activities will take place, as well as the neighbouring suburbs of Westmeadows and Keilor Park, with a low decile score indicated a high level of disadvantage within these communities.

The Community Profile demonstrates that Study Area includes vulnerable communities as there are high levels of disadvantage, higher percentage of elderly community members and lower levels of median household income. These vulnerable groups are likely to be more sensitive to impacts arising from the Project.

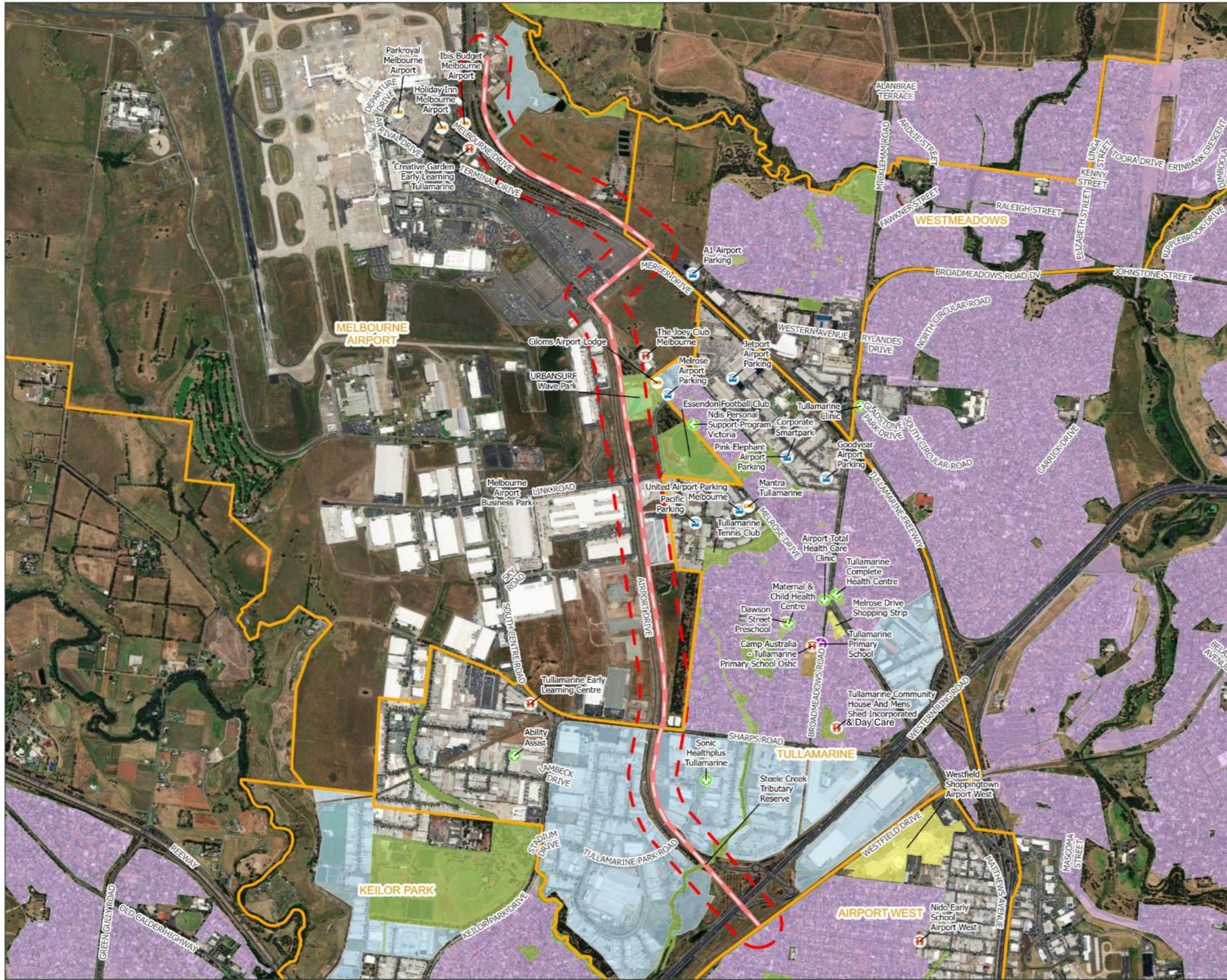
5.2 Social infrastructure and community resources

For the purposes of this assessment, community resources and social infrastructure are defined as services or organisations that support health, education and childcare, community support and culture development, sport and recreation, and emergency services.

This section outlines social infrastructure and community resources which serve individuals and groups who live near, or visit locations potentially affected by the Project.

As the land uses of the Project area and immediate surroundings is predominantly industrial, there is relatively limited availability of social infrastructure. Figure 5-6 provides an overview of the social infrastructure and business environment within the study area.

