

# Launceston Gateway Freight Demand Study

**Final**

Northern Midlands Council

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Independent insight.



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insight.

NMC

Neil Matthews Consulting



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# EXECUTIVE SUMMARY

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## Introduction

The Gateway Precinct includes the TRANSLink Industrial Estate, Launceston Airport and the Western Junction Rail node.

The TRANSLink Industrial Estate is one of the most regionally significant precincts in Northern Tasmania. It forms an important distribution point for goods and services for the region and the rest of the State. The relevance of the Gateway Precinct has also been recognised as part of the Greater Launceston Plan.

The Gateway Precinct is strategically positioned to attract and accommodate transport and logistics activities. In order to enable and support economic development in the region, the Gateway Precinct should provide optimal opportunities for industries to prosper.

To fully unlock the potential of the Precinct there is a need to understand the current and future freight task to identify the need for further infrastructure and servicing of the precinct.

Such requirements may involve (not limited to):

- Shared precinct infrastructure and services
- Intermodal facilities
- Road and other infrastructure upgrades

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## The Gateway Precinct

The Gateway precinct encompasses the TRANSLink Precinct, Launceston Airport, and the Western Junction rail node. The Gateway Precinct covers over 300 ha (hectares) of land, with 59 ha of vacant land available for development for new industrial-type businesses currently within the TRANSLink precinct and another 90 ha available in its expansion area. In total, the Gateway Precinct provides for over 1,500 jobs.

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## Freight Demand Projections

From a supply chain perspective, the Gateway precinct generally comprises two key activities, being:

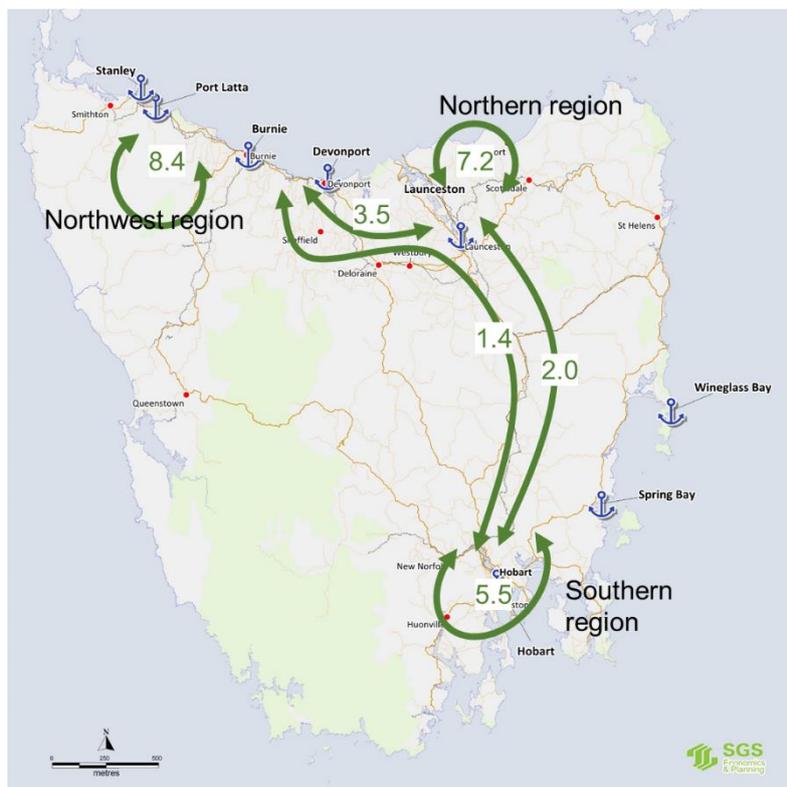
1. Location of businesses/enterprises that attract and generate from within the precinct itself; and
2. Co-location of freight logistics businesses that facilitate the movement of this freight.

Given the potential scope of the Gateway Precinct and the surrounding infrastructure, the freight and logistics businesses can be further segmented as:

1. Land and sea freight operators with complementary road transport and warehousing services;
2. An intermodal terminal operator that interfaces with rail services to the port and Brighton terminal (near Hobart); and
3. Air freight cargo handling services interfacing with the Launceston airport.

In 2010, Tasmania moved around 28 Mtpa (millions of tonnes per annum) of freight of which 2.3 Mtpa was moved by rail. Of the total volume:

- Around 21 Mtpa moves within each of the Northwest, Northern and Southern regions; 18.6 Mtpa of these movements are unprocessed or semi-processed bulk materials from mining, forestry and fuels sectors;
- 5.6 Mtpa relates to volume moving to/from the Northern region, dominated by consumer goods, timber, paper, and containerised industrial goods; and
- A further 1.4 Mtpa moves on a corridor through the Northern region from Southern region mainly to/from the ports in the Northwest.



Estimating freight markets can be a complex process, particularly where the movement of goods is highly dispersed and in small consignments. The approach adopted was to:

- Estimate the size and forecast for the **total land freight market for Tasmania**, using a range of data sources and economic metrics for growth;
- Segment the freight market to determine the size of the **contestable freight market for the Gateway precinct**, based on industry and product types and spatial assessments of origins, destinations, pathway and modes;
- Determine the future scenarios and conditions to **capture a share of the contestable market by the Gateway Precinct** (following in Section 5).

The estimate and composition of freight demand for 2014-5 is shown in the following table and is derived from Tasmania Freight Survey 2008-9 (Department of Infrastructure, Energy and Resources), TasPorts trade data for 2009-15 and ABS freight and economic data. The 2014 Tasmania Freight Survey was not available during this study.

Overall, there has been a decline in the volume of land transport, mostly attributed to the decline in forestry products. Some sectors have seen an increase in freight volumes.

#### ESTIMATE OF FREIGHT MOVEMENTS FOR 2015 ('000 TONNES)

2015 ESTIMATE	Intra-regional freight flows				Interregional flows							Total (All)
	Origin	North west only	Northern only	Southern only	Subtotal	North west	Northern	Northern	Southern	Southern	North west	
Destination						Northern	North west	Southern	Northern	North west	Southern	
Forestry – logs, woodchip	1,488	1,682	1,100	<b>4,270</b>	453	323	323	194	129	65	<b>1,488</b>	<b>5,758</b>
Timber/Paper	194	194	194	<b>582</b>	65	323	0	194	65	129	<b>776</b>	<b>1,359</b>
Agriculture; unprocessed	1,560	1,135	284	<b>2,979</b>	426	142	142	142	142	142	<b>1,135</b>	<b>4,114</b>
Agriculture; processed	426	284	0	<b>709</b>	213	142	142	35	71	142	<b>745</b>	<b>1,454</b>
Construction/ concrete	1,592	2,760	2,760	<b>7,112</b>	0	0	0	0	0	0	<b>0</b>	<b>7,112</b>
Consumer goods	358	358	0	<b>716</b>	657	358	90	239	299	119	<b>1,761</b>	<b>2,478</b>
Fuel	276	92	368	<b>735</b>	0	0	0	0	0	0	<b>0</b>	<b>735</b>
Mining and industrial products	296	296	296	<b>889</b>	0	148	198	99	99	49	<b>593</b>	<b>1,482</b>
Mining via pipeline	2,000	0	0	<b>2,000</b>	0	0	0	0	0	0	<b>0</b>	<b>2,000</b>
<b>Totals</b>	<b>8,191</b>	<b>6,801</b>	<b>5,002</b>	<b>19,994</b>	<b>1,813</b>	<b>1,437</b>	<b>894</b>	<b>903</b>	<b>804</b>	<b>647</b>	<b>6,498</b>	<b>26,492</b>

Forecasts were developed to 2045 given the strategic significance and scale of the Gateway Precinct. The forecast was informed by relevant economic indicators, and on advice from key Government advisers, in particular State Growth. Five year intervals were used for estimates for 2020 and 2025, with 10-year intervals used for 2035 and 2045.

Forecast Tasmanian land transport freight task is expected to rise above 40 million tonnes per annum, with around 25% of the volume attributed to processed agricultural products, food, consumer goods and general freight. A proportion of the volumes associated with processed agricultural products, consumer goods and general freight are applicable to Gateway.

## FREIGHT FORECAST TO 2045 BY KEY SECTOR ('000 TONNES)

Sector	Forecast for freight transport to 2009-2045					
	2009	2015	2020	2025	2035	2045
Forestry – logs, woodchip	8,900	5,758	5,740	5,740	5,740	5,740
Timber/Paper	2,100	1,359	1,330	1,330	1,330	1,330
Agriculture; unprocessed	2,900	4,114	5,510	6,690	8,540	10,390
<b>Agriculture; processed</b>	1,025	1,454	1,940	2,460	3,300	4,440
Construction/concrete	6,700	7,112	7,470	7,860	8,680	9,580
<b>Consumer goods and general freight</b>	2,075	2,478	2,950	3,510	4,720	6,350
Fuel	800	735	740	740	740	740
Mining and industrial products	1,500	1,482	1,550	1,650	1,810	2,010
Mining via pipeline	2,000	2,000	2,000	2,000	2,000	2,000

The Gateway Precinct is well located to capture:

1. A high proportion of containerised goods moving between the sea ports to the Northern region;
2. Tasmania-wide distribution of goods for tenants (manufacturers, wholesalers, retailers, etc.) who are located within the Gateway Precinct;
3. Inbound and outbound flows of goods where agricultural and industrial processors are located within the Gateway Precinct; and
4. Movement of goods from firms located “off-site” but seeking to access the proposed Gateway Precinct; this movement will depend on the relative cost of direct transport by road from origin to destination versus the aggregate cost of movement of the goods via the intermodal terminal.

