

EDITHVALE AND BONBEACH  
LEVEL CROSSING REMOVAL PROJECTS  
**ENVIRONMENT EFFECTS STATEMENT**

EES TECHNICAL REPORT K  
**Business Impact Assessment**

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## Document Control

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# Executive summary

The Victorian Government is removing 50 of Melbourne's most dangerous and congested level crossings. The Edithvale Road, Edithvale and Station Street/Bondi Road, Bonbeach level crossing removal projects were referred to the Minister for Planning who determined that an Environment Effects Statement (EES) was required.

This report assesses potential impacts to local businesses resulting from construction and operational activity including business disruption and increased competition for local businesses as a result of removing the level crossings at Edithvale and Bonbeach.

## Business impact assessment context

The Business Impact Assessment (BIA) for the Edithvale and Bonbeach level crossing removal projects documents how businesses in the local area would be affected as a result of the two projects, principally during the construction phase. The local area as defined in this study is the row of commercial premises along Nepean Highway, directly adjacent to the Edithvale and Bonbeach railway stations respectively. This study area was chosen as these were the only businesses deemed to be within the station catchment which could be directly affected by the level crossing removal.

## Method

The BIA involved an assessment of construction and operation activities as they relate to business impacts, based on the design, as well as consultation with a cross-section of business stakeholders along the alignment and representatives from the local council.

Local trader interviews were conducted as face-to-face interviews or discussions, or where not possible a letter was left at the business. In the Edithvale shopping precinct, 13 interviews were conducted and seven letters were left (resulting in two follow up interviews). This represents a sample of 15 businesses (or 28 percent of operating businesses). For Bonbeach, four interviews were conducted and three letters left (resulting in one follow up interview). This represents a total of 5 interviews with businesses (or 42 percent of operating businesses). These are considered to be very large samples in a business consultation process. The businesses interviewed represented a cross section of retail activities including hospitality, food, medical and personal services, repair services, and specialist goods.

## Existing conditions

The Edithvale and Bonbeach stations are located in the south-eastern suburbs of Melbourne within the City of Kingston, which spans from Moorabbin through to Carrum.

Both stations are very similar in character, being located in a predominantly low to medium density residential area, with a strip of commercial parcels along the northbound lanes of the Nepean Highway (to the west of the rail corridor), and parallel to the stations.

These businesses are for the most part small hospitality, service, and retail businesses. The majority of all traders in the area are classified as small businesses, employing fewer than 20 people with an average aggregated turnover of less than \$50,000.

Traders stated that the vast majority of customers live on the eastern side of the rail corridor, and access their business by private car. They also indicated that passing by trade was relatively minor, however some agreed that being able to see their advertising from the train was beneficial.

## Impact assessment

The BIA found that the key risk for businesses is access during the construction, leading to a temporary loss of revenue.

Potential issues and management/mitigation strategies identified for traders in the two precincts include the following:

- Reduced access to parking during construction – Traders noted that parking in the two precincts is already limited, and parking opposite shopping strips along the Nepean Highway is generally all day parking used by commuters. A reduction in parking or increased competition for car parking (due to site access requirements or construction workers using the car parks) during the construction phase would likely adversely impact businesses within the two study areas. This may be managed by assigning designated parking for construction workers, which would provide certainty to traders, commuters and customers during the construction phase.
- Reduced access to the precincts as a result of road closures – It is anticipated that for a part of the construction period, there would be intermittent road closures of local roads and periodical lane closures of major roads at the level crossing project areas at Edithvale (Edithvale Road) and Bonbeach (Bondi Road). This may cause delays for motorists and reduce access to the retail strips for customers and staff. Rail closures may also have an impact on access to the precinct, however from trader consultation it was found that the vast majority of customers drove to the precinct. Most customers live on the eastern side of the rail corridor, so road access is an important element in the customer catchments for all traders in the area. This could temporarily reduce customers and revenues for traders. It may be managed by careful planning and phasing of construction, ensuring that alternative access is clearly marked (including the provision of train replacement bus services). Pedestrian access would be retained during the construction phase, and parking further east of the project areas are less likely to be impacted during this time.
- Amenity impacts associated with dust and noise – this could reduce the attractiveness of both areas, and temporarily decrease the number of customers who visit both precincts.
- Loss of visibility of their shop signage from the train – the loss of free advertising from commuters was identified as a potential impact from the level crossing removal.
- Increased competition, particularly for food and beverage services, from additional retail spaces at the upgraded stations, depending on the ultimate design outcomes.

Once completed, the traders stated that the redeveloped stations would improve the visual amenity of the area.



## Environmental Performance Requirements

Business impacts from construction would be addressed through implementation of EPRs as well as mitigation and management measures identified under other technical assessments within the EES.

The following Environmental Performance Requirements are recommended for the Edithvale and Bonbeach level crossing removal projects:

EPR ID	Environmental Performance Requirement	Stage
EPR_B1	<p><b>Business Disruption Plan</b></p> <p>Minimise impacts to local business through preparation and implementation of a Business Disruption Plan. The business disruption plan must be consistent with an approved Community and Stakeholder Engagement Management Plan (EPR reference SC1) and include:</p> <ul style="list-style-type: none"><li>a. transport planning prior to road closures to minimise impacts to business access and parking (EPR reference T1)</li><li>b. a process for communication with traders and businesses</li><li>c. management of potential amenity impacts during construction (EPR references AQ1, AQ2, NV2, and NV3).</li></ul>	Construction
EPR_UD1	<p><b>Urban Design Guidelines</b></p> <p>Design projects in accordance with the LXRA Urban Design Framework and project specific Urban Design Guidelines. The urban design guidelines must consider:</p> <ul style="list-style-type: none"><li>a. identity</li><li>b. connectivity and wayfinding</li><li>c. urban integration</li><li>d. resilience and sustainability</li><li>e. amenity</li><li>f. vibrancy</li><li>g. safety</li><li>h. accessibility</li></ul> <p>Seek the advice of the LXRA Urban Design Advisory Panel (chaired by the Office of the Victorian Government Architect, and includes officers of Kingston City Council) during the preparation of detailed design to ensure an appropriate response to the LXRA Urban Design Framework.</p>	Operation

# Abbreviations

Term	Definition
ABS	Australian Bureau of Statistics
ATO	Australian Taxation Office
BIA	Business Impact Assessment
EES	Environment Effects Statement
EMF	Environmental Management Framework
EPR	Environmental Performance Requirements
LXRA	Level Crossing Removal Authority
MTM	Metro Trains Melbourne
SA1	Small Area, Level 1
EY	Ernst and Young
SES	State Emergency Service

# 1 Introduction

## 1.1 Purpose

The Victorian Government is removing 50 of Melbourne's most dangerous and congested level crossings, inclusive of the level crossings at Edithvale Road, Edithvale (Edithvale) and Station Street/Bondi Road, Bonbeach (Bonbeach).

The level crossing removal projects have three core objectives. To provide:

- improved productivity from more reliable and efficient transport networks
- better connected, liveable and thriving communities
- safer communities.

The Edithvale and Bonbeach level crossing removal projects were referred to the Minister for Planning on 9 March 2017. On 5 April 2017, the Minister issued a decision determining that an Environment Effects Statement (EES) is required for the projects due to the potential for a range of significant environmental effects.

This report provides a Business Impacts Assessment (BIA) for the Edithvale Road, Edithvale (Edithvale) and the Station Street/Bondi Road, Bonbeach (Bonbeach) level crossing removal projects.

## 1.2 Why understanding business impacts is important

The removal of the Edithvale and Bonbeach level crossings provides a unique set of challenges and opportunities in both the pre and post construction phases for local traders, local residents, and the wider community. Local businesses contribute to the character of the neighbourhood and as such are valued by the communities in which they operate.

The purpose of this report is to understand the impacts on local businesses from the projects and subsequently inform the management and mitigation of impacts during design and construction. The BIA involved an assessment of construction and operation activities as they relate to business impacts, based on the design, as well as consultation with a cross-section of business stakeholders along the alignment.

Although there may be broader benefits to both the road and rail networks from the level crossing removal program along the Frankston rail line, cumulative impacts or benefits from the removal of multiple level crossings, are outside of the scope of this assessment.

## 1.3 Project description

### 1.3.1 Overview

#### Edithvale

The Level Crossing Removal Authority (LXRA) proposes to remove the level crossing by lowering the Frankston railway line into a trench under Edithvale Road while maintaining Edithvale Road at the current road level. The trench would be located between Lochiel Avenue and Berry Avenue. It would be up to 1,300 metres in length and 14 metres wide at its narrowest point, widening to up to 24 metres (including pile widths) at the new Edithvale station platforms.