Path: C:\Users\nick.chen\Aurecon Group\521511 - Melbourne JUHI Pipeline Landholder and Regulatory engagement - GIS\WIP\Project\521511_Melbourne_JUHI_Social_Impact.aprx
 Author: Nick Chen



Legend

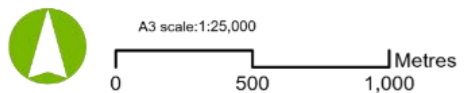
- Childcare Centres
- Schools
- Health Services
- Parking
- Hotel
- MJP Pipeline
- 150m Buffer from Alignment
- Locality Boundary
- Residential Zones
- Industrial Zones
- Reserve & Sport Facility
- Education Centre
- Commercial Facility
- Community & Recreational Resource

Notes:

Source:
 ESRI (2022)
 VicMap (2022)
 Aurecon (2022)

Date: 14/09/2022

Version: 1



Job No: 521511
 Coordinate System: GDA 1994 MGA Zone 55

Social Impact - Overview

Figure 5-6 Social infrastructure and business environment

Table 5-5 Schools within study area

Asset	Location	Approximate distance from pipeline alignment /laydown area
Tullamarine Primary School	Tullamarine Primary School, 37-39 Broadmeadows Rd, Tullamarine VIC 3043	1000m

Table 5-6 Childcare and kindergartens within study area

Asset	Location	Approximate distance from pipeline alignment /laydown area
The Joey Club Melbourne - Childcare Centre/ KU Children's Services	450 Melrose Dr, Melbourne Airport VIC 3045	Car park is approximately 100m, the facility is approximately 160m from the alignment
Creative Garden Early Learning Tullamarine	16-20 Gowrie Park Drive Melbourne Airport	170m
Tullamarine Early Learning Centre	189 S Centre Rd, Tullamarine VIC 3043	800m
Dawson Street Preschool	27A Dawson St, Tullamarine VIC 3043	975m
Nido Early School	64 Parer Rd, Airport West, VIC 3042	1000m

Table 5-7 Health services within study area

Asset	Location	Approximate distance from pipeline alignment /laydown area
Sonic HealthPlus Tullamarine	1/35-37 Tullamarine Park Rd, Tullamarine VIC 3043	250m
NDIS Personal Support Program Victoria	360 Melrose Dr, Tullamarine VIC 3043	350m
Ability Assist	1/4-6 Commercial Ct, Tullamarine VIC 3043	850m
Maternal & Child Health Centre	27 Dawson St, Tullamarine VIC 3043	975m
Airport Total Health Care Clinic	8 Cherie St, Tullamarine VIC 3043	1050m
Tullamarine Complete Health Centre	84-86 Mickleham Rd, Tullamarine VIC 3043	1120m

Table 5-8 Sports and recreation clubs within study area

Asset	Location	Approximate distance from pipeline alignment /laydown area
Essendon Football Club	275 Melrose Dr, Melbourne Airport VIC 3045	200m
Tullamarine Tennis Club	69 Catherine Ave, Tullamarine VIC 3043	500m
Keilor Little Athletics Centre	Stadium Dr, Keilor Park VIC 3042	870m
Keilor Park Cricket Club	Stadium Dr, Keilor Park VIC 3042	900m
Tullamarine Swimming School	7 Coventry St, Tullamarine VIC 3043	1500m

Table 5-9 Green and recreational areas within study area

Asset	Location	Approximate distance from pipeline alignment /laydown area
Steele Creek Tributary Reserve	Barrie Rd, Tullamarine, Melbourne, Victoria, 3043,	The pipeline crosses through the Reserve, the access track is approximately 180m from the alignment.
Fisher Grove Reserve	32 Fisher Grove, Tullamarine VIC 3043	270m
Tullamarine Linear Reserve	72A-74A Sharps Rd, Tullamarine VIC 3043	550m
Leo Dineen Reserve	60 Spring St, Tullamarine VIC 3043	500m
Trade Park Reserve	Catherine Ave, Tullamarine, Melbourne, Victoria, 3043,	500m
Keilor Park Recreation Reserve	Stadium Dr, Keilor Park VIC 3042	900m

Table 5-10 Community groups and facilities within study area

Asset	Location	Approximate distance from pipeline alignment /laydown area
Tullamarine Library	58 Spring St, Tullamarine VIC 3043	500m
Tullamarine Public Hall	60 Spring St, Tullamarine VIC 3043	500m
Ramacca Social Club	30 Barrie Rd, Tullamarine VIC 3043	650m
Tullamarine Community House	30 Carol Grove, Tullamarine VIC 3043	1000m

As identified in the table above a range of community facilities are located within the study area and in close proximity to the pipeline alignment, however the Joey Club Melbourne childcare centre and Steele Creek Tributary reserve are the only locations that fall within the ML. The Project and in particular the construction phase may pose a risk to community amenity, enjoyment and access.

5.3 Housing and land

While the land uses of the Project area and immediate surroundings are predominantly industrial, there are four key residential areas within proximity to the Project as follows:

- along Parer Road South of the Western Ring Road
- east of Western Avenue in Tullamarine
- between Melrose Drive and Derby Street
- along Fisher Grove, Dawson Street and Churchill Avenue.

Title and other searches have been completed along the proposed pipeline corridor to identify potentially affected landowners and occupiers. The search results indicate that there are eight sets of landholders including:

- VicTrack
- VicRoads
- Melbourne Water
- Brimbank City Council
- Hume City Council
- Australian Pacific Airports Melbourne (APAM)

- Maizwest
- Three private landholders that own the Prima Court parcel

5.4 Access and connectivity

A number of significant roads traverse the study area, connecting people to Melbourne Airport and to the Melbourne City Business District. Key roads in the study area include:

- Calder Freeway, which connects drivers from the CityLink toll road to north regional Victoria
- Western Ring Road, which connects Greensborough (in the East) to the Hume Freeway and West Gate Freeway
- Tullamarine Freeway, connecting CityLink to Melbourne Airport.

5.5 Business environment

This section provides an overview of the business environment and key activities in the study area. It has identified industrial zones and retail centres based on publicly available information. Where possible individual business and traders who are confirmed to be currently operating in close proximity to the Project have been identified. Due to limitations of a desktop assessment, and the availability and quality of data, this assessment does not include a comprehensive list of all individual businesses and traders in the study area. As outlined in Section 7, it is recommended to consult with traders and business to accurately capture business details and anticipated impacts.