A forecast of the size of the contestable freight market for the Gateway Precinct was determined by applying market share estimates to freight tonnage, based on:

1. Proximity to the freight flows, within and to/from the Northern region
2. Scale of suitable freight sectors and types
3. Commercial drivers relevant to enterprises and freight operators.

### Three growth scenarios for the Gateway precinct

Three economic and freight growth scenarios were developed for the Gateway precinct:

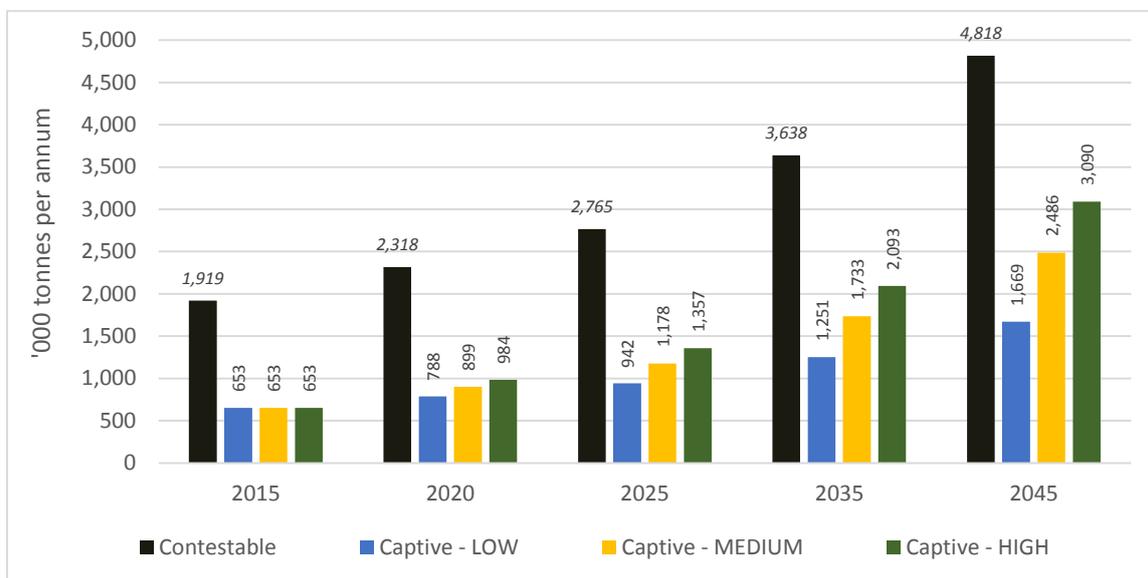
1. Business as usual scenario, capturing incremental growth
2. Freight precinct scenario, capturing the development of an intermodal freight hub serving Northern Tasmania and with links to service Tasmania, plus incremental growth (scenario 1). This scenario assumes the relocation / establishment of a major freight operator to relocate to the precinct to benefit from the intermodal facilities.
3. An integrated site accommodating a rural processing cluster, assuming the establishment of a major rural processing plant, in addition to growth generated by scenario 1 and 3.

The graph below shows the forecast volumes of the contestable freight, and the three scenarios considered above.

1. The precinct presently handles around 600,000 tonnes per annum.

- By 2025, the precinct could capture 950,000 to 1.4 million tonnes per annum, depending on scope of the development and profile of the future tenants.
- By 2045, the volume could increase to 1.7 to 3.0 million tonnes.

## SCENARIO RESULTS FOR CONTESTABLE AND CAPTIVE TONNAGE TO 2045



Assuming a 35% mode share<sup>1</sup> outcome for rail, the intermodal terminal could handle the volume shown in the following table. While the volumes are not as large as mainland terminals, these volumes however indicate a prima facie a case for further and more detailed justification of the intermodal terminal, including commercial modelling of prices and costs in the longer term.

## POTENTIAL CONTAINER TRAFFIC

Throughput volumes – full and empty ('000 TEU's pa)	Year				
	2015	2020	2025	2035	2045
Scenario 1 (Low growth)	36	44	53	70	94
Scenario 2 (Medium growth)	36	50	66	97	139
Scenario 3 (High growth)	36	55	76	117	173

Actual intermodal terminal volumes will depend on a range of service and price factors, and the road freight sector competing with rail services.

## Implications for Site Occupancy

### Warehousing

Based on a range of underlying assumptions, a direct relationship between volume throughput and warehouse area (under roof) can be made, depending on:

- The style and technology for the warehousing methods employed
- The rate of inventory turnover to demand, influencing the quantity of stock being held
- Any interrelationship between processing (e.g. agriculture) and production inputs

<sup>1</sup> Mainland intermodal terminals serving key industrial and warehousing precinct generally achieve 30-45% of market share however outcome depends on price and degree of contestability by road freight operators

From the modelling,

- For scenario 1, the freight demand by 2025 equates to a cumulative warehouse footprint between 10 and 20 hectares. By 2045, this area increases to between 20 and 30 hectares;
- For scenario 2, demand by 2025 equates to a cumulative warehouse footprint between 16 and 28 hectares. By 2045, this area increases to between 30 and 50 hectares; and
- For scenario 3, demand by 2025 equates to a cumulative warehouse footprint between 15 and 24 hectares. By 2045, this area increases to between 35 and 60 hectares.

### Intermodal terminal

There is certainly scope in the long term for the integration of a rail-serviced intermodal terminal within the Gateway Precinct. The requisite area for the intermodal terminal largely depends on volume throughput and the range of services provided. Most new intermodal terminals have been designed to integrate empty container storage for shipping lines.

While the specific design of the terminal needs to be scalable over time, the area required for all scenario varies from 8 to 10 hectares.

### Processing

Under scenario 3, the Gateway Precinct would attract a significant rural processing plant, comparable to the Simplot processing plant in Devonport. In terms of land area, the likely uptake would be in the area of 7.5 ha.

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## **Economic Impacts of the Gateway Precinct as an Intermodal Hub**

The economic impact assessment (EIA) shows that scenarios 2 and 3 generate significant economic impacts for the region. Scenario 2 generates a value-added of \$50 million per annum, and 538 jobs by year 30. Scenario 3 generates a value-add of \$84 million per annum, and 830 jobs by year 30. These impacts are not immediate, as there is currently insufficient market demand for these scenarios to effectuate. The impacts are likely to occur –based on the freight demand analysis- over a twenty to thirty year period.

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## **Infrastructure issues**

The Tasmanian economy is supported by an extensive road system reflecting the need to connect a highly dispersed population separated by rugged mountainous terrain. There is a high dependency on road transport for the movement of goods and freight. Challenges to implementing a more integrated approach to transport planning within the Tasmanian context include:

- Ageing transport infrastructure;
- Small and dispersed permanent resident population, and slow population growth, and
- Uncoordinated investment decisions by the government versus the private sector.

In response to this increased demand for access to the road network over time, there will be an increased need to improve the level of access and egress to the Gateway Precinct. This will come mainly in the form of a gradual development to the south along with the establishment

of a freight hub in close proximity to the Western Line. Although not currently identified in any long term plans, it is anticipated that more attention will need to be given to upgrading the Western Junction roundabout and the lesser route C417 (Mill Road) towards Perth.

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### Strategic issues

Scenarios 2 and 3 rely on an intermodal hub being established in the Gateway Precinct, and of rural processing activities being attracted. The intermodal hub can arguably only be viable if a significant freight forwarder was to relocate to the Gateway precinct. The rural processing activities depend on the State's success in growing the agricultural sector and the export to domestic and overseas market. Strategic policy directions of importance are:

- Strategies in regards to urban redevelopment in Launceston's inner urban areas, and
- State Government's promotion and trade strategies in regard to agricultural production.

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### Recommended actions in the short term

There is insufficient freight demand in the short to medium term for developing an intermodal hub. To ensure future development potential is fully utilised, there is a need to address the following in the short term:

- **Complete Concept Plan as Stage 1 of a Master Plan.** This plan would need to identify the need for quarantining of land for a future intermodal hub, and preferred locations and planning use tables for rural processing (including required supporting infrastructure).
- Use the Concept Plan (underpinned by an attraction strategy and possible incentives) to **attract large existing businesses** to the Gateway Precinct (including processors and logistics firms).
- **Ensure the Special Area Plan Overlay provides for appropriate opportunities** for the development of intended uses (export, transport, logistics and processing).
- Liaise with Coordinator General and other trade promoting State services to **advocate for the Gateway precinct as a central hub for export, transport, logistics and rural processing** to drive the State's objectives in regards to growing the agricultural sector and its exports.
- Develop a strategy for **attracting a major freight forwarder** to the Gateway Precinct.
- **Formally quarantine land** for future intermodal terminal and air freight precincts.
- **Review** immediate progress and potentially revisit need for Master Plan in 2018-2020.

# 1 BACKGROUND

## 1.1 Introduction

The Gateway Precinct includes the TRANSLink Industrial Estate, Launceston Airport and the Western Junction Rail node.