The rail track would be approximately eight metres below ground level, and sit above the trench base slab and infrastructure to collect and divert rain water from the trench. The maximum depth of the excavation would be 15 metres. Pile depths would be a maximum of 24 metres at the deepest point of the trench.

Barriers, fencing and screening would be erected along the trench at road level to prevent unauthorised access by vehicles or people. Decking above the rail trench would provide for the new station building, car parking and a new substation required to ensure sufficient power is available for passenger services on the Frankston railway line. New pedestrian bridges would be constructed to retain pedestrian access across the railway line. A new station is to be constructed with lift, ramp and stair access to the below-ground train platforms.

## Bonbeach

LXRA proposes to remove the level crossing by lowering the Frankston railway line into a trench under Bondi Road while maintaining Bondi Road at the current road level. The trench would be located between Golden Avenue and The Glade. It would be up to 1,200 metres in length and 14 metres wide at its narrowest point, widening to up to 24 metres (including pile widths) at the new Bonbeach station platforms.

The rail track would be approximately eight metres below ground level, and sit above the trench base slab and infrastructure to collect and divert rain water from the trench. The maximum depth of the excavation would be 15 metres. Pile depths would be a maximum of 24 metres at the deepest point of the trench.

Barriers, fencing and screening would be erected along the trench at road level to prevent access by vehicles or people. Decking above the rail trench would provide for the new station building and car parking. New pedestrian bridges would be constructed to retain pedestrian access across the railway line. A new station building would be constructed with lift, ramp and stair access to the below-ground train platforms.

### 1.3.2 Construction

The key construction activities for the Edithvale and Bonbeach level crossing removal projects include:

- site establishment including:
  - clearing of vegetation and ground levelling
  - establishment of site fencing, staff facilities and temporary construction areas
- protection and/or relocation of utility services
- excavation for piling, foundations and the rail trench
- on site waste management including removal, management and appropriate disposal of excavated soil, rock, stormwater and groundwater
- transport of spoil, excavated material and groundwater offsite
- demolition of existing stations and removal of existing rail and road infrastructure
- construction of bridge/deck structures to support Edithvale Road and Station Street/Bondi Road where they cross the railway line
- construction of base slab and waterproofing, including stormwater tanks
- construction of new station infrastructure including platforms and buildings
- construction of pedestrian overpasses and decking over the rail trench
- installation and commissioning of new rail infrastructure including ballast, overhead line equipment and rail.

In preparation for the main rail occupation, the existing Edithvale and Bonbeach stations would be closed approximately four weeks in advance. Both projects would be constructed concurrently under the same rail closure, which is anticipated to take approximately six weeks.

During the closure of the rail corridor, construction activities would occur 24 hours per day, seven days per week. Additional periodic road closures and lane closures would be required and access along adjacent streets could be restricted. Additional weekend rail shutdowns would likely be required prior to and after the main rail occupation. Construction is expected to be completed within an 18 month period.

### 1.3.3 Operation and maintenance

Following the construction of the Edithvale and Bonbeach level crossing removal projects, the key operation and maintenance phase activities would include:

- operation – monitoring, controlling and operation of the asset in accordance with the rail and road network requirements
- maintenance – routine inspection and monitoring of the condition of the asset, planned routine maintenance and refurbishment work, and unplanned intervention and repair of the asset.

Operation and maintenance activities would be consistent with existing practices and subject to the evolving operational demands of the road and rail networks.

## 1.4 Project area

### 1.4.1 Edithvale

The Edithvale Road, Edithvale level crossing project investigation area (Edithvale project area) extends from Lincoln Parade, Aspendale to Chelsea Road, Chelsea. It includes the rail corridor and all of Station Street and Nepean Highway to the east and west of the rail corridor, and small sections of adjacent road reserves. Refer to Figure 1.

### 1.4.2 Bonbeach

The Station Street/Bondi Road, Bonbeach level crossing removal project area (Bonbeach project area) extends from Chelsea Road, Chelsea to Patterson River, Bonbeach. It includes the rail corridor and all of Station Street and Nepean Highway located to the east and west of the rail corridor, and small sections of adjacent road reserves. Refer to Figure 2.

### 1.4.3 Study area

The study area chosen for the business impacts assessment are the areas deemed to be within a 800 metre radius from the two stations (and therefore two shopping strips), which has been used as a proxy catchment for the businesses in this area. This is because half the distance between the railway stations in the area is approximately 800 metres.

These areas are used in the analysis to identify the demographics of individuals who could potentially walk to the businesses adjacent to the stations. This captures the population most likely to frequent these businesses, although will not accurately identify patrons who may drive to these precincts as this would be more determined by business type or existing customer relationships.

These areas are displayed in Figure 7 and Figure 8 within Section 5 of this report.





Figure 1 Edithvale project area





Figure 2 Bonbeach project area

## 2 Scoping Requirements

In order to meet statutory requirements, protect environmental values and sustain stakeholder confidence, the EES will include an Environmental Management Framework (EMF). The EMF will provide a transparent framework with clear accountabilities for managing and monitoring environmental effects and hazards associated with the construction and operational phases of the projects.

Section 3.5 of the Scoping Requirements (issued September 2017), states '*Environmental Performance Requirements (EPRs) ... should be clearly described in the EMF*'. The proposed objectives, indicators and monitoring requirements to be described that are relevant to this study are:

- social outcomes and community engagement.



### 3 Legislation, policy and guidelines

Table 1 summarises the relevant primary legislation that applies to the Edithvale and Bonbeach level crossing removal projects as well as the implications, required approvals.

Table 1 Primary legislation and associated information

Legislation/policy	Key policies/strategies	Implications for this project
<b>State</b>		
<i>Transport Integration Act 2010</i>	<p>The Act provides a legislative framework for transport in Victoria. The Act seeks to integrate land use and transport planning and decision-making by applying the framework to land use agencies whose decisions can significantly impact on transport. The Act requires agencies, including the Department and Planning Authorities, to consider the potential impact of land use planning proposals on transport.</p> <p>The objectives and principles of this Act include integrated decision making, transparency, the precautionary principle and consideration of the transport system user perspective. The transport system should facilitate economic prosperity by–</p> <ul style="list-style-type: none"> <li>• enabling efficient and effective access for persons and goods to places of employment, markets and services;</li> <li>• increasing efficiency through reducing costs and improving timeliness;</li> <li>• fostering competition by providing access to markets;</li> <li>• facilitating investment in Victoria;</li> <li>• supporting financial sustainability.</li> </ul>	<p>The removal of the Edithvale and Bonbeach level crossings meets all these policy principles, especially enabling the efficient and effective access to businesses.</p>

## 4 Method

This section describes the method that was used to assess the potential impacts of the Edithvale and Bonbeach level crossing removal projects.

A systematic risk based approach was applied to understand the existing environment, potential impacts of the projects and how to avoid, minimise or manage the risk of impact.

The iterative nature of the assessment is illustrated in Figure 3.