The Project is located adjacent to and within Melbourne Airport and its surrounding industrial areas which includes Melbourne Airport Business Park and the Tullamarine Industrial Area.

Melrose Drive Shopping Strip is located approximately 1500 m from the pipeline alignment. Gladstone Park Shopping Centre and Westfield Airport West are two large-scale retail centres located further to the east and south of the Project.

5.5.1 Melbourne Airport

Melbourne Airport is located within the suburbs of Melbourne Airport and Tullamarine. The Airport is a significant contributor to the local and state economies –directly supporting around 14,300 jobs and indirectly supporting around 43,000 jobs. The economic activity undertaken across the airport precinct contributes approximately \$1.47 billion a year to Victoria’s Gross State Product.

Melbourne Airport is Australia’s second busiest passenger airport. Pre-Coronavirus disease (COVID-19), Melbourne Airport serviced more than 675 flights and 102,000 passengers a day.

The Airport attracts businesses to locate around it, bringing a range of employment opportunities in the surrounding suburbs, which are currently experiencing strong population growth and not typically serviced by diverse businesses and jobs.

Business located within the airport terminal include three hotels Holiday Inn Melbourne Airport, PARKROYAL Melbourne Airport, Ibis Budget Melbourne Airport.

5.5.2 Melbourne Airport Business Park

As shown in Figure 5-7, Melbourne Airport Business Park (MABP) is located in the southern area of the Airport. It is an established Park of around 285 hectares, with more than 77 hectares of developed land providing facilities for 27 tenants. Similar to Melbourne Airport, MABP functions curfew-free and vehicles are able to access the freeway directly at all hours of the day and night.

Facilities in the park include large distribution warehouses supporting logistical operations, a manufacturer, self-storage facility, storage compounds, pet-care facility as well as Quest Melbourne Airport hotels and the Joey Club Melbourne childcare centre.

MABP also comprises sporting facilities including URBNSURF surf park and Essendon Football Club’s new training and community facility. The Essendon Football Club’s facility has recently been completed, providing two full-sized football ovals, 10,000 square metres of administration and indoor training areas, and approximately five hectares of landscaped environment.

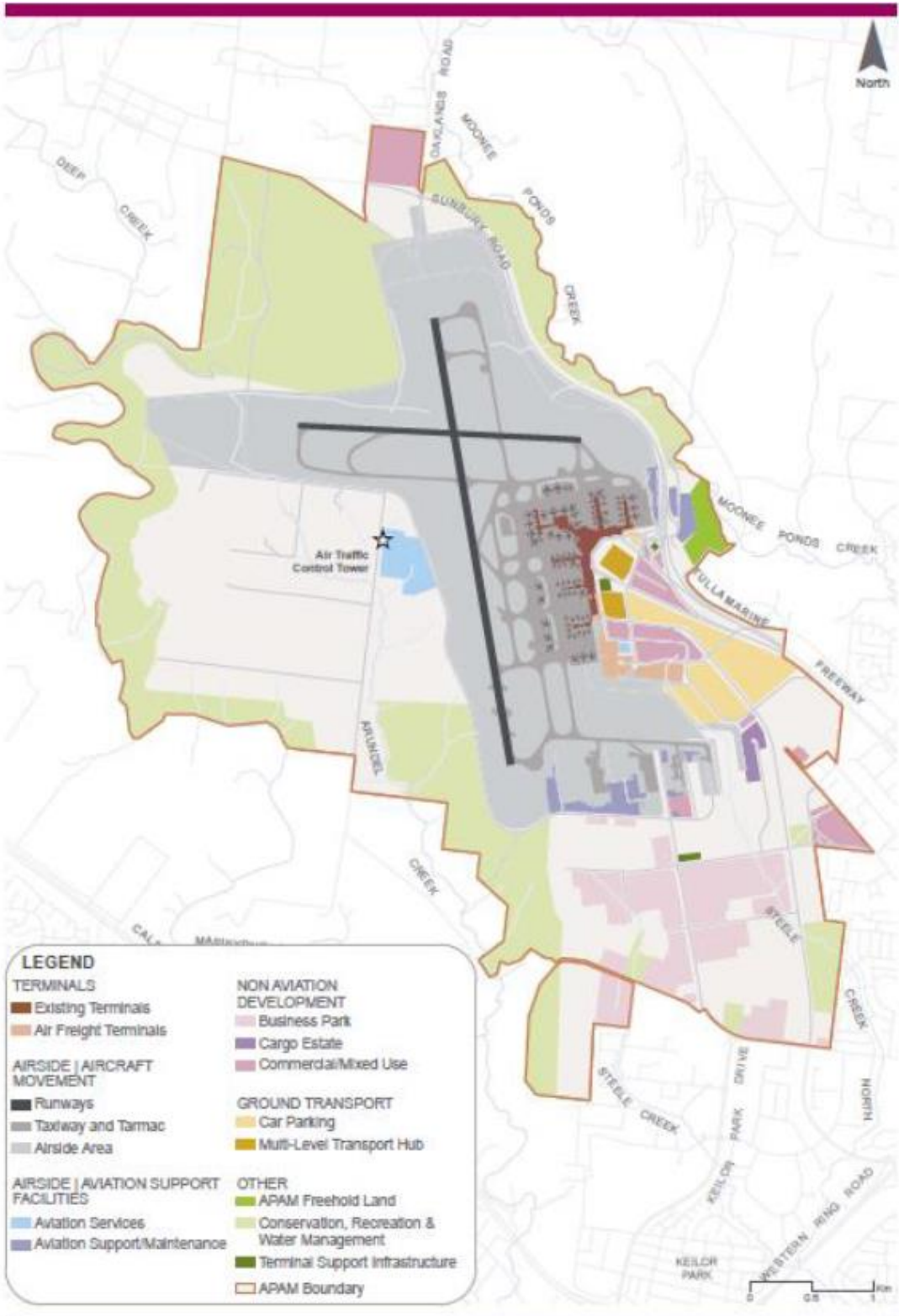


Figure 5-7 Existing Melbourne Airport site plan (Source: Melbourne Airport)

5.5.3 Tullamarine industrial area

Tullamarine industrial area is located south of Sharps Road and in between Keilor Park Drive and Melrose Drive as pictured in Figure 5-8.