The TRANSLink Industrial Estate is one of the most regionally significant precincts in Northern Tasmania. It forms an important distribution point for goods and services for the region and the rest of the State. The relevance of the Gateway Precinct has also been recognised as part the Greater Launceston Plan.

The Gateway Precinct is strategically positioned to attract and accommodate transport and logistics activities. In order to enable and support economic development in the region, the Gateway Precinct should provide optimal opportunities for industries to prosper.

There are a number of growth drivers for the Gateway Precinct. The roll-out of the Midlands Irrigation Scheme and the successful take-up of this and other irrigation schemes in the region is an important driver for agricultural production, rural industries, processing and transport.

Over time, some industries currently located in the City of Launceston may consider relocating to the Precinct, especially if this was supported by incentives. Transport and logistics firms in the City generate substantial freight movements through the City and affect amenity. In addition, the land currently used by these industries may be redeveloped to higher value commercial, residential, retail and mixed uses in the City. The increased levels of activity at the Gateway Precinct will likely have positive impacts on productivity through collaboration, knowledge transfer and other benefits of co-location.

Road, rail, airport and other infrastructure upgrades that are being planned for the region may further strengthen the precinct's strategic position and opportunities for logistics activities to grow. With increasing market demand for Tasmanian fresh produce, there may be opportunities to increase air freight from Launceston Airport. These transmodal opportunities provide the precinct with a unique profile within Tasmania.

## 1.2 Objectives

To fully unlock the potential of the Precinct it is important to understand the current and future freight tasks of the region before the infrastructure and servicing needs of the precinct can be identified.

This requirement may involve the development of a better understanding of the:

- Existing shared precinct infrastructure and services,
- Planned intermodal facilities, and
- Future road and other infrastructure upgrades.

The Project team for the Gateway Precinct Masterplan has identified the need for a freight demand analysis. This freight demand analysis is (as per Brief):

- Primary - to establish basis of evidence to support the development of a master plan for the precinct.
- Secondary – to inform decision-making by public or private entities about whether to proceed to full business case development for potential infrastructure, enterprise or other investments

either at the precinct or at locations that might feed freight into or receive freight from the precinct.

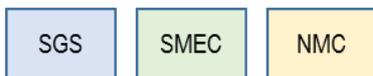
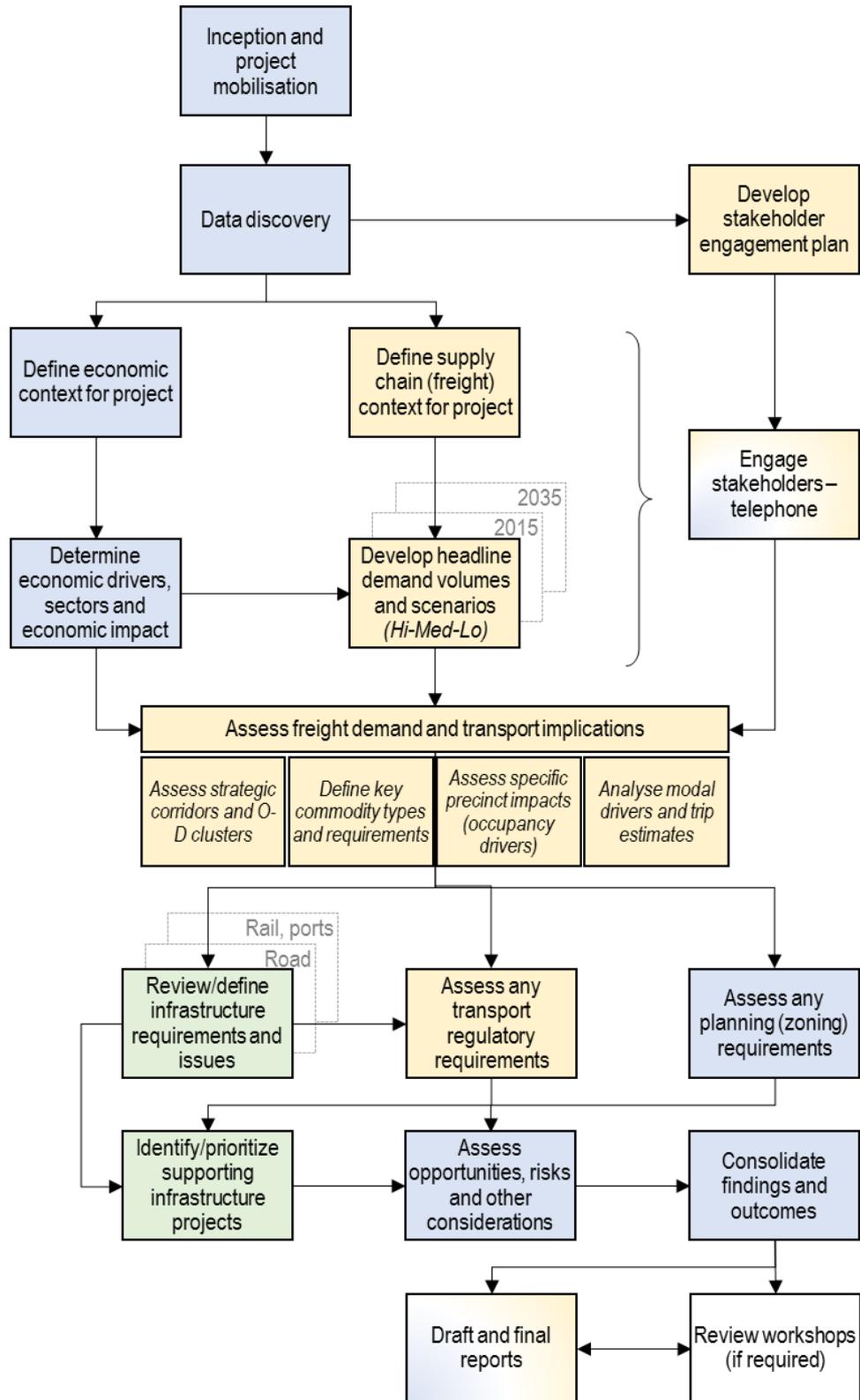
### 1.3 Approach

The approach for the freight demand analysis encompasses the following key steps:

- Establish a solid understanding of the current and future economic development of the region, and how this relates to the Gateway Precinct: its current and likely future uses. This includes the consideration of any projects or opportunities to relocate industries from the City of Launceston to the Precinct, freeing up opportunities for commercial, service and knowledge based uses in the city.
- Determine the supply chain for the precinct (based on current economic activity) and develop headline demand scenarios (low, medium and high) for the next 20 years on the basis of the economic projections.
- Assess freight demand and transport implications, informed by a detailed analysis of corridor, commodity, precinct and modal drivers.
- Use the findings to assess the adequacy of infrastructure provisions, zoning and development conditions and transport regulatory requirements.
- Formulate recommendations for the future development of the precinct based on these findings.

A detailed methodology is set out in Figure 1.

FIGURE 1 METHODOLOGY



## 1.4 This Report

The report is structured as follows:

- Section 1 – Background and aim
- Section 2 – The Gateway Precinct, provides a description of the precinct site, development potential and levels and types of activity
- Section 3 – Freight demand framework, provides an explanation of the freight demand modelling, logic and important drivers
- Section 4 – Current demand of the freight market, provides an overview of the state freight market and freight related activities in the region to 2045
- Section 5 – Freight demand scenarios, describes possible future development scenarios for the freight precinct, and related projected levels of economic activity and freight demand
- Section 6 – Implications for site occupancy, describes the likely land demand levels for warehousing, intermodal uses and rural processing activities
- Section 7 – Economic impacts of the Gateway Precinct, describes the levels of economic activity expected under the three scenarios, and the economic impacts of enabling intermodal facilities and rural processing activities
- Section 8 – Network and infrastructure issues, provides a contextual review of the Gateway Precinct in the State network
- Section 9 – Other considerations, reviews the importance and possible impacts of wider policy issues on the prospects of the Gateway Precinct, and constraints and opportunities in regard to existing regulation and planning
- Section 10 – Summary and conclusions, provides recommendations for actions

# 2 THE GATEWAY PRECINCT

The Gateway Precinct (“the precinct”) is located in the Northern Midlands region of Northern Tasmania. As of June 2011 (Census count) the total population of Northern Tasmania was 137,560 people. Northern Tasmania is permanent residence for 28% of the total Tasmanian population.

The top five industry sectors in Northern Tasmania are (2010-11):

1. Manufacturing
2. Rental, hiring and real estate services
3. Financial and insurance services
4. Health care and social assistance
5. Wholesale trade.

Some of the region’s opportunities and challenges are (SGS, 2014<sup>2</sup>):

- As an Island state, the economy has to overcome disadvantages of relative isolation (transport connectivity issues) and limited scale to compete effectively
- The population and workforce of Northern Tasmania are ageing and the proportion of the population in the workforce will decline
- Northern Tasmania currently holds an experienced and skilled engineering industry base. Developing and growing a skilled workforce across professions and key occupations may be an issue as young professionals leave for the mainland to pursue careers
- Northern Tasmania is still recovering and diversifying after the liberalisation of Australian international trade in the 1990s and early 2000s, the industries of agriculture and manufacturing were especially hard hit
- Northern Tasmania is strategically positioned in terms of regional transport logistics. For example, TRANSLink is home to a \$75 million grocery distribution centre that evolved from the rationalisation of regional distribution centres across Tasmania to service the entire state for the Statewide Independent Wholesalers group.
- Northern Tasmania is an agricultural region and it is benefitting from the roll-out of irrigation schemes. The irrigation schemes enable more intensified and more reliable agricultural production, a shift towards higher value niche products and fresh commodities.