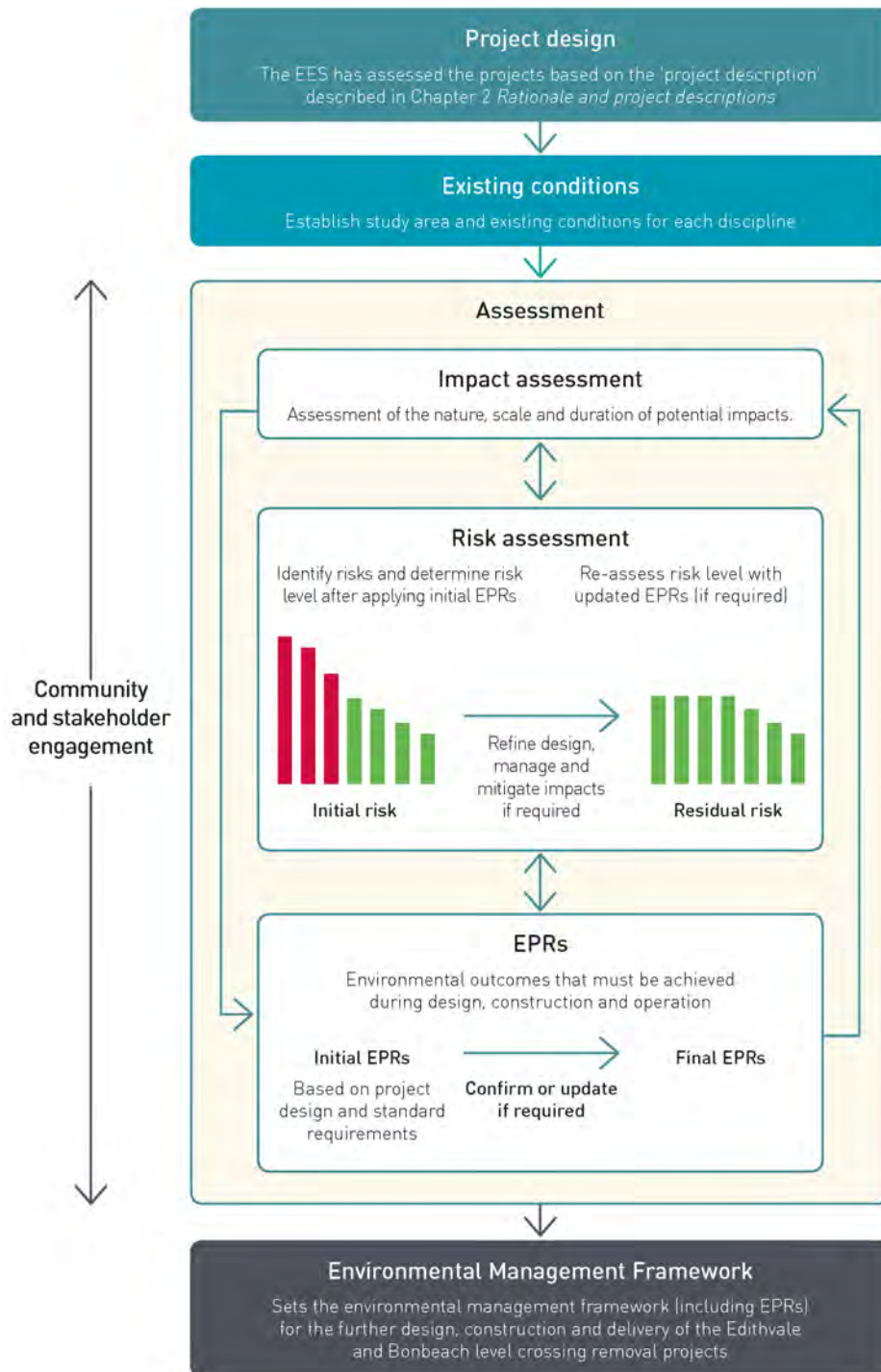


Figure 3 Overview of impact and risk assessment process

The following sections outline the methodology for the business impact assessment.

## 4.1 Existing conditions assessment

A review of the existing conditions was conducted through a combination of desktop studies and physical site assessments (including information gained from stakeholder consultation). This meant that both a macroscopic and microscopic view of the existing conditions of the two station precincts could be assessed, ranging from broader region-wide data (such as population density) to the business type in each individual shop along the strip.

The desktop review was an essential first step for assessing and reviewing the potential impacts on local businesses from removing the two level crossings, as it gave direction towards the parties necessary for consultation during both the construction and operational phases.

## 4.2 Risk assessment

A risk-based approach is integral to the EES as required by Section 3 of the Scoping Requirements for the EES.

The risk management approach adopted for the Edithvale and Bonbeach EES is consistent with AS/NZS ISO 31000:2009 Risk Management Process and involves the following steps:

- establishment of the context of the risk assessment – this identifies the boundaries of the projects including the project definition, the duration of construction and operation, the design and environmental controls that would be in place (initial Environmental Performance Requirements (EPRs) – refer to Section 8), and the location of the projects
- risk identification – identification of risk pathways by specialists in each relevant discipline area
- risk analysis – assessment of risk for each risk pathway, whereby risk is a combination of:
  - the likelihood of an event and its associated consequences occurring
  - the magnitude of potential consequences of the event.
- risk evaluation – review key risks posed by the projects to focus effort in terms of impact assessment and mitigation.
- risk treatment – identification of additional management and mitigation where required to reduce risk levels where possible.

An initial risk assessment was undertaken to assess potential risks to the environment arising from the implementation of the projects. Where risks were minor or above, further mitigation was explored. Risks were re-assessed to determine the residual risk based on further mitigation.

A more detailed description of each step in the risk assessment process is provided in EES Attachment II *Environmental Risk Report*.

This technical report describes the risks associated with the projects on business.

## 4.3 Impact assessment

The assessment of potential impacts to local businesses was informed by trader consultation, which was conducted as face-to-face interviews/discussions. Where this was not possible, a letter was left at the business. In the Edithvale shopping precinct, 13 interviews were conducted and seven letters were left (resulting in two follow up interviews). For Bonbeach, four interviews were conducted and three letters left (resulting in one follow up interview). The questions presented to traders in the interview were designed to gain general information about the business (e.g. annual turnover), and also more specific ones about the effects of the level crossing removal on their businesses (e.g. changes to passing trade during construction).

In some cases, additional potential impacts were identified through trader engagement. Interviews with traders explored a range of factors including:

- size of businesses, the characteristics of their customer bases, and the size of their customer catchments
- mode of travel for customers, and how the projects could potentially impact staff and customer travel patterns
- an understanding of potential impacts of the construction and operation phases of the project, including factors such as customer access
- potential mitigation approaches for the risks to their business operations.

## 4.4 Environmental Performance Requirements

The environmental outcomes that must be achieved during design, construction and operation of the projects are referred to throughout the EES as Environmental Performance Requirements (EPRs). EPRs must be achieved regardless of the construction methodology or design solutions adopted. Measures identified in this EES to avoid or minimise environmental impacts have formed part of the recommended EPRs for the projects.

The development of a final set of EPRs for the project has been iterative.

### 4.4.1 Initial EPRs

Environmental performance requirements were identified to inform the assessment of initial risk ratings (where appropriate). These initial EPRs were based on compliance with legislation and standard requirements that are typically incorporated into the delivery of construction contracts for rail projects.

### 4.4.2 Confirm or update EPRs

The risk assessment either confirmed that these EPRs were adequate or identified the need for further refinement.

EPRs were updated or new EPRs were developed for any initial risk that could not be appropriately managed by standard requirements. The risk and impact assessment processes confirmed the effectiveness of new or updated EPRs to determine the residual risk rating.

### 4.4.3 Final EPRs

The EPRs recommended for the projects are outlined in Section 8 of this report and are included in the EES Environmental Management Framework.

The EPRs are applicable to the final design, construction approach and operation and provide certainty regarding the environmental performance of the projects.

## 4.5 Linkage to other technical reports

This report relies on, or informs the following technical assessments:

- EES Technical Report C *Acid Sulfate Soils And Contamination*
- EES Technical Report G *Traffic*
- EES Technical Report H *Noise and Vibration*
- EES Technical Report I *Air Quality*
- EES Technical Report L *Social*.

## 5 Existing conditions

### 5.1 Regional existing conditions

Edithvale and Bonbeach stations are located in the south-eastern suburbs of Melbourne within the City of Kingston, which spans from Moorabbin through to Carrum.

For this investigation, the business characteristics of the broader region are described, before focusing on the two study areas (Section 1.4.3).

The broader region has been defined as the South Ward of the City of Kingston, on the basis that this area is large enough to capture the surrounding suburbs, yet granular enough to remain comparable in demographics and area characters, amongst other factors. The South Ward is comprised of the suburbs directly adjacent to Edithvale and Bonbeach – from Aspendale in the north to Carrum in the south.

Figure 4 displays a count of business in the area, with the greatest number of workplaces (by SA1<sup>1</sup>) contained around Edithvale and Chelsea stations, as well as a narrow corridor of industrial land in Chelsea Heights, adjacent to the Mornington Peninsula Freeway.

The vast majority of these workplaces either do not have additional employees (excluding the owner), or hire fewer than 20 people (shown in Figure 5).

The small business characteristic of the area is also apparent in the annual turnover statistics of the area, where the majority of businesses have an aggregated turnover of less than \$50,000, with the next largest categories being between \$100,000 and \$500,000 aggregated turnover (shown in Figure 6).

The Australian Taxation Office (ATO) classifies a small business as having less than \$2 million aggregated turnover, which further reflects the small business profile of the ward.

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<sup>1</sup> SA1 (Statistical Area Level 1) is a geographical area in the Australian Statistical Geography Standard Main Structure, designed to represent different land uses and in residential areas contain between 200 and 800 people.