The Tullamarine Industrial Area comprises 189 hectares of zoned industrial land with industry cluster strengths in food manufacturing, metal products and transport and warehousing. The Area comprises small and medium scale warehousing and logistics, food production and construction businesses.

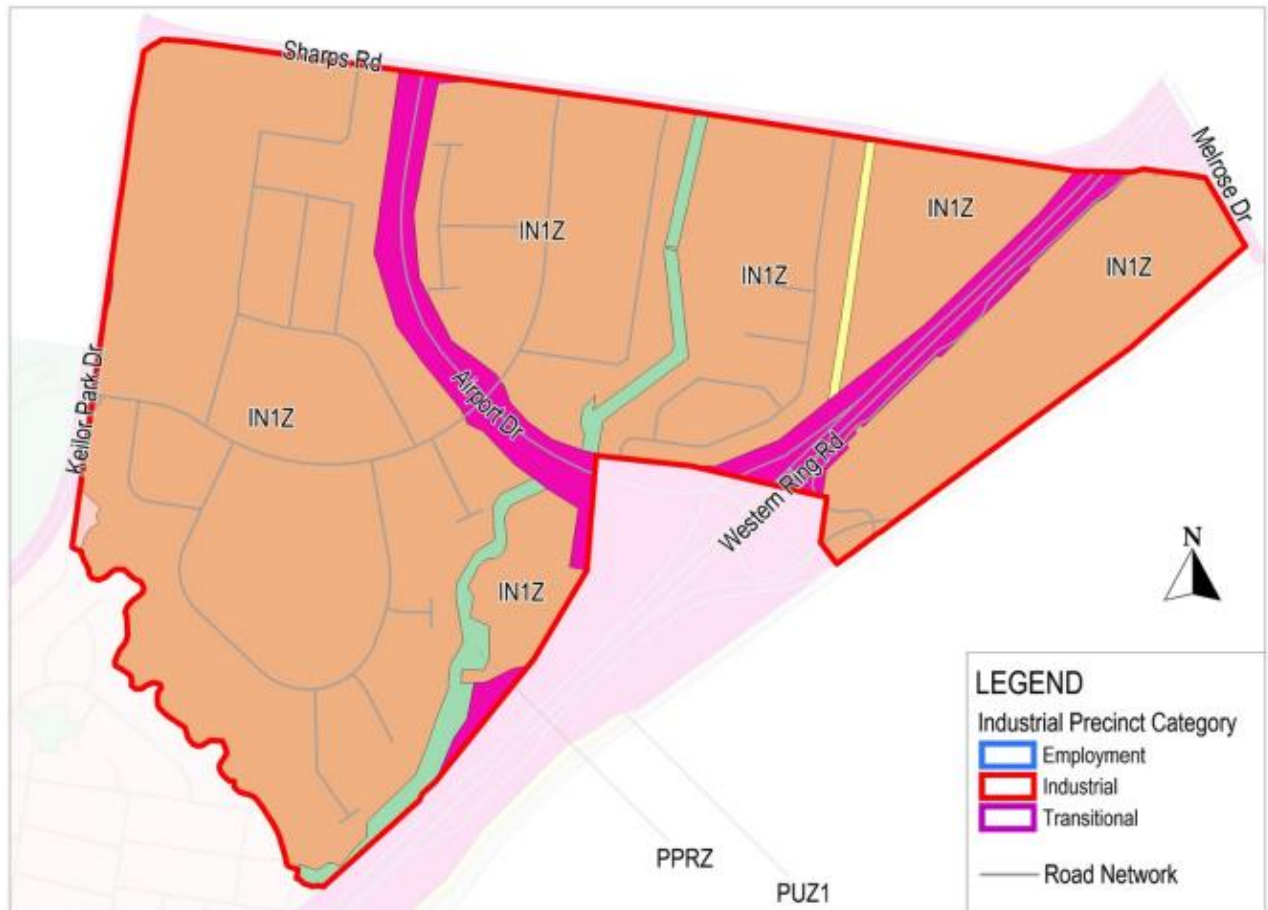


Figure 5-8 Tullamarine industrial area

5.5.4 Retail centres and hotels

There are a number of retail centres located within or nearby the study area. These include:

- Westfield Shopping Centre along Westfield Drive in Airport West, approximately 700m from the alignment, which offers more than 158 stores and other services such as cinemas and restaurants.
- Gladstone Park Shopping Centre off the Mickleham Road in Gladstone Park located approximately 1,500m from the alignment, which offers over 100 retails and professional business and services.
- Melrose Drive Shopping Strip along Melrose Drive, servicing business and employees of MABP, located approximately 1,500m from the alignment.