## 2.1 Site development potential

The Gateway Precinct, which encompasses the TRANSLink Precinct, Launceston Airport, and the Western Junction rail node, is identified as a significant freight/logistics hub within the Northern Tasmania region given the existing conditions and strategic location of the precinct<sup>3</sup>. The Gateway Precinct has been identified as a “regionally significant industrial precinct<sup>4</sup>” and is mostly zoned General Industrial. Comprising of both an airport and an existing base of transport and logistics businesses, the precinct handles approximately 600,000 tonnes of freight per annum and has significant additional room for growth in the freight volume with additional development.

The Gateway Precinct is situated approximately 15 minutes from Launceston, the second-largest economic activity centre within Tasmania, providing businesses within the precinct direct access to a large market. Furthermore, the precinct has direct access to three significant modes of freight transport (road, rail, and air) and is approximately one hour away from the deep water Port of Bell Bay by road,

<sup>2</sup> SGS (2014), Northern Tasmania Industrial Land Strategy, for Northern Tasmania Development

<sup>3</sup> Greater Launceston Plan & Northern Tasmania Industrial Land Strategy

<sup>4</sup> Northern Tasmania Industrial Land Study - SGS Economics & Planning, 2014.

giving the precinct indirect access to freight transport by sea. The Gateway Precinct is located on a key transport route between Southern Tasmania and Northern and North-West Tasmania.

The Gateway Precinct covers over 300 ha (hectares) of land, with 59 ha of vacant land available<sup>5</sup> for development for new industrial-type businesses currently within the TRANSLink precinct and another 90 ha available in its expansion area. Up to 130 ha may also be available for further industrial-type businesses pending future examination of the land. In addition to the available land within the TRANSLink precinct, Launceston Airport also has approximately 7.5 ha available for business developments, including retail, commercial, light industrial, and transport and warehousing.

Given these conditions (i.e. existing business activity, strategic location, land for development), the Gateway Precinct has the potential to support businesses that are dependent on freight movement - such as rural processing, manufacturing, wholesale, and retail businesses.

The Gateway Precinct is in line with, and supported by regional strategic policy. This includes the Regional Land Use Strategy of Northern Tasmania<sup>6</sup> and the Greater Launceston Plan. Regional strategic policy highlights the need for industrial precincts to be strategically positioned to ensure that the land value of industrial zoned land is efficiently used, and for appropriate industrial-type firms to be co-located in order to utilise the benefits of agglomeration and encourage innovation.

## 2.2 Industries and employment at the Gateway Precinct

The Gateway Precinct hosts a significant amount of economic activity. The majority of industrial activity is concentrated in the TRANSLink area of the Gateway Precinct. This area contains 60 businesses and approximately 1,250 employees, including some of the largest suppliers of groceries to supermarkets throughout Tasmania (SRT and Woolworths). The bulk of these businesses are transport-oriented or transport-reliant, which is driven by the precinct's immediate access to various modes of freight transport.

Adding to this, the Launceston Airport provides employment for over 300 employees, mostly in jobs related to the airport's operations and services.

The Western Junction rail node is the main rail access point for transport and logistic services within the Gateway Precinct, supporting the growth of more transport-related businesses within the precinct and its potential development as a transport hub in the Northern Tasmania region.

<sup>5</sup> TRANSLink Investment Prospectus, to be released in 2016

<sup>6</sup> Northern Tasmania Development, 2013

Table 1 provides a breakdown of the number of businesses and employment within the Gateway Precinct by industry-type. Current total employment in the area reaches about 1,570 jobs across 81 businesses.

TABLE 1 GATEWAY PRECINCT BUSINESSES & EMPLOYMENT

Industry	No. of Businesses	Employment
Transport, Postal and Warehousing	20	330
Wholesale Trade	11	559
Manufacturing	11	231
Rental, Hiring and Real Estate Services	10	115
Construction	7	127
Retail Trade	4	53
Professional, Scientific and Technical Services	4	39
Administrative and Support Services	3	46
Agriculture, Forestry and Fishing	3	12
Public Administration and Safety	2	20
Other Services	2	6
Electricity, Gas, Water and Waste Services	1	17
Health Care and Social Assistance	1	5
Arts and Recreation Services	1	5
Accommodation and Food Services	1	4
<b>Total</b>	<b>81</b>	<b>1,569</b>

# 3 FREIGHT DEMAND FRAMEWORK

This section describes the logic and method for determining freight demand. Freight demand estimates for the Gateway Precinct have been developed using the logic and framework presented below. A key concept that will be explored in more detail is the proportion of ‘contestable freight’.

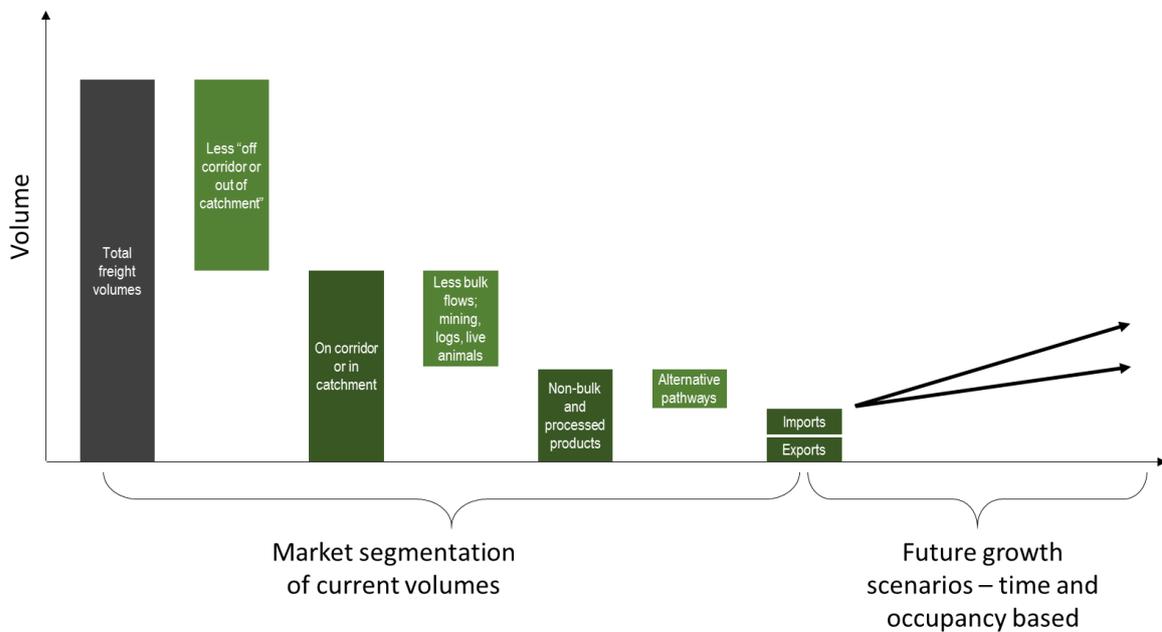
## 3.1 Methodology

Developing the framework for estimating contestable freight demand for the Gateway Precinct has adopted a three-step process. The first two steps involve (i) estimating the current freight market for Tasmania, then (ii) segmenting the demand into contestable and non-contestable freight. The final step then forecasts future demand given the potential occupancy of the Gateway Precinct and growth in the underlying industries.

A scenario based approach is needed to forecast future demand, as there are many possible variants in the occupancy of the site, and future growth underpinned by Government policy and private sector investment is yet to be realised.

The following diagram summarises the step-wise process for estimating potential freight demand.

FIGURE 2 - SEGMENTING FREIGHT DEMAND AND FORECASTING FUTURE GROWTH



Referring to the diagram, the steps are as follows:

1. The Gateway Precinct will have a market catchment and relate to specific freight corridors. Some freight demand within Tasmania, being located outside the catchment or off the corridor,

will not be contestable by the Gateway Precinct. Many of the intra-regional freight flows within the Northwest and Southern regions are therefore not contestable;

2. Given the zoning and planning of the Gateway Precinct, there are products and flows that will not be attractive for the Gateway Precinct. For example, bulk mining or forestry flows as input to the Bell Bay industrial zone will not be contestable by the precinct. Similarly, the staging and processing of live animals through the Gateway Precinct is not considered viable, however animal products processed elsewhere may be transferred for further processing by enterprises located within the Gateway Precinct;
3. Finally, there are products and flows that will not have a pathway via the Gateway Precinct because of a range of commercial factors – for instance where:
  - a. Enterprises (including freight operators) have made long term investments in property and equipment elsewhere within the catchment
  - b. Spatial relationships of origins, destinations and pathways are not efficient
  - c. The competitive nature of freight operators leads them to avoid co-existence, engagement or interaction, particularly through key nodes such as an intermodal terminal; and
4. Freight which is captured by the Gateway Precinct will be processed differently depending on whether comprised of import or export flows.

### 3.2 Regional context

Freight demand for the Gateway Precinct needs to be considered in a regional context.