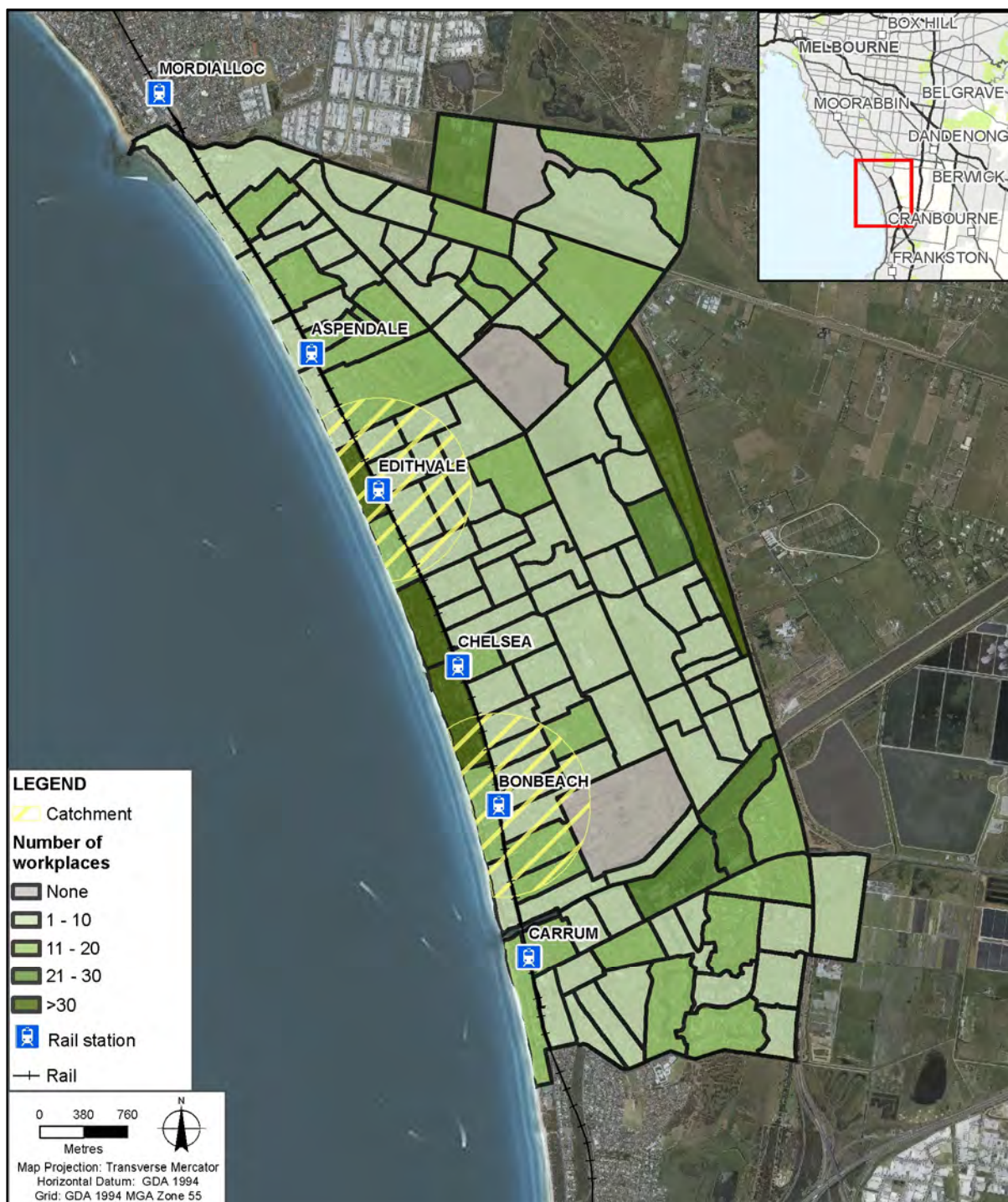


Figure 4 Businesses by SA1 located in the South Ward of the City of Kingston (ABS Census, 2011)



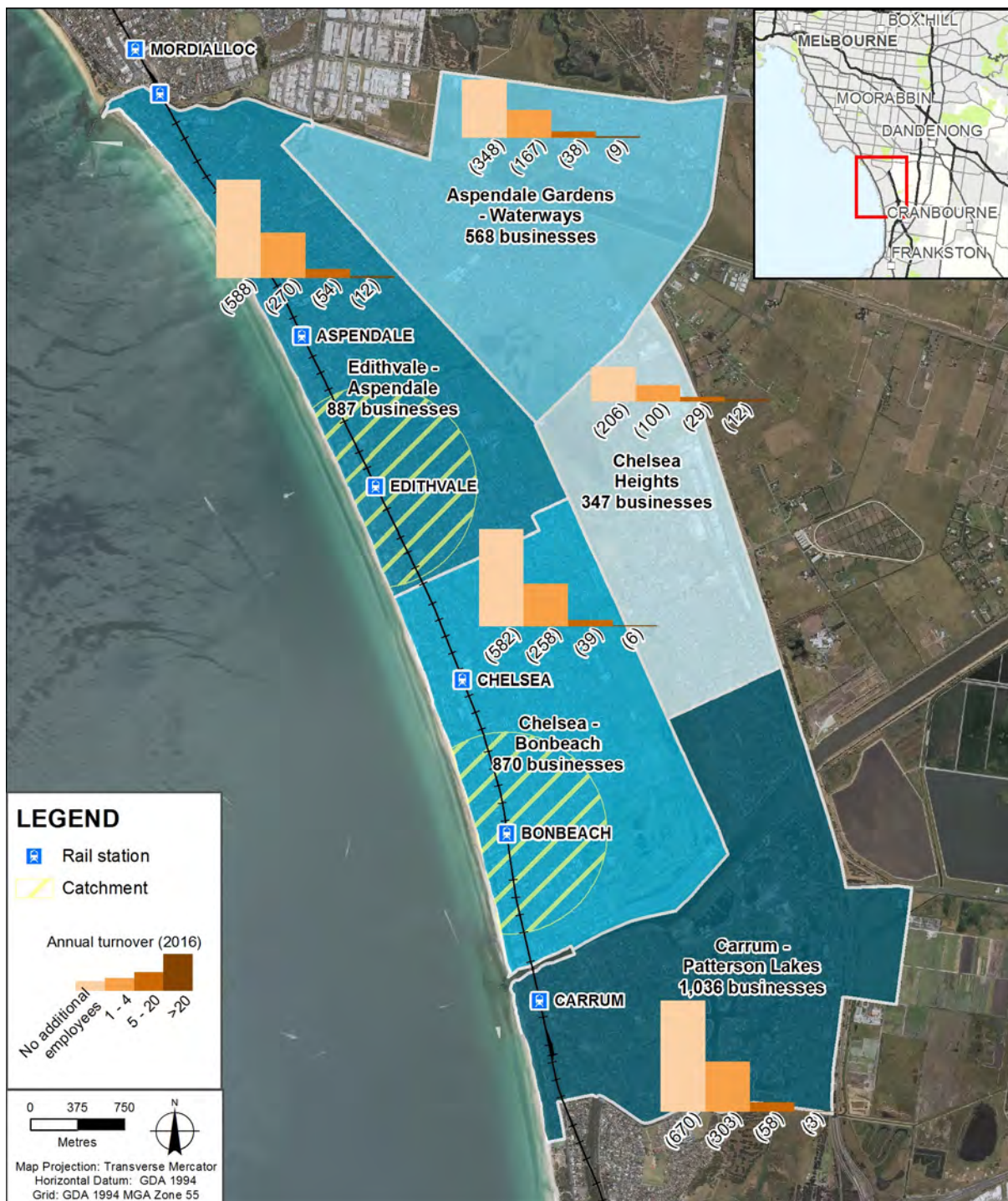


Figure 5 Number of employees in businesses located within the South Ward of the City of Kingston (ABS Census, 2011)