In addition to the retail centres, there are two hotels (located outside of Melbourne Airport and MABP), this includes Ciloms Airport Lodge located on Melrose Drive (approximately 200m from the alignment) and Mantra Tullamarine located on Trade Park Drive (approximately 650m from the alignment).

5.6 Airport users

In 2017-18 Melbourne Airport serviced 36.7 million passengers. Passengers travelling to and from Melbourne Airport have a wide variety of choice including taxi or rideshare, private or public bus, rental car or share car, or being picked up or dropped off free of charge.

Over 100,000 vehicles use the airport precinct every day. Where passengers choose to drive, they have the choice to park on-site at one of several facilities provided by the Airport, or at one of the many different off-site car parking providers.

Mode of transport to/from Melbourne Airport is outlined in Table 5-11 below.

Table 5-11 Mode of transport to/from Melbourne Airport

Mode of Transport	Domestic Flights	International Flights
Taxi	13%	15%
Uber	6%	4%
Bus/coach/shuttle	16%	14%
Skybus	10%	9%
Nearby Car Park	3%	4%
Limousine/Personal Driver	2%	3%
Melbourne Airport Parking	7%	5%
Car rental	3%	1%
Drop off / Pick up	39%	43%

There are 5 on-site car parks at Melbourne Airport.

- At Terminal T1 T2 T3 Car Park
- At Terminal T4 Car Park
- Business Car Park
- Value Car Park
- Ring & Ride Car Park

Airport car parking facilities are located at the Melbourne Airport terminals, between Terminal Drive and Airport Drive, and between Airport Drive and Francis Briggs Road as pictured in Figure 5-9 below.



Figure 5-9 Melbourne Airport parking (Source: Melbourne Airport)

In addition, there are a number of off-airport car parks. Those located in proximity to the Project include:

- A1 Airport Parking on Western Avenue
- Jetport Airport Parking on Garden Drive
- Goodyear Airport Parking on Garden Drive
- Melrose Airport Parking on Melrose Drive
- Corporate Smartpark Parking on Sabre Court
- Pink Elephant Airport Parking on Sabre Court
- United Airport Parking on Trade Park Drive
- Pacific Airport Parking on Aviation Place

5.7 Current projects

In addition to the construction of the Project, there are number of other Projects planned or currently being constructed in the Project area. The known current and planned Projects in the study area are outlined below.

5.7.1 Melbourne Airport Rail

Melbourne Airport Rail (MAR) is a transformational public transport Project connecting Melbourne Airport to Victoria's regional and metropolitan train network being delivered by Rail Projects Victoria (RPV).

Publicly available information indicates that construction of MAR is expected to commence in late 2022 with target opening date of 2029 subject to relevant Victorian and Federal planning, environmental and other government approvals. Construction activity will peak between the end of 2023 and beginning of 2025 with activity sites changing over time.

The proposed Project scope within the study area includes:

- new rail tracks towards Melbourne Airport following Airport Drive
- a new rail bridge crossing over the Western Ring Road (M80) and Steele Creek connecting with the new rail tracks
- a new station at Melbourne Airport, with work currently being undertaken to determine the location and design.

5.7.2 Melbourne Airport third runway

Melbourne Airport is currently seeking approval from the Federal government to build a third runway. A draft 2022 Master Plan and preliminary draft Major Development Plan were developed outlining the plan to construct a new 3000-metre runway running parallel to the existing north-south runway. Both plans were released for formal public exhibition between February and May 2022.

5.7.3 Melbourne Airport elevated roads

Melbourne Airport is addressing growing traffic congestion through the construction of an elevated loop road network, which will separate public traffic from commercial transport operators

Stage 1 of this Project was approved by the Federal Minister for Infrastructure, Transport and Regional Development in 2019.

The scope of the Project is outlined below:

- Stage 1: new exit-ramp from the Tullamarine Freeway (outbound), forming an 800-metre roadway connecting to the existing elevated road structure that feeds into the T4 multi-storey car park.
- Stage 2: a suite of infrastructure to reconfigure vehicle movements to Terminals 1, 2 and 3 including the construction of a new elevated roadway link and new exit ramps from the T123 Structure connect onto Melbourne Drive and the Tullamarine Freeway.

5.7.4 Leo Dineen Reserve Pavilion upgrade

Leo Dineen Reserve is located approximately 500 meters from the Project area. Hume City Council is upgrading Dineen Reserve Pavilion to expand its uses and provide better spaces for local sporting clubs and the wider community.

6 Impact assessment

6.1 Sensitive receptors

6.1.1 Social receptors

As identified in Section 4.3, this report defines sensitive receptors as locations where land use is of sensitive nature, and where there may be a particular focus on protecting use for human health and wellbeing, local amenity and aesthetic enjoyment. Sensitive community receptors are determined based on the nature of the land use and the proximity to the Project.

Key sensitive social receptors have been identified following the analysis of the existing conditions.

Due to their proximity to the Project and potential greater exposure to impacts the key sensitive receptors identified are:

- The Joey Club Melbourne - Childcare Centre
- Steele Creek Tributary Reserve
- Creative Garden Early Learning Tullamarine
- Essendon Football Club.
- URBNSURF Wave Park

It should be noted that URBNSURF Wave Park is a privately operated business, however as it provides recreational services, potential impacts to community wellbeing have been considered.

6.1.2 Business receptors

As identified in Section 4.3 sensitive business receptors are any location registered as a commercial or retail premise where routine or normal activities occurring at reasonably expected times would experience adverse impact(s) from the Project. These are businesses where the occupants, visitors, and workforce are more susceptible to adverse effects from the Project. Sensitive business receptors are determined based on the nature of the business, their operating requirements and proximity to the Project.