Tasmania has three broad economic regions: the Northwest, Northern (including north east coast) and Southern. Freight flows as “intra-regional flows” within these regions and “inter-regional flows” between the regions. The Gateway Precinct may influence and attract some of these freight flows, as classified in the following table.

TABLE 2 – CLASSIFYING CONTESTABILITY OF INTRA AND INTER REGIONAL FREIGHT FLOWS THROUGH THE GATEWAY PRECINCT

Freight flow attractiveness and contestability by Gateway Precinct		Destinations		
		Northwest	Northern	Southern
Origins	Northwest	●	●	● / ●
	Northern	●	●	●
	Southern	● / ●	●	●

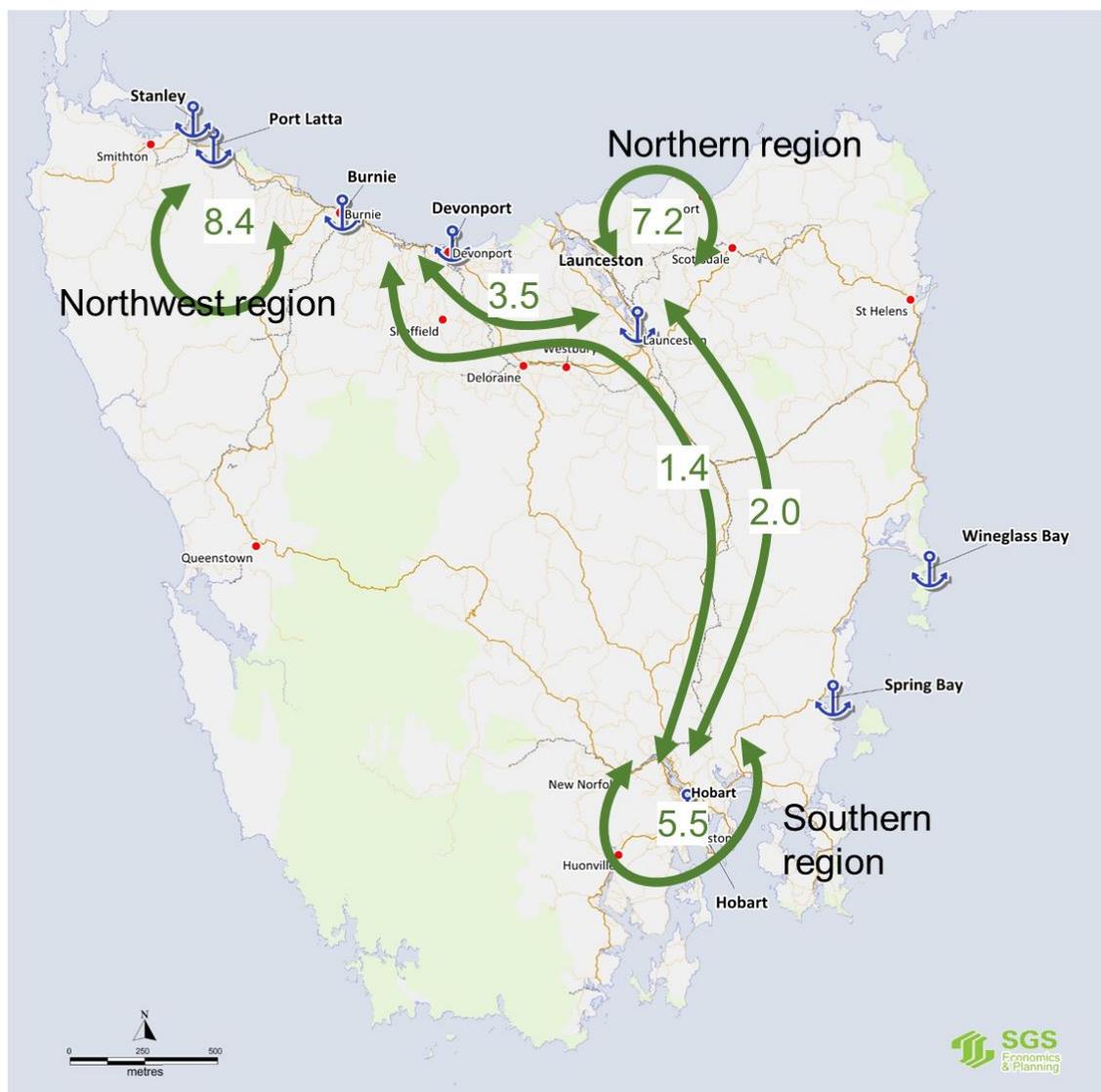
- The Gateway Precinct has a spatial proximity to critical infrastructure and may capture upstream and downstream volumes depending on the profile of enterprises and services within the precinct
- There is some potential for the Gateway Precinct to capture these flows dependent on unique services provided within the Gateway Precinct; for example, accessing rail services through the intermodal terminal for part of the journey, or access to air freight services
- The Gateway Precinct will not compete for these volumes as out of catchment or off corridor

In 2010, Tasmania moved around 28 Mtpa (millions of tonnes per annum) of freight of which 2.3 Mtpa was moved by rail. Of the total volume:

1. Around 21 Mtpa moves within each of the Northwest, Northern and Southern regions; 18.6 Mtpa of these movements are unprocessed or semi-processed bulk materials from mining, forestry and fuels sectors;
2. 5.6 Mtpa relates to volume moving to/from the Northern region, dominated by consumer goods, timber, paper, and containerised industrial goods; and
3. A further 1.4 Mtpa moves on a corridor through the Northern region from Southern region mainly to/from the ports in the Northwest.

Freight flows contestable by the Gateway Precinct relate to (a) inter-regional flows between Northwest and Northern regions; (b) the Northern and Southern regions, and (c) some intra-regional flows within the Northern region. Freight contestability will however depend on the specific nature of the goods and the enterprises located within the Gateway Precinct .

FIGURE 3 - DOMINANT INTRA AND INTER-REGIONAL FREIGHT FLOWS



### 3.3 Supply chain elements

From a supply chain perspective, the Gateway Precinct comprises two key activities, being:

3. Location of businesses/enterprises that attract and generate from within the precinct itself; and
4. Co-location of freight logistics businesses that facilitate the movement of this freight.

Given the potential scope of the Gateway Precinct and the surrounding infrastructure, the freight and logistics businesses can be further segmented as:

4. Land and sea freight operators with complementary road transport and warehousing services;
5. An intermodal terminal operator that interfaces with rail services to the port and Brighton terminal (near Hobart); and
6. Air freight cargo handling services interfacing with the Launceston airport.

The scope and scale of each of these services will depend on the primary freight demand within the Gateway Precinct and the surrounding catchment. The proximity of the site to key strategic road, rail and air transport provides a competitive advantage for the enterprises within the Gateway Precinct, Launceston and the Northern region.

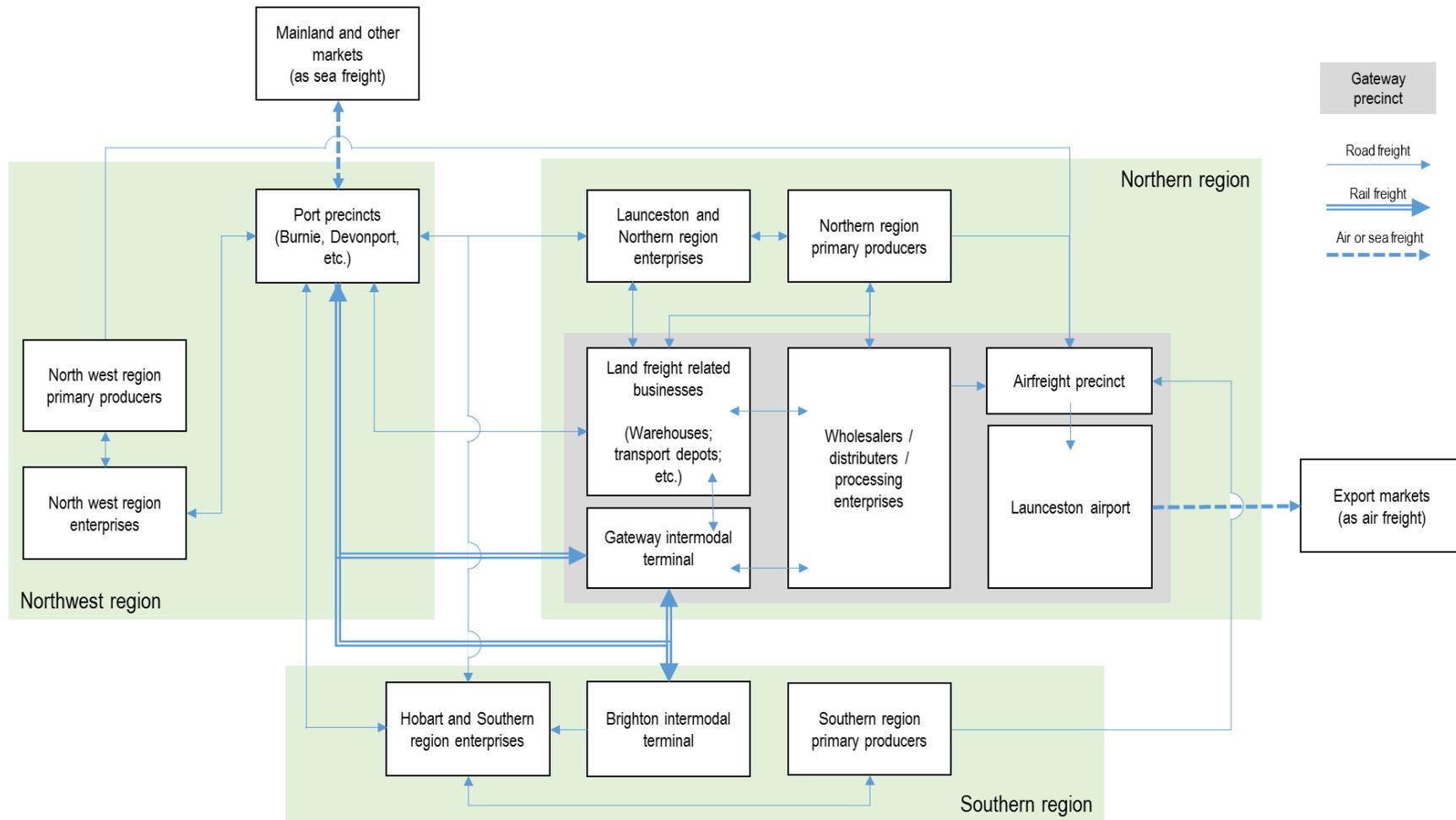
The enterprises inside the Gateway Precinct and the surrounding areas could be primary producers such as agriculture, forestry and mining, or secondary/tertiary enterprises in manufacturing, wholesaling, distribution, retail and businesses services. The composition of enterprises within the Gateway Precinct (including the freight operators) will determine the type and scale of freight moving to/from the Gateway Precinct.