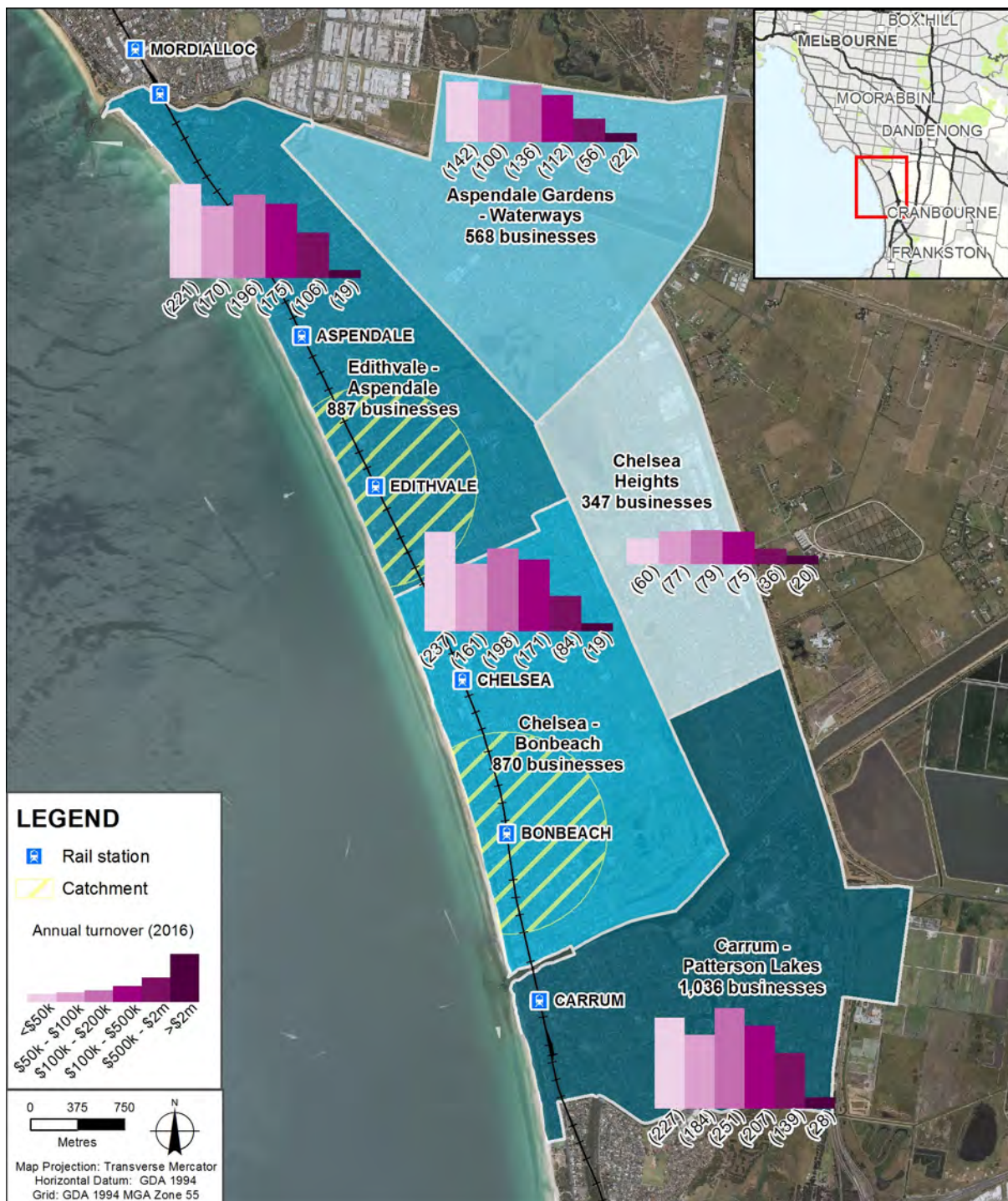


Figure 6 Number of employees in businesses and annual turnover, South Ward of the City of Kingston (ABS Census, 2011)



## 5.2 Edithvale

Although the actual catchment of businesses in the area may vary depending on business type and existing consumer relationships, a 10 minute walking (approximately 800 metres) proxy catchment has been used for this analysis (shown in Figure 7).



Figure 7 Edithvale station walking catchment

Within the 800 metre radius, the 2016 Census reveals that close to 4,334 people lived in the area in 1,900 dwellings. This is at a density of roughly 2,000 people per square kilometre, which is typical of the surrounding suburbs, and more broadly middle-outer suburban Melbourne.

Edithvale Station is located in a predominantly low to medium density residential area. There is a strip of commercial parcels along the northbound lanes of the Nepean Highway (to the west of the rail corridor), parallel to the station.

The station and the surrounding businesses, are serviced by three bus services:

- 858 (Edithvale – Aspendale via Chelsea)
- 706 (Mordialloc – Aspendale – Edithvale – Chelsea) – off-peak only
- 902 SmartBus (Chelsea – Airport West).

The bus stops for the 858 and 706 are located on the Station Street side of Edithvale station, while the 902 is located on Edithvale Road (approximately 200 metres away).

Currently, there are car spaces on Station Street to the east of the rail corridor that are all day and generally used by commuters (34 formal spaces provided and the rest being on-street parking), with parking on the west side (where traders are located) limited to 0.5-2 hours in duration. Trader consultation revealed that approximately 90-95 percent of customers, and in some cases up to 100 percent of employees used private vehicles to access their businesses, however this varied depending on business type.

The consultation also found that the customer base were mainly from the local area (approximately the suburbs included in the South Ward), and that between 80-95 percent of customers lived on the east side of the rail corridor. The general sentiment was that many of the trips to the stores were premeditated, and that only a small portion of their trade is from passers-by.

As of October 2016 there were 54 businesses operating along the strip that is clustered in the three blocks between Natal Avenue and Derrbeg Lane. The commercial parcels, from south to north, are outlined in the following table.

Table 2 below summarises the businesses within the Edithvale study area.

**Table 2 Businesses located within the Edithvale study area**

Business name	Business type	Address
Edithvale Physiotherapy	Health Services	285 Nepean Highway
Vacant Shop - Gale Marine	-	281 Nepean Highway
Olympic Blinds	Retail	277 Nepean Highway
Hound Grooming Studio	Pets	276 Nepean Highway
Edithvale Consulting Clinic	Health Services	275 Nepean Highway
Bayside Pizza	Restaurant	274 Nepean Highway
Innovative Physiotherapy	Health Services	272 Nepean Highway
LJ Hooker	Real Estate Agent	270 Nepean Highway
Tattooist	Health Services	269 Nepean Highway
Bayside Bicycle Repairs	Retail	268 Nepean Highway

Business name	Business type	Address
Mas Tax Accountant	Professional Services	267 Nepean Highway
Fairy Bird Chinese Takeaway	Restaurant	266 Nepean Highway
Soul Press Café	Café	265 Nepean Highway
Straight to Hairven, Hair Extensions	Hair and Beauty	264 Nepean Highway
Aqua Edithvale Hair Beauty Boutique	Hair and Beauty	263 Nepean Highway
Aspendale Veterinary	Pets	262 Nepean Highway
Bayside Podiatry	Health Services	261 Nepean Highway
Riceberry Café and Restaurant	Café	Nepean Highway
Vacant block/cleared	-	Nepean Highway
Vacant shop	-	Nepean Highway
Australia Post Office Shop (licensee)	Retail	253 Nepean Highway
Bar Electrics (Vacant Shop)	-	252 Nepean Highway
Lam Accounting and Taxation	Professional Services	251 Nepean Highway
Optometrist Millennum Optical	Health Services	250 Nepean Highway
Brown Rice Thai Restaurant	Restaurant	249 Nepean Highway
Neil Fletch Design, Building Design	Building and Construction	248 Nepean Highway
Chelsea Mower Power	Retail	246 Nepean Highway
Chubby Buddies	Café	245 Nepean Highway
Ambermoon	-	244 Nepean Highway
Vacant shop (newspaper on windows)	-	243 Nepean Highway
Clover Leaf Massage Centre	Health Services	242A Nepean Highway
Edigrocer	Retail	242 Nepean Highway
Vacant Shop - Plum Heating and Cooling	-	241A Nepean Highway
Vacant	-	241 Nepean Highway
Vacant - Octtec Employment Service	-	Nepean Highway
Edithvale Pharmacy	Pharmacy	240 Nepean Highway
Hairven by the Bay	Hair and Beauty	239 Nepean Highway
Linda's Bakehouse	Café	238B Nepean Highway
Edithvale Fish and Chips	Restaurant	238A Nepean Highway
IGA	Retail	235 Nepean Highway



Business name	Business type	Address
Flakey Jakes, Edithvale	Restaurant	Nepean Highway
Weather House	Retail	2/232 Nepean Highway
Brittany and Co Hair and Beauty Salon	Hair and Beauty	3/232 Nepean Highway
Pain Fit Integrated Health Centre	Health Services	230 Nepean Highway
Tandoori Pavilion	Restaurant	229 Nepean Highway
Sports Massage	Health Services	228 Nepean Highway
Pick Property	Real Estate Agent	227 Nepean Highway
Aspendale Trophies	Retail	226 Nepean Highway
Thrive Yoga and Pilates	Health Services	223a Nepean Highway
Sat Plus	Retail	223 Nepean Highway
Edithvale Motors	Mechanical Repairs	222 Nepean Highway
Berry Fitness Centre	Health Services	218 to 220 Nepean Highway
Beach Hairworks	Hair and Beauty	217 Nepean Highway
Commonwealth Financial Planning	Professional Services	215 Nepean Highway

The Edithvale Lifesaving Club has an on-site café, and there are food vans which hold three year permits along The Esplanade (off Nepean Highway).