Adverse impacts could include environmental or amenity nuisance issues such as noise, vibration, dust, light and odour, access impacts, and parking areas impacts, potentially impacting the traders, business staff or visitors to the establishment or the way the business operates.

As noted in Section 5.5 this report has identified industrial zones and retail centres in the Project area, and where possible, individual businesses that are confirmed to be currently operating in close proximity to the Project. This is due to the limitation of a desktop assessment and the availability and quality of this data. Further consultation is recommended to verify all individual traders and business in the area and understand potential impacts based on their operating requirements. This is outlined in Section 7. Key sensitive business receptors are:

- URBNSURF Wave Park
- Traders along Airport Drive
- Ciloms Airport Lodge
- Ibis Budget Melbourne Airport
- Holiday Inn Melbourne Airport.

It should be noted that while URBNSURF provides recreational services that contribute to community wellbeing it is a privately operated business. As a sensitive business receptor potential impacts to staff and visitors have been considered.

6.2 Construction phase

The potential impacts of the construction of the pipeline over the 12 month construction period, informed by the technical studies undertaken, are outlined in Table 6-1 and Table 6-2 below.

Table 6-1 Social impact significance criteria

Significance	Residents & Traders Amenity	Community Facilities
Insignificant	Short term (less than 6 months) or negligible impact. Easily reversible negative impacts or adverse change where those affected stakeholders could be expected to easily adapt or cope.	No change to access or use of community facility.
Minor	Reversible adverse change where those affected stakeholders could be expected to have substantial capacity to adapt or cope.	Minor (short term or minimal) reduction to access or use of community facility.
Moderate	Adverse impact or unavoidable change where those stakeholders affected could be expected to have some capacity to adapt or cope.	Moderate reduction to access or use of community facility.
Major	Irreversible change at a local community level where those affected stakeholders could be expected to have limited capacity to adapt or cope.	Permanent reduction to access or use of community facility.
Severe	Irreversible change at a local community level where those affected stakeholders could be expected to have little or no capacity to adapt or cope.	Complete loss of a community facility.

Table 6-2 Summary social and business impacts and rating

Area	Impact summary	Significance to community and stakeholders
Noise	<p>Based on the construction scenarios provided, the Construction Noise and Vibration Impact Assessment identified that no noise exceedances have been predicted at the nearest sensitive and non-sensitive receivers.</p> <p>As a result of reasonably high background noise levels in the area and relatively large separation distance between the proposed pipeline alignment and the sensitive receivers, noise impacts have been predicted to be below the criteria set out in accordance with the Civil construction, building and demolition guide, Publication 1834 (CCBDG).</p> <p>Impacts are minor and unlikely to be noticeable at the sensitive and non-sensitive receives based on predicted levels.</p>	Insignificant
Vibration	<p>Based on the construction scenarios provided, no vibration exceedances have been predicted when assessing damage for building structures and human comfort. Impacts are minor and unlikely to be noticeable at the sensitive and non-sensitive receives based on predicted levels.</p>	Insignificant
Dust	<p>In accordance with the Institute of Air Quality Management (IAQM) methodology, in the absence of specific mitigation measures, the works have a medium risk of dust soiling impacts and a low risk of health impacts.</p> <p>Subject to the implementation of mitigation measures, the residual effects of dust from the Project are not expected to be significant and to have a low risk of generating unacceptable air quality impacts.</p>	Minor
Impacts to pedestrians and cyclists	<p>The Western Ring Path Shared User Path (SUP) and the SUP on the eastern side of Airport Drive (between Sharps Road and Mercer Drive) will be impacted during construction of the pipeline due to their proximity to the work areas and access points. The SUPs will remain open during the construction period but are expected to undergo temporary closures and relocations at several locations during construction.</p>	Moderate

Area	Impact summary	Significance to community and stakeholders
	<p>The SUP along the eastern side of Airport Drive will require temporary relocations at two sections along its length. The relocation timing for each section is currently unknown, however each are expected to be multi-month relocations (up to 12 months) and are dependent on the construction program. Construction vehicles are expected to cross sections of SUP sections during construction.</p>	
Public transport impacts	<p>During construction, bus routes (478, 479 and 482) operating in the vicinity of, and within the study area, may be indirectly affected along sections of Airport Drive, Sharps Road, Tullamarine Park Road and Mercer Drive due to the, albeit marginal increased traffic volumes along these roads and the potential for road and lane closures.</p> <p>However, there are minimal and manageable residual impacts anticipated in terms of bus operation with mitigation measures in place.</p>	Minor
Road closures	<p>The Project will under bore all major roads along the alignment to avoid any major road closures during construction. Under the current design, one car park access road for the Melbourne Airport Wait Zone Car Park may be required to be closed during the pipeline trenching activities which will add around 2 minutes of travel time and impact Melbourne Airport Visitors. There may be impacts to the truck parking area south of Sharps Road.</p>	Moderate
Lane closures	<p>At this stage the lane closures required during construction have not been confirmed and will be confirmed as part of the contractor Traffic Management Plans (TMPs).</p> <p>Initial planning indicates that access Point 1 will require a lane closure of the short lane of the westbound Western Ring Road On-Ramp. This has been implemented during the construction period of MAR Transmission Tower Relocation Project and is expected to be manageable with a TMP for this Project.</p>	Minor
Access	<p>There are currently 13 proposed vehicle access points. No preferred routes have been established for workers or heavy vehicles with the exception of the indicative haulage routes for pipeline deliveries from the Port of Melbourne. Pipeline deliveries will originate from the Port of Melbourne and travel to one of the three pipeline the pipeline storage area via the West Gate Freeway (M1) and the Western Ring Road (M80).</p>	Moderate
Traffic generation	<p>During peak period of construction approximately 85 workers are expected during peak construction periods which is expected to occur in Week 19. This amounts to a daily traffic generation of 170 light vehicle movements during the peak. Construction traffic volumes for the project amount to approximately between a 1% - 2% increase in daily traffic movements.</p>	Minor
Heavy vehicles	<p>The peak deliveries and spoil disposal traffic generation for heavy vehicles is 30 vehicle movements to and from site in the midday peak hour and 50 vehicle movements daily. The heavy vehicles for deliveries and spoil disposal are assumed to originate from the west of the study area and utilise the M80 and Tullamarine freeway as the primary roads to and from the study area.</p> <p>Delivery of the pipe segments to each of three pipe stockpile locations within the study area will occur during project construction. These will consist of long semi-trailer (25m) which are classified as OSOM vehicles from the Port of Melbourne to the sites.</p>	Moderate
Land use	<p>The Land Use Assessment completed identified that it is unlikely that the Project will create significant or long-term impact on existing or proposed land uses. Where the proposed construction technique is via trenching, the likely impact on existing land uses is anticipated for a period of 12 months. A temporary ROW of 20m will be required for this period. Trenchless construction methods of HDD or thrust boring is proposed to avoid impacts to more complex or environmental sensitive areas. Trenchless construction methods avoid</p>	Insignificant