Enterprises in the Northwest and Southern regions of Tasmania however are not likely to derive any strategic advantage from the Gateway Precinct itself, except in the case of air freight where Launceston airport attracts air freight from across the entire island state.

Figure 4 overleaf shows the key freight flows operating between and within each of the regions. The main elements of the potential Gateway Precinct are also shown. From the diagram the key freight flows are as follows:

1. Road and rail freight movements to/from the sea ports, and enterprises and logistics operators in the Gateway Precinct. Rail movements will pass through the intermodal terminal. In some instances, the freight operators will deliver consignments to other enterprises located outside the Gateway Precinct.
2. Road or rail freight movements will move directly to enterprises in the Northwest, Northern and Southern regions, bypassing the Gateway Precinct altogether.
3. Enterprises located inside the Gateway Precinct will also subsequently distribute to other enterprises in Tasmania; for example Statewide Independent Wholesalers (SIW) receive containers from the port, unpack and store these goods at the warehouse (in TRANSLink), and later distribute to retail outlets across Tasmania.
4. Depending on the scale of services, air freight consignments through the Gateway Precinct could be drawn from across entire Tasmania. Sea freight services to the mainland or other international destinations could be packed within each region and moved directly to the sea port, bypassing the Gateway Precinct.

FIGURE 4 - DIAGRAMMATIC LAYOUT OF KEY FREIGHT FLOWS BETWEEN REGIONS, ENTERPRISES AND LOGISTICS NODES



Note: The diagram is not intended to infer any scale in distance or freight task

### 3.4 Contestable freight drivers

Freight demand likely to be attracted to the Gateway Precinct will depend on the factors shown in the following table. Specific estimates of the total and contestable freight task are provided in the following chapter.

TABLE 3 - ASSESSMENT OF FREIGHT DRIVERS INFLUENCING CONTESTABILITY

Freight element	Driver	Implications
Scope and scale of Gateway Precinct tenants	<ul style="list-style-type: none"> <li>– Zoning and land economics</li> <li>– Scale of lots available</li> <li>– No amenity impacts</li> <li>– Connectivity with supply channels and downstream markets</li> <li>– Capacity to develop and support industry cluster (e.g. agriculture hub)</li> </ul>	<ul style="list-style-type: none"> <li>– Clean manufacturing activities likely to be secondary or tertiary in nature</li> <li>– No odours or emissions will limit key sectors (metals and timber manufacture); no livestock holding</li> <li>– Major wholesaler and consumer goods activities from the site</li> </ul>
Intermodal terminal traffic	<ul style="list-style-type: none"> <li>– Direct connectivity with rail infrastructure to link to ports and other rail origins/destinations</li> <li>– Direct connectivity with road networks and avoidance of any last mile constraints</li> <li>– Governance and access arrangements to meet Government policy and ACCC requirements</li> <li>– Value-adding capability, including empty container storage</li> </ul>	<ul style="list-style-type: none"> <li>– Fit for purpose with staged investment to meet demand in lieu of excessive upfront CAPEX costs</li> <li>– Storage of whole trains off mainline</li> <li>– Connectivity of rail sidings to Bell Bay, Hobart and sea ports</li> <li>– B-Double access for trucks</li> <li>– Open-access capability with a “neutral” manager interfacing with freight operators and other tenants</li> <li>– Site with operational interface with Brighton terminal near Hobart</li> </ul>
Inbound transport flows	<ul style="list-style-type: none"> <li>– Proximity to upstream supply points, especially agricultural producers and ports</li> <li>– Cost and service competition with road and rail operators</li> <li>– Reach of inbound flows dependent on nature of goods – imports or local supply</li> </ul>	<ul style="list-style-type: none"> <li>– Freight demand focussed into the Northern region</li> <li>– Road based PUD<sup>7</sup> costs may limit the reach of the Gateway Precinct and its intermodal terminal</li> <li>– Primary “hub” role of Launceston airport may attract consignments from all over Tasmania</li> <li>– Potential to develop complementary rail services between ports and Brighton with rapid drop off and pickup at Gateway</li> </ul>
Local precinct circulation	<ul style="list-style-type: none"> <li>– Connectivity with Northern region corridors, especially with links to Launceston and northeast coastal regions</li> <li>– Connectivity between intermodal terminal and tenants/operators</li> </ul>	<ul style="list-style-type: none"> <li>– B-Double access across entire development</li> <li>– Internal Gateway Precinct roads to have capability for efficient movements to/from intermodal terminal and tenants</li> <li>– Connectivity between freight precinct and airport</li> </ul>
Outbound transport flows	<ul style="list-style-type: none"> <li>– Nature of goods being distributed</li> <li>– Speed to market and consignment size</li> <li>– Distribution of downstream delivery points</li> <li>– Pathway and land transport economics</li> </ul>	<ul style="list-style-type: none"> <li>– Export oriented - connectivity to sea and air ports for containerised consignments</li> <li>– Domestic distribution maximised from a single hub supplying to Northwest, Northern and Southern regions (e.g. wholesaler supply channel)</li> </ul>

<sup>7</sup> PUD means “pick and delivery”; refers to complimentary road based transport with picks up or deliveries consignments

### 3.5 Likely industry sectors

The identification of the likely industry sectors to be located within the Gateway Precinct will inform the segmentation of freight demand. The following assessments have been made.

TABLE 4 - CLASSIFYING LIKELY INDUSTRIES TO BE LOCATED AT THE GATEWAY PRECINCT

Industry	Assessment	
Mining	The Gateway Precinct is not zoned to handle heavy industry as seen at Bell Bay, therefore inbound flows of mining products and outbound flows of metal manufactured products are not expected	✗
Industrial manufactures	The movement of some metal manufactures to the Gateway Precinct for storage, distribution or export is possible - however this involves a secondary movement from Bell Bay to the Gateway Precinct which may add cost.	✗
	Selected movement of loaded export containers through the intermodal terminal at the Gateway Precinct is possible, where exported through Burnie or Devonport	✓
Forestry	Forestry products are generally handled and processed through Rural Resource Land, therefore large volumes of forestry outputs and timber products are unlikely.	✗
	Selected movement of some timber manufacture products for storage, distribution or export at the Gateway Precinct is possible.	✓
Construction materials	Most bulk materials are transported as intra-regional movements as these materials have a low intrinsic value and highly sensitive to transport costs	✗
Live animals and meat processing	Live animal holding facilities or animal slaughtering facilities would be unlikely to be located at the Gateway Precinct, however the precinct is well suited as an agricultural hub for secondary processing or produce, packaging, storage and dispatch (for distribution or export)	✗
Processed agricultural products	Agricultural processing such as dairy, meat, horticulture is possible however it may be dependent on related infrastructure such as sewerage waste water treatment/disposal, odour, etc.	✓
Wholesaling and distribution of general and consumer goods	Wholesaling and distribution – are highly likely – food and consumer goods; building trade products (non-bulk); commercial products; bulk goods storage	✓
Freight activities including intermodal rail terminal	Related freight operator facilities as (a) transport depots and fleet management and (b) contract storage and handling services, mostly for consumer and wholesaler goods. Operators will also service enterprises located away from the Gateway Precinct.	✓
Air freight exports	This is a special case of freight flows. Co-location of the Launceston airport and an air freight consolidation precinct nearby within the Gateway Precinct. A fully functioning air freight precinct has potential to attract high-value products for export to mainland and international destinations	✓

### 3.6 Value chains, industry players and behaviours

Freight will often follow the lowest cost pathway as assessed by the enterprise making the pathway choice. These choices may cause adverse costs elsewhere within the chain or may be influenced by a range of non-freight factors.