From the Ernst Young (EY) Sweeney Community Sentiment Research conducted in late 2016, it was found that 96 percent of Edithvale local traders had heard about the removal of the level crossings along the Frankston train line, with 92 percent of these traders being in favour or strongly in favour of the level crossing removals.

Some of the key outputs from the Edithvale stakeholder feedback in the EY Sweeney report include that the existing shopping strip is in need of modernisation and refurbishment, as well as a desire for additional retail spaces to be provided as part of the new station forecourt.

### 5.3 Bonbeach

Although the actual catchment of businesses in the area may vary depending on business type and existing consumer relationships, a 10-minute walking (approximately 800 metre) proxy catchment has been used for this analysis (shown in Figure 8).

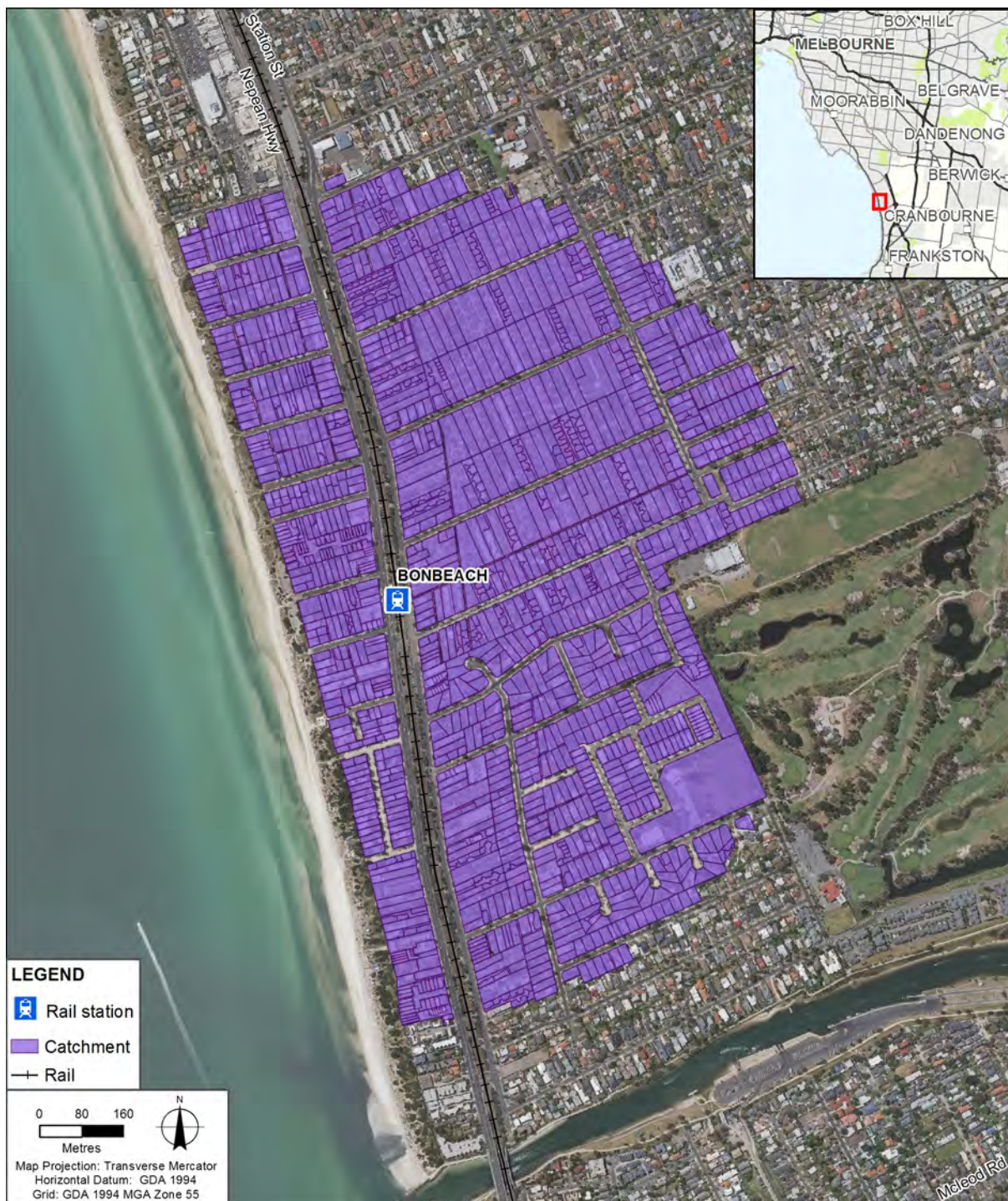


Figure 8 Bonbeach station walking catchment

Within the 800 metre radius, the 2016 Census reveals that just over 4,500 people lived in the area in 2,300 dwellings. This is at a density of roughly 2,100 people per square kilometre, which is typical of the surrounding suburbs, and more broadly middle-outer suburban Melbourne.

Bonbeach Station is located in a predominantly low to medium density residential area. There is a strip of commercial parcels along the northbound lanes of the Nepean Highway (to the west of the rail corridor), parallel to the station.

The station, and therefore the surrounding businesses, do not have any other direct public transport links besides the rail service. The 857 (Chelsea – Dandenong via Patterson Lakes) bus service does have a stop approximately 550 metres to the south-east of the station on Cannes Avenue, however this falls beyond of the generally accepted walking catchment of 400 metres to a bus service.

Currently, there are car spaces on Station Street to the east of the rail corridor that are all day and generally used by commuters (35 formal spaces provided and the rest being on-street parking), with parking on the west side (where traders are located) generally limited to 0.5-2 hours in duration. Similar to Edithvale, the majority of customers and staff used private vehicles to access the shopping strip, although anecdotally some businesses still speculate many customers walked from home. During the trader consultation, some of these businesses noted that the visibility of their signage from rail passengers attracted customers, in addition to general passing-by foot traffic.

Traders from Bonbeach held similar opinions on their customer base and passing trade as those from Edithvale, with the vast majority of them crossing the rail corridor (from east to west) to access the businesses.

As of October 2016 there were 12 businesses operating along the strip that is clustered in the two blocks between Newberry Avenue and Harding Avenue. The commercial parcels, from south to north, are outlined in the following table.

Table 3 below summarises the businesses within the Bonbeach study area.

**Table 3 Businesses located within the Bonbeach study area**

Business name	Business type	Address
Bonbeach Café	Café	533-535 Nepean Highway
Samsung Galaxy Repairs, Mobile Phones	Retail	3 Harding Street
HP Laptops Repair/Compaq PC Desktop Repairs	Retail	531 Nepean Highway
Little French Deli and Café	Café	524 Nepean Highway
Coin Laundry	Service	525 Nepean Highway
Bonbeach Pizza and Fish and Chips	Café	1/523 Nepean Highway
Bonbeach Massage	Health Services	1/523 Nepean Highway
Full Spectrum Tattoo	Health Services	522A Nepean Highway
Bottlemart	Retail	526 Nepean Highway
Vacant	-	525A Nepean Highway

Business name	Business type	Address
Vacant	-	524A Nepean Highway
Mowerworks Bonbeach	Retail	1/523 Nepean Highway
Bonbeach Furniture	Retail	515 Nepean Highway
Design and Construct	Building and Construction	514 Nepean Highway

From the EY Sweeney Community Sentiment Research paper, it was found that most of the Bonbeach local traders had heard about the removal of the level crossings along the Frankston train line, with 80 percent of these traders being in favour or strongly in favour of the level crossing removals.

Some of the key outputs from the EY Sweeney survey was to ensure there were plenty of opportunities to cross the proposed rail trench to access the shops, as well as providing retail opportunities in the new station forecourt.



## 6 Risk assessment

A risk assessment of project activities was performed in accordance with the methodology described in Section 4.2. Risks were assessed for the construction and design/operation phases (where relevant).

The residual business risks associated with the projects are listed in Table 4. The likelihood and consequence ratings applied during the risk assessment process are provided in Appendix A. There was no change in the initial risk and final risk levels for business.