Area	Impact summary	Significance to community and stakeholders
	<p>disturbance to existing land use, environmentally sensitive areas and roads during construction. Post construction, the land would be generally returned to its previous use.</p> <p>The Project has been designed to respond to foreseeable land use change to allow for those land uses to occur without being impacted by the Project in the future. The Project will have temporary impacts for a period of 12 months however the pipeline alignment is generally located directly next to roads, often within road reserves, avoiding impacts on new development or future change inland use.</p>	
Historical Heritage	<p>The Historic Heritage Assessment completed by Aurecon identified that there are no historic heritage places or values located within or adjacent to the Project area. A site inspection has not been completed as part of this assessment. However, the background research results has indicated that there is a low likelihood for historic heritage elements to be present within the Project area. Therefore, it is not deemed necessary to pursue further historic heritage assessments for the Project area.</p>	Insignificant
Safety	<p>The Australian Standard AS2885 Pipelines—Gas and liquid petroleum (2012) states that from a safety perspective sensitive use location class shall be assigned to any portion of pipeline where there is a sensitive development within a measurement length. Sensitive uses are defined in some jurisdictions, but include schools, hospitals, aged care facilities and prisons.</p> <p>Based on the AS2885 definition, the Joey Club Melbourne - Childcare Centre is the only sensitive use within the Study Area. Whilst located in the Study Area, it will not be directly impacted by the construction of the Project as the alignment and construction areas avoid this location. A Safety Management Study (SMS) should be undertaken, and the recommendations implemented to further protect and ensure this land use can safely continue.</p>	Moderate

6.3 Cumulative impacts

As outlined in Section 5 (Existing conditions), there are several Projects currently planned or under construction within the study area. Even in the case where impacts from the Project are minimal, it is important to consider the cumulative impacts on the local community and traders.

The section below outlines the known construction impacts from the following Projects:

- Melbourne Airport Rail
- Melbourne Airport third runway
- Melbourne Airport elevated roads
- Leo Dineen Reserve Pavilion upgrade.

It is expected that concurrent construction activities will negatively impact sensitive receptors.

6.3.1 Melbourne Airport Rail

Detailed (construction) impacts for community and businesses are not available however, information on potential adverse impacts have been made publicly available through the Melbourne Airport Rail Website and the MAR State Land Business Impact Assessment are outlined below:

- Property acquisition and permanent impacts: Some industrial and commercial land along Airport Drive will be required to support the construction of MAR as outlined in Figure 6-1. Affected landowners and tenants have already been advised of this by RPV.
- Traffic and detours: For the construction of the new rail bridge it is proposed to reduce the width of lanes with short periods of night lane closures and intermittent night of the Western Ring Road (M80). There will

also be trucks travelling to and from construction sites. Closures of Airport Drive will be required to allow the installation of larger components, although these would generally be able to be scheduled overnight.

- Business impacts: business within the MAR Project area may experience impacts including decreased footfall, perceived and actual revenue loss due to construction activities.
- Temporary impacts: A number of sites along the alignment will be required for laydown, site compounds and access to the rail corridor.
- Noise and vibration: There may be increased noise from construction vehicles, piling rigs, excavators and power tools.

RPV is developing mitigation measures to manage construction impacts resulting from MAR. In November 2020, RPV commenced engagement with properties identified as being within the public acquisition overlay (PAO), an area of land that was set aside for a future rail link to Melbourne Airport in 2005.

Construction on Melbourne Airport is expected to commence in late 2022 and continue until 2029.

6.3.2 Melbourne Airport third runway

Construction will commence once the Third Runway Major Development Plan is approved and is expected to take four to five years to complete. Construction will be staged to limit the impact on current airport operations.