Externality costs such as greenhouse gas emissions or amenity impacts will only influence mode and pathway choices where there are price signals evident that impact the “decision-making” enterprise.

Freight demand assessments also need to be considered from a value chain perspective rather than purely from an industrial or efficiency perspective. Freight moves as a consequence of serial and parallel commercial transactions between buyers and sellers, with each transaction having an influence over pathways, modes and choice of freight provider.

### **Freight forwarders**

Freight forwarders (such as Toll and SeaRoad) seek to aggregate freight demand into efficient consignments and derive a margin from competitive advantage, market knowledge, scale, asset utilisation and operational excellence.

Freight forwarding markets are highly competitive particularly where there are low barriers to entry and/or there is insufficient market scale. Freight forwarders also have considerable ease in switching freight volumes between road and rail to maximise their commercial interests and service needs of their customers.

Tasmania’s freight markets are highly contested for these reasons. Collaborative behaviours across the industry appear to be relatively low, with each of the dominant players seeking to protect their market share.

The air freight forwarding sector in Tasmania presently lacks scale, and services are focussed on utilising latent cargo capacity in the passenger services hubbed through Melbourne. Potential air freight forwarders are more likely to engage with the market where an opportunity exists to aggregate demand quickly. Air freight costs have been comparatively high (especially for the Asian markets) and consignors have seen only modest benefits with rapid supply pathways such as air freight.

### **Rail operators**

The provision of freight rail transport services requires scale to achieve efficiency and market competitive freight prices. The rail operator needs to aggregate volume through the freight forwarders or directly with large consignors (end-market enterprises).

In rail markets in mainland Australia, rail transport has a competitive price advantage in journeys that exceed 1500kms (such as Sydney-Perth or Melbourne-Brisbane). By contrast, road transport achieves higher market shares where the journey is less than 800 kms (such as Melbourne-Adelaide or Melbourne-Sydney).

An intermodal terminal has the capability of aggregating volumes that are attractive for a rail operator, especially where journey distances are relatively short (such as Burnie-Launceston or Devonport-Hobart). The rail movement itself needs to be operationally efficient, with several cycles or trips within a 24-hour period. The terminal’s management and access arrangements can influence the capacity of the rail operator to aggregate volume.

### **End market interests**

The profile of end-market players is highly polarised between a comparatively small number of large players and many medium-to-small sized enterprises. This is typical of most freight markets around Australia.

Freight pathways (ports, terminals, transport flows, staging, etc.) can be influenced by a range of factors including the scale of enterprise, and whether the enterprise is an end-market player or a freight forwarder.

- Firms such as Simplot and Woolworths are highly attractive given the scale of their freight task. They invariably have a range of choices in service providers, pathways, modes, and locations.

- Large end-market firms make strategic decisions about the location and scale of their facilities and often such facilities (assets) are immovable in the short to medium term, and consequently freight pathways become “locked into” a specific node for a considerable length of time.
- Large freight forwarders such as Toll, SeaRoad and SRT often bundle the freight needs of the medium to smaller market players into larger consignments and move those consignments more efficiently, and accordingly derive a profit. The scope and scale of the large transport operators relative to smaller transport operators is generally more attractive to end-market interests.

Large end-market firms are also operating at a national/regional level and make logistics and inventory decisions to optimise their interests across a wider network. These decisions will influence where goods are value-added and stored within the network - which may or may not benefit the Tasmanian economy. With the broad efficiencies that have been realised in transport in the last two decades, Australia’s freight patterns are invariably influenced by decisions around where to locate processing facilities and where to store inventory.

**Consequently, freight transport must be seen as a derived demand, influenced by broader corporate strategy.**

The Gateway Precinct provides the opportunity for large end-market players and logistics firms to establish new greenfield facilities at the intersection of key road and rail networks. It also provides an opportunity to relocate brownfield sites/operations away from encroachment in built-up areas like Launceston.

# 4 CURRENT DEMAND OF THE FREIGHT MARKET

This section presents the freight demand estimates for the Gateway Precinct, based on a structured assessment of contestable freight volumes.

Estimating freight markets can be a complex process, particularly where the movement of goods is highly dispersed and in small consignments.

The approach adopted in the following chapter is based on the following process:

- Estimate the size and forecast for the **total land freight market for Tasmania**, using a range of data sources and economic metrics for growth;
- Segment the freight market to determine the size of the **contestable freight market for the Gateway Precinct**, based on industry and product types and spatial assessments of origins, destinations, pathway and modes;
- Determine the future scenarios and conditions to **capture a share of the contestable market by the Gateway Precinct** (following in Section 5).

*The scale, function and role of the tenants and the rate of take-up also influences actual contestability factors for the Gateway Precinct. Estimating the scale of the contestable and captive market volumes for the Gateway Precinct is a complex process and a detailed analysis would require survey and analysis of potential Gateway Precinct tenants and users using a stated preference survey process, across commercial, property and supply chain factors.*

## 4.1 Freight related activities in the region

A number of specific industries rely significantly on freight activity to produce the respective goods and services within those industries. Within the context of the Gateway Precinct and the Northern Tasmania region, these relevant industries include:

- Transport, Postal & Warehousing
- Wholesale Trade
- Manufacturing
- Agriculture, Forestry & Fishing

The economic strength and performance of these industries within the region are highlighted below through the economic indicators of employment and value-added (see Table 5 and Table 6).

TABLE 5 EMPLOYMENT BY INDUSTRY, 2006-2011

Industry	Employment		
	2006	2011	Change (%)
Agriculture, Forestry and Fishing	3,596	3,199	-11%
Mining	274	342	25%
Manufacturing	6,145	5,958	-3%
Electricity, Gas, Water and Waste Services	604	814	35%
Construction	3,296	3,859	17%
Wholesale Trade	2,537	2,202	-13%
Retail Trade	6,735	6,692	-1%
Accommodation and Food Services	3,767	4,292	14%
Transport, Postal and Warehousing	2,421	2,459	2%
Information Media and Telecommunications	879	711	-19%
Financial and Insurance Services	1,862	1,648	-11%
Rental, Hiring and Real Estate Services	811	761	-6%
Professional, Scientific and Technical Services	2,016	2,142	6%
Administrative and Support Services	1,351	1,454	8%
Public Administration and Safety	3,124	3,546	14%
Education and Training	4,713	5,273	12%
Health Care and Social Assistance	6,401	6,866	7%
Arts and Recreation Services	755	840	11%
Other Services	1,908	2,139	12%
N/A	658	720	9%
<b>Total</b>	<b>54,035</b>	<b>56,112</b>	<b>4%</b>

Source: SGS Economics & Planning, ABS Census

TABLE 6 GROSS VALUE-ADDED BY INDUSTRY, 2009-2014

Industry	GVA (\$m)						2009-2014	
	2009	2010	2011	2012	2013	2014	#	AAGR
Agriculture, Forestry & Fishing	\$495	\$477	\$496	\$534	\$538	\$565	\$70	2.68%
Mining	\$37	\$39	\$46	\$48	\$43	\$42	\$5	2.56%
Manufacturing	\$767	\$747	\$692	\$577	\$536	\$597	-\$170	-4.88%
Electricity, Gas, Water and Waste	\$158	\$188	\$254	\$271	\$308	\$270	\$112	11.30%
Construction	\$262	\$308	\$301	\$304	\$259	\$266	\$4	0.29%
Wholesale Trade	\$206	\$202	\$205	\$217	\$216	\$215	\$9	0.87%
Retail Trade	\$339	\$390	\$356	\$371	\$384	\$418	\$79	4.29%
Accommodation and Food Services	\$118	\$154	\$169	\$170	\$161	\$184	\$66	9.28%
Transport, Postal & Warehousing	\$294	\$321	\$338	\$351	\$378	\$374	\$81	4.97%
Information Media and Telecommunications	\$110	\$113	\$117	\$114	\$113	\$125	\$14	2.43%
Financial & Insurance Services	\$443	\$417	\$501	\$471	\$474	\$443	-\$1	-0.03%
Rental, Hiring and Real Estate Services	\$96	\$98	\$97	\$115	\$123	\$125	\$29	5.46%
Professional, Scientific & Technical Services	\$116	\$129	\$142	\$144	\$144	\$130	\$14	2.25%
Administrative & Support Services	\$102	\$95	\$113	\$119	\$109	\$101	-\$1	-0.13%
Public Administration and Safety	\$247	\$287	\$269	\$279	\$257	\$274	\$28	2.14%
Education & Training	\$343	\$364	\$395	\$409	\$441	\$466	\$122	6.28%
Health Care & Social Assistance	\$460	\$498	\$525	\$521	\$575	\$534	\$74	3.03%
Arts & Recreation Services	\$35	\$31	\$33	\$32	\$31	\$33	-\$1	-0.76%
Other Services	\$83	\$103	\$118	\$111	\$97	\$114	\$31	6.57%
<b>Total</b>	<b>\$4,711</b>	<b>\$4,959</b>	<b>\$5,165</b>	<b>\$5,155</b>	<b>\$5,189</b>	<b>\$5,277</b>	<b>\$566</b>	<b>2.29%</b>

Source: SGS Economics & Planning

Based on the above indicators, it can be seen that growth in freight-related industries has been limited, with most of the growth coming from the Transport, Postal & Warehousing industry, which has experienced both an increase in employment (38 jobs from 2006-2011) and a relatively significant increase in value-added (approximately \$81 million from 2009-2014).