Table 4 Business risks

Risk ID	Risk name	Risk pathway	EPR ID	Risk level (post mitigation)
<b>Construction risks</b>				
B7	Decreased revenue (construction)	Businesses suffer from temporary loss of revenue due to changed traffic conditions and other construction impacts.	EPR B1 Business Disruption Plan EPR AQ1 Air quality (construction) EPR AQ2 Air quality management EPR T1 Transport Management Plan EPR NV2 Construction noise EPR SC1 Community and Stakeholder Engagement Management Plan	Minor
<b>Operational risks</b>				
B8	Decreased revenue (operation)	Existing businesses suffer from increased competition from new businesses in the railway station and/or reduced exposure to rail passengers	EPR SC1 Community and Stakeholder Engagement Management Plan EPR UD1 Urban Design Guidelines	Negligible

For further details refer to the EES Attachment II *Environmental Risk Report* which includes the full risk register, with initial EPRs and the final EPRs assigned to each risk.

## 7 Impact assessment

Cumulative impacts have been considered, and the combined impacts of these on the various individual businesses have been used to inform the impact assessment.

There are a number of factors which could result in business disruption and negatively impact business revenue. The cumulative impact was assessed in the risk assessment, however the individual impacts are considered in detail below.

### 7.1 Edithvale

#### 7.1.1 Construction impacts

##### 7.1.1.1 Business disruption – reduced availability of car parking

A concern which was consistently raised throughout the trader consultation process was the potential for changes to parking in the precinct during the construction phase.

Nearly all of the traders consulted noted that the vast majority of their employees and customers travelled by private vehicle. This means that any reduction in parking from construction activity or construction workers using the car spaces would adversely impact their businesses by reducing customer access (**risk B7**).

#### Management and mitigation

Planning for the construction period would consider the treatment of parking spaces during the construction phase in order to limit any adverse effects. This may include providing designated parking for construction workers elsewhere (**EPR\_B1**), which has proven a successful strategy on other level crossing removal projects. Planning for the construction period and designating car parking spaces would contribute to a minor risk rating for the shopping precinct as a whole, although individual businesses may be affected more than others. Refer to EES Technical Report G *Traffic* for more detail.

##### 7.1.1.2 Business disruption – access changes

It is accepted by traders that rail services would be temporarily disrupted during the construction period, along with some intermittent road closures (especially at the level crossing intersection to be removed). However, there are concerns around the timing and placement of these closures, with access across the rail corridor vital to business access. As discussed earlier, this is due to the majority of patrons to these shopping precincts who live in the surrounding suburbs to the east of the railway line, and changes to the crossings that may dramatically change their inclination to go to these particular businesses.

Another consideration is the propensity for people to use the train replacement bus services, which generally attract a lower patronage than normal train services, as these are slower than the train service and perceived to be less reliable. This may also affect the number of potential customers who can access businesses within the precinct.

Concerns were raised about parking during the summer periods, as many people looking to access the adjoining beaches use the parking along Nepean Highway, putting further pressure on the limited parking spaces available to people utilising the businesses.

By temporarily removing parking during construction in both these areas, this will create a cumulative impact and potentially make the wider area less desirable for potential customers due to the disruption. Due to there being alternatives to many of the businesses in neighbouring suburbs, the traders were concerned that temporary losses to business may become permanent. One business estimated that if they closed for a month it would lose up to 40 percent of its customer base (**risk B7**).

## Management and mitigation

This impact may be managed by the careful planning and phasing of construction, ensuring that the alternative access provided is clearly signed and (where possible) comparable in distance to the current routes.

Ensuring high quality public transport services remain in place when the trains are not operating is also vital, as commuters expect an efficient, timely and comfortable alternative. Some measures to ensure this is provided may include temporary weather protected waiting areas and customer service staff for the train-replacement bus services.

Traders also noted the importance of early communication from the projects and road management authorities regarding changes to road conditions, as well as alternative routes, in order for businesses to advise their customers (**EPR\_SC1**). Traders noted that many customers used Edithvale Road, and if the Nepean Highway was not accessible from this route for a period of time, customers would benefit by knowing in advance. (**EPR\_B1**). LXRA has worked closely with traders during other recent level crossing removals to ensure early and clear communication about any potential road closures. It is expected this work will be done in accordance with the community and engagement management plan (**EPR\_SC1**).

This may also include assigning case managers to businesses or simply giving out vouchers to commuters and construction workers, to incentivise use of the local businesses. Details such as how the programs will be funded, duration of the program, and which businesses would be included would be included in the business disruption plan. The business disruption plan would be developed in consultation with the City of Kingston and in place prior to the commencement of construction, excluding ancillary activities, preparatory and enabling works.

### 7.1.1.3 Business disruption – dust and amenity changes

There are a number of hospitality businesses along the two shopping strips, some of which have outdoor seating areas along Nepean Highway. Amenity changes (such as increased dust, vibration and noise) which occur during construction may make these seating areas less desirable to potential customers.

It has also been identified that odours may occur during the main occupation when acid sulfate soils or other organic materials would be excavated (EES Technical Report C *Acid Sulfate Soils and Contamination*). When disturbed and exposed to air, these soils produce an unpleasant odour which may also contribute to reduced amenity of the area during the construction period.

It was determined that when assessing the risk of this impact, the changes to dust and amenity were rated as negligible during the construction period.

## Management and mitigation

Careful management of the construction process will ensure the amenity issues are managed and mitigation (**EPR\_AQ1**, **EPR\_AQ2**, **EPR\_NV2** – refer to EES Technical Report I *Air Quality* and EES Technical Report H *Noise and Vibration*). This would include close consultation with traders around specific timings construction periods where noise, dust and odours may be especially prominent. (**EPR\_B1** and **EPR\_SC1**). Construction dust may be managed through the use of water trucks to spray roads during especially dusty works.

### 7.1.2 Operational impacts

#### 7.1.2.1 Increased competition – retail spaces in new station

Depending on the final design of the new station at Edithvale, there may be opportunity for small retail areas to be built in to the design of the new station forecourt (**risk B8**).

A Metro Trains Melbourne (MTM) design requirement necessitates that a small kiosk space (25 square metres) is included within the Edithvale design. There is a risk to existing local businesses that a small hospitality or service businesses (such as a coffee shop or newsagent) may occupy the space.

This may slightly increase the competition with similar businesses within the shopping precinct, especially given that it will be in a high pedestrian traffic area.

#### Management and mitigation

The level of impact that new retail space may have will vary depending on what type of business uses the space and the overlap between it and existing stores in the precinct. Overall, the space designated for a small retail premises within Edithvale station is small, and is not likely to provide any speciality services – similarly to other level crossings removed throughout Melbourne. It is therefore considered that no management or mitigation is recommended for this risk as any potential impacts would be negligible.

#### 7.1.2.2 Improved precinct amenity

With the two level crossings removed, the traders expressed their belief that this would provide significant amenity uplift for the wider precinct. This may have the effect of making the area more attractive for investment (reducing the shop vacancy rate) and bringing more people to the precinct – increasing the chance of passing trade for existing businesses.

#### Management and mitigation

Along with businesses, residents and other key stakeholders, the design of the new station and surrounding landscaping would be informed by consultation with these parties. This would ensure that the final design would have received input from business owners about how they think the look of the new precinct could best achieve the impact stated above.

## 7.2 Bonbeach

### 7.2.1 Construction impacts

Traders in Bonbeach held the same concerns over the reduced availability of car parking, access changes, and dust and amenity changes as those in Edithvale. Refer to 7.1.1.

### 7.2.2 Operational impacts

#### 7.1.2.3 Increased competition – retail spaces in new station

Refer to discussion in 7.1.2.1.

#### 7.2.2.1 Increased competition – loss of visibility

Three of the Bonbeach businesses surveyed identified the loss of 'free advertising' to train passengers as a potential impact from the level crossing removal.

The traders were concerned that by having a below-ground station, the visibility of their shopfronts and signage will be lost (**risk B8**).

## Management and mitigation

While this risk is considered to be negligible, it is recognised that lines of visibility to commercial areas would be impacted by the projects. Discussions with traders would be ongoing throughout the delivery of the project (**EPR\_SC1**) and the Alliances would work with traders and relevant stakeholders (MTM and Public Transport Victoria (PTV) for example) to establish outcomes to minimise the impacts associated with this risk. Any physical advertising components (such as signage) would be proposed in accordance with the Urban Design Framework and the Bonbeach Urban Design Guidelines (**EPR\_UD1**).

## 8 Environmental Performance Requirements

The EPRs required for the projects to achieve acceptable environmental outcomes are summarised in the table below. The EPRs are applicable to the final design and construction approach and provide certainty regarding the environmental performance of the projects.