Detailed (construction) impacts for community and businesses are not available however potential adverse impacts during construction and operation to residents and immediate surrounds of the Airport were highlighted in the draft 2022 Melbourne Airport Master Plan and included:

- Traffic and detours: it is estimated that there will be 540,000 two-way heavy vehicle trips over the four-five year construction period with equates to 36 hourly trips each workday. If the third runway is built traffic is expected to increase by up to around 11 per cent during the five years post-opening. By 2046 daily traffic flows are substantially increased, with an additional 40 per cent more daily traffic.
- Sleep disturbance: disturbance due to night-time aircraft noise is expected to occur however the number of affected dwellings is expected to reduce compared to if a third runway were not to be built.
- Noise impacts resulting from aircrafts and operation of the Airport.
- Pollution associated with car travel to and from the Airport and from aircraft emissions.
- Despite the negative impacts, surveys undertaken as part of the master plan development indicated that there is a high overall level of support for Melbourne Airport’s expansion over time, echoed by most Victorian households.

6.3.3 Melbourne Airport elevated roads

Construction of the Project will be located predominantly within the airport internal road network. As such, there should be minimal disruption to road users, as the existing infrastructure will remain available for users. However, there are a few locations where works will be needed to modify existing road carriageways, which would result in some temporary disruption while the works are completed. Expected environmental impacts and social impacts during construction and operation identified by Melbourne Airport in its Major Development Plan are outlined in Table 6-3 below.

Table 6-3 Summary of environmental and social impacts (source: Melbourne Airport)

Environmental and social factors	Impacts	
	Construction	Operation
Traffic	Low/negligible	Beneficial
Soils and land contamination	Low	Low
Surface water and drainage	Negligible	Negligible
Ecology	Negligible	Negligible
Air quality	Low	Low
Noise	Low	Low
Land use	Low	Beneficial
Tenure	Moderate	Low
Economic and Social	Low	Beneficial
Landscape	Low	Low
Cultural heritage	Negligible	Negligible
Hazardous goods	Low	Negligible

6.3.4 Leo Dineen Reserve Pavilion upgrade

The redevelopment Project is slated for completion by mid-2022. No details are available on the potential adverse impacts during construction.

7 Conclusions and recommendations

This assessment has concluded that it is unlikely that the Project will create significant or long-term social impacts on existing communities and traders within the identified Project study area. The risk assessment and subsequent impact assessment found that the Project's construction activities have the potential to result in temporary social impacts on the nearby residents, traders, the general community and community infrastructure facilities, including:

- Temporary amenity impacts especially in locations where the proposed construction technique is via trenching. A temporary reduction in the local amenity could lead to disruption to daily activities at residences and businesses and reduced enjoyment of outdoor areas, mainly within the local study area. The likely amenity impacts on road users and residential and business areas are anticipated for 12 months.
- A temporary reduction in the local amenity could lead to reduced use and enjoyment of nearby community facilities and services, such as sports venues, open spaces, and outdoor areas near the Project's construction corridor.
- Most of the pipeline route is in road reserves, which are unlikely to support development and land use changes. Therefore, it is unlikely that the Project will create a significant or long-term impact on existing or proposed land uses. The land would be generally returned to its previous use post-construction activities with an easement of 7-10 m required to protect the pipeline for operational and maintenance requirements.
- Temporary and intermittent increase in travel time experienced along existing roads at locations intersected by the proposed construction corridor.
- The Project intercepts regionally significant industrial land within Melbourne Airport Business Park and the Tullamarine industrial area. The Project will not reduce industrial land; however, a temporary disturbance may occur to industrial uses during construction.
- Land access requirements to conduct detailed investigations and develop, construct, and operate the pipeline would result in a temporary demand on the time of the traders, landowners, and leaseholders to engage with the Project. The type of access and nature of associated activities would vary throughout the life of the Project.

As identified through the specialist assessments a number of management studies and plans are recommended to minimise the impact to communities and businesses:

- A Safety Management Study (SMS) should be undertaken to understand the impact to the Joey Club Melbourne – Childcare Centre in the Study Area and implement any recommendations to further protect and ensure this land use can safely continue.
- A Construction Environment Management Plan (CEMP) will be required to manage and mitigate impacts including noise, vibration, visual, and air quality impacts to traders directly adjacent to the alignment, community facilities, recreation areas, and sports venues during construction.
- Ensure the CEMP outlines a communication and engagement approach that aligns with the approach as set out in the Pipeline Consultation Plan (PCP) and allows for meaningful and consistent consultation with community and stakeholders on potential impacts and mitigation measures.
- TMPs will be implemented to communicate and manage the routes in which workers and heavy vehicles utilise during construction including impacts to SUPs. This will reduce any impact on sections of roads which are not suitable. Relevant stakeholders will be consulted prior to the commencement of construction and mitigation measures to manage potential impacts on bus services will be included in the construction contractor's TMP.

- Dust Management Plan for construction including management and mitigation measures to minimise air quality impacts.

In addition, further consultation with community and stakeholders is recommended:

- Despite the impacts to community being minor and manageable it is advised that community is consulted prior to follow best practice as set out by IAP2 and Victorian Auditor-General's Office (VAGO) Stakeholder Engagement Guidelines.
- The development of a Business Disruption Engagement Plan in line with the Victorian Small Business Engagement Guidelines should be considered.
- Continuation of consultation with key stakeholders such as Australia Pacific Airports Melbourne (APAM), Department of Transport (DoT), Rail Projects Victoria (RPV), Brimbank City Council and Hume City Council to discuss expected impacts and potential mitigations.
- It is recommended to undertake trader consultation to verify and better understand potential impacts on businesses and traders near the alignment. The purpose of this consultation would be to identify the type of business, operating hours, delivery, access, and parking requirements and assess anticipated impacts during construction and operation.
- Inform traders of the critical project activities, including construction commencement and the proposed construction program, as outlined in the Pipeline Consultation Plan.

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