**Table 5 Edithvale and Bonbeach Environmental Performance Requirements**

EPR ID	Environmental Performance Requirement	Stage
EPR_B1	<p><b>Business Disruption Plan</b></p> <p>Minimise impacts to local business through preparation and implementation of a Business Disruption Plan. The business disruption plan must be consistent with an approved Community and Stakeholder Engagement Management Plan (EPR reference SC1) and include:</p> <ol style="list-style-type: none"> <li>transport planning prior to road closures to minimise impacts to business access and parking (EPR reference T1)</li> <li>a process for communication with traders and businesses</li> <li>management of potential amenity impacts during construction (EPR references AQ1, AQ2, NV2, and NV3).</li> </ol>	Construction
EPR_UD1	<p><b>Urban Design Guidelines</b></p> <p>Design projects in accordance with the LXRA Urban Design Framework and project specific Urban Design Guidelines. The urban design guidelines must consider:</p> <ol style="list-style-type: none"> <li>identity</li> <li>connectivity and wayfinding</li> <li>urban integration</li> <li>resilience and sustainability</li> <li>amenity</li> <li>vibrancy</li> <li>safety</li> <li>accessibility</li> </ol> <p>Seek the advice of the LXRA Urban Design Advisory Panel (chaired by the Office of the Victorian Government Architect, and includes officers of Kingston City Council) during the preparation of detailed design to ensure an appropriate response to the LXRA Urban Design Framework.</p>	Operation

### 8.1 List of other relevant EPRs

EPRs listed in other technical assessments within the EES that are relevant to this BIA include:

- EES Technical report G *Traffic* (EPR\_T1)
- EES Technical report H *Noise and Vibration* (EPR\_NV2)

- EES Technical report I *Air Quality* (**EPR\_AQ1** and **EPR\_AQ2**)
- EES Technical Report L *Social* (**EPR\_SC1**).

## 9 Conclusion

### Existing conditions

The Edithvale and Bonbeach study areas are characterised by the predominant low to medium density residential housing, with a strip of commercial premises along Nepean Highway, adjacent to the station areas.

These commercial premises are primarily small retail, hospitality and services based, with each business hiring fewer than 20 people and each having an aggregated turnover of less than \$50,000.

Traders were highly supportive of the level crossing removal, and stated that the vast majority of customers live on the eastern side of the rail corridor, and access their business by private car. They also indicated that passing by trade was relatively minor, however some agreed that being able to see their advertising from the train was beneficial.

### Impact assessment

The BIA found that the key risk is associated with business access during the construction period.

Potential issues identified for traders in the two precincts are generally similar to those observed and managed before in other level crossing removals which have already been completed by LXRA, and are listed below:

- Reduced access to parking during construction – traders noted that parking in the two precincts is already limited, and parking opposite shopping strips along the Nepean Highway is generally all day parking used by commuters. A reduction in parking because of construction or increased competition for spots because of their use by workers would likely adversely impact businesses within the two study areas.
- Reduced access to the precincts as a result of road closures – it is anticipated that for a part of the construction period, there will be road closures at the current level crossings at Edithvale (Edithvale Road) and Bonbeach (Bondi Road). This may cause delays for motorists and reduce access to the retail strips for customers. Traders stated the majority of their customer base lives on the eastern side of Nepean Highway, so road access is an important element in the customer catchments for all traders in the area. This could temporarily reduce customers and revenues for traders.
- Amenity impacts associated with dust, noise and odour – this could reduce the attractiveness of both areas, and temporarily decrease the number of customers who visit both precincts.
- Loss of visibility of their shop signage from the train – the loss of free advertising from commuters was identified as a potential impact from the level crossing removal.
- There is concern that there may be increased competition particularly for food and beverage services from additional retail spaces at the upgraded stations, depending on the final design.

These impacts can be minimised through the preparation and implementation of a Business Disruption Plan and consultation with local traders. The extensive experience LXRA has gained through removing similar level crossings across the network will mean they are best placed to deliver these projects with minimal negative impacts to traders.

Once completed, the traders stated that the redeveloped stations would improve the visual amenity of the area.



# 10References

Primrose, David, Frankston Line Community Sentiment – Edithvale Road, Edithvale, EY Sweeney, December 2016

Transport Integration Act 2010 (Vic)

Businesses by Industry Division by Statistical Area Level 2 by Employment Size Ranges, June 2014, June 2015 & June 2016 , Australian Bureau of Statistics, 2017

Businesses by Industry Division by Statistical Area Level 2 by Turnover Size Ranges, June 2014, June 2015 & June 2016 , Australian Bureau of Statistics, 2017

Place of usual residence – Census 2016, Australian Bureau of Statistics, 2017

# Appendix A – Risk assessment

Table A1 Guide to quantification of likelihood

Qualitative descriptions	Probability over a given time period	Basis
A. Certain	1 (or 0.999, 99.9%)	Certain, or as near to as makes no difference
B. Almost certain	0.2 – 0.9	One or more incidents of a similar nature has occurred here
C. Highly probable	0.1	A previous incident of a similar nature has occurred here
D. Possible	0.01	Could have occurred already without intervention
E. Unlikely	0.001	Recorded recently elsewhere
F. Very unlikely	$1 \times 10^{-4}$	It has happened elsewhere
G. Highly improbable	$1 \times 10^{-5}$	Published information exists, but in a slightly different context
H. Almost impossible	$1 \times 10^{-6}$	No published information on a similar case

Source: Bowden, A.R., Lane, M.R. and Martin, J.H., 2001, *Triple Bottom Line Risk Management – Enhancing Profit, Environmental Performance and Community Benefit*, Wiley and Sons, New York, 314 pp.

Table A2 Consequence table used for business risk assessment

Qualitative descriptor	Negligible		Minor		Moderate		Major	Extreme
Consequence description	Minimal, if any impact for some communities. Potentially some impact for a small number (<10) of individuals		Low level impact for some communities, or high impact for a small number (<10) of individuals		High level of impact for some communities, or moderate impact for communities area-wide		High level of impact for communities area-wide	High level of impact State-wide
	0.1	0.3	1	3	10	30	100	1000
<b>SOCIAL</b> <b>Amenity</b> (Traffic/ air/noise/odour/visual impacts)	Short term impacts that alter perception of area as a high amenity place to live / visit.		Short term (months) localised impacts that alter perception of area as a high amenity place to live / visit.		Medium term (1-2 years) regional impacts that alter perception of area as a high amenity place to live / visit.		Community perception that the area is significantly damaged.	Community perception that the area has experienced major damage.
	Region still seen as attractive place to live.		Region not locally seen as attractive place to live.		Region not widely seen as attractive place to live.		Area loses appeal as residential area. Recovery > 2 yrs.	Area is a place to be avoided. Recovery, if at all, >10 yrs.
<b>ECONOMIC</b> <b>Business activity</b>	Localised, short term (< 6 months) reduction in business activity. Loss of annual revenue <\$100,000.		Short term (6 - 12 months) reduction in business activity in local area. Loss of annual revenues \$100,000 to \$1,000,000.		Medium term (1 to 2 yr) reduction in business activity across a number of businesses over a wider area. Loss of annual revenues \$1,000,000 to \$10,000,000.		Long-term (>2 yr) reduction in business activities across a number of businesses in a regional area. Loss of annual revenues \$10,000,000 to \$100,000,000.	Permanent reduction in business activity across a number of businesses in a regional area. Loss of annual revenues \$100,000,000 to \$1,000,000,000.

Table A3 Business risks

Risk ID	Risk name	Risk pathway	EPR ID (initial)	Initial risk			EPR ID (final)			Residual risk		
				Likelihood	Consequence	Risk				Likelihood	Consequence	Risk
Construction risks												
B 7	Decreased revenue (construction)	Businesses suffer from temporary loss of revenue due to changed traffic conditions and other construction impacts	EPR B1 Business Disruption Plan EPR AQ1 Air quality (construction) EPR AQ2 Air quality management EPR T1 Transport Management Plan EPR NV2 Construction noise SC1 Community and Stakeholder Engagement Management Plan	Almost certain	Minor	Minor	As initial EPR	Almost certain	Minor	Minor		
Operation risks												
B 8	Decreased revenue (operation)	Existing businesses suffer from increased competition from new businesses in the railway station and/or reduced exposure to rail passengers	EPR SC1 Community and Stakeholder Engagement Management Plan EPR UD1 Urban Design Guidelines	Possible	Negligible	Negligible	As initial EPR	Possible	Negligible	Negligible		