Observations regarding other relevant industries are as follows:

- Wholesale Trade has remained relatively stable in terms of value-added over the years 2009-2014, with only small variation in volume over this time. However, it has experienced a significant decline in employment of over 300 employees. This could be attributed to processes becoming less labour-intensive and more capital-intensive;
- Manufacturing has declined recently in both employment and value-added, with the industry experiencing a loss of 200 employees from 2006-2011 and a decrease in value-added of \$170 million from 2009-2014. Such observations indicate that the manufacturing industry as a whole has declined in recent times, which in turn would have seen a decline in freight demanded by manufacturers in the region. Within the manufacturing industry, the decline has been particularly centred in metal product manufacturing and textiles. Rural processing has more optimistic growth expectations in line with the expansion of irrigated land areas and related production; and
- Agriculture, Forestry, and Fishing has seen an increase in value-added of \$70 million from 2009-2014, though it has experienced a significant loss of employment with a decline in 400 jobs from 2006-2011. Similar to Wholesale Trade, this could be attributed to processes becoming less labour-intensive and more capital-intensive in addition to the possibility of smaller farms and processors losing their businesses due to competition from larger ones. This industry, especially forestry, underwent significant structural changes in recent years.

Given the overall limited growth by the aforementioned industries, freight demand within the Northern Tasmania region would have experienced a slight increase in recent times, as freight demand is derived from these industries' economic activity.

## 4.2 State-wide freight overview

Freight transport in Tasmania is dominated by the movement of primary products such as forestry, agriculture and mining commodities. Much of the forestry and mining products move to large processing centres (such as Bell Bay and Burnie) and are exported as industrial products, processed timber, and woodchip.

Agricultural products encompass (i) primary activities such as live animals for meat and dairy sectors, grains and horticulture, and (ii) secondary activities such as processing milk and vegetables through local factories, which are then exported in containers to mainland Australia or international markets. Some small volume, high value goods totalling around 15,000 tonnes are also airfreighted to Asian destinations.

Tasmania also imports and exports general cargo, food, beverages, horticulture and some industrial products in containers, mostly through the ports at Burnie and Devonport.

### Leveraging 2008-9 freight data

*As of November 2015, the only publically available freight survey was based on the 2008-09 Freight Survey. The detailed results of the recent 2014 Freight Survey have not been published and not likely to be available until after publication of this report, mostly likely in 2016. However, an aggregated assessment of the 2014 freight task was provided to the consultants and used.*

It is possible to leverage past analyses and extrapolate freight demand to 2015 to support a forecast for the Gateway Precinct. This is achieved by:

- Analysing the 2008-9 survey data into origins, destinations, movements, modes and tonnages.
- Reviewing import-export data from TasPorts by commodity and assessing growth/decline in volumes by product group

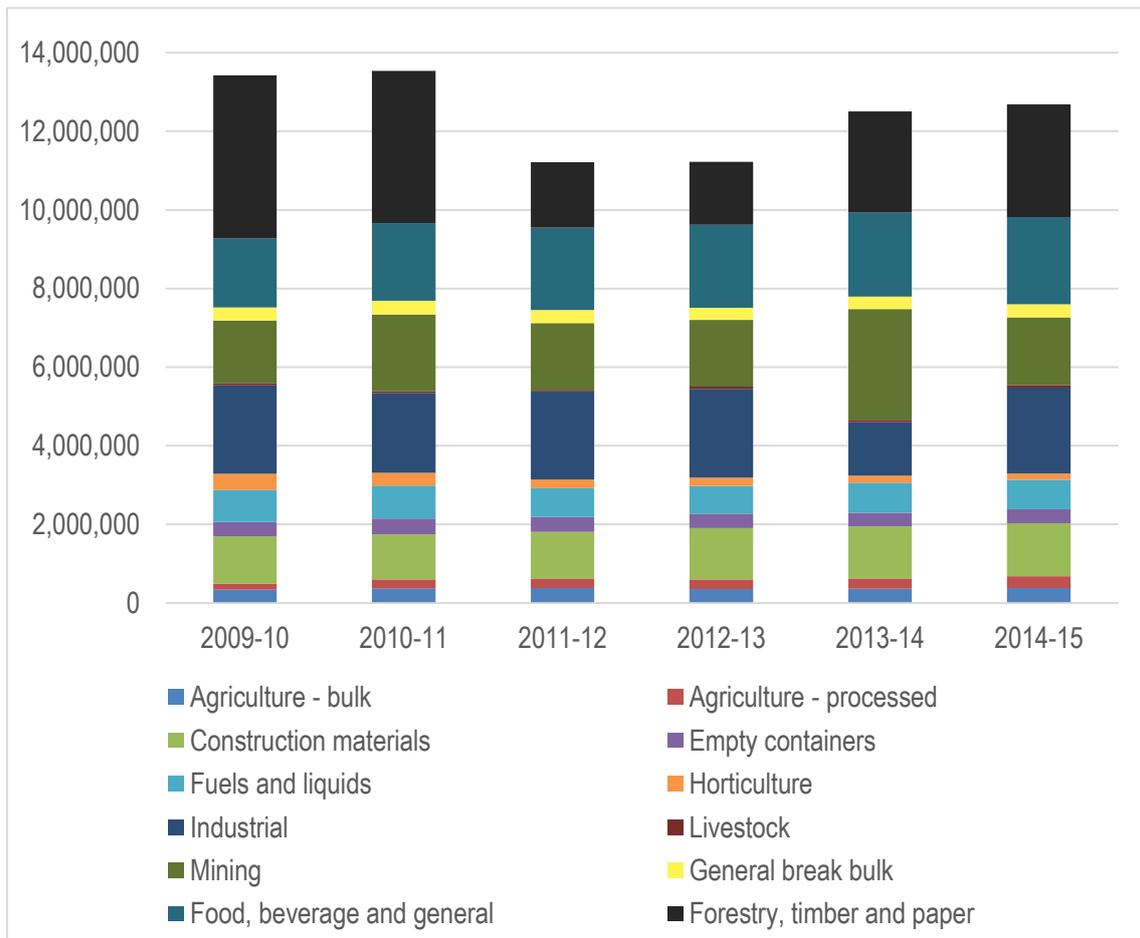
- Extrapolating the 2008-9 data towards 2014-15, using the ports data, and reconciling these forecasts with the aggregated results for 2014-15 from Infrastructure Tasmania.
- Forecasting growth to 2045 using a range of economic indicators.

In 2008-9, the land transport freight task was around 28 Mtpa as measured in the Tasmania Freight Survey (2008-9) by the Department of Infrastructure, Energy and Resources. Table 7 overleaf provides a high level summary of the intra and inter-regional freight flows, road and rail. A more detailed breakdown of the freight task is not available for confidentiality reasons.

By 2014-15, the overall freight task volumes have remained relatively static: however there have been increases and decreases in the volumes moved of specific product groups/sectors. As the survey report has not yet been published, the 2014-15 volumes have been extrapolated from the 2008-9 survey using known compounded growth rates derived from analysis of port trade statistics, as shown in the Appendix in Table 25 on page 66<sup>8</sup>.

The chart below shows the total port trade through Tasmanian ports. Overall, port trade declined by an annual average around 1% per annum. The largest decline was due to a severe reduction in export logs and woodchip in 2011-12.

FIGURE 5 - PORT TRADE - ALL TASMANIAN PORTS; IMPORTS AND EXPORTS (TONNES)



<sup>8</sup> Note: an update of freight estimates may be recommended once the latest survey data become available.

TABLE 7 - SUMMARY OF FREIGHT MOVEMENTS BY SECTOR AND REGION; 2008-9 ('000 TONNES)

2008-9 ACTUAL	Intra-regional freight flows				Interregional flows							Total (All)
	Origin	Northwest only	Northern only	Southern only	Subtotal	Northwest	Northern	Northern	Southern	Southern	Northwest	
Destination						Northern	Northwest	Southern	Northern	Northwest	Southern	
Forestry – logs, woodchip	2,300	2,600	1,700	<b>6,600</b>	700	500	500	300	200	100	<b>2,300</b>	<b>8,900</b>
Timber/Paper	300	300	300	<b>900</b>	100	500	0	300	100	200	<b>1,200</b>	<b>2,100</b>
Agriculture; unprocessed	1,100	800	200	<b>2,100</b>	300	100	100	100	100	100	<b>800</b>	<b>2,900</b>
Agriculture; processed	300	200	0	<b>500</b>	150	100	100	25	50	100	<b>525</b>	<b>1,025</b>
Construction/concrete	1,500	2,600	2,600	<b>6,700</b>	0	0	0	0	0	0	<b>0</b>	<b>6,700</b>
Consumer goods	300	300	0	<b>600</b>	550	300	75	200	250	100	<b>1,475</b>	<b>2,075</b>
Fuel	300	100	400	<b>800</b>	0	0	0	0	0	0	<b>0</b>	<b>800</b>
Mining and industrial products	300	300	300	<b>900</b>	0	150	200	100	100	50	<b>600</b>	<b>1,500</b>
Mining - pipeline	2,000	0	0	<b>2,000</b>	0	0	0	0	0	0	<b>0</b>	<b>2,000</b>
<b>Totals</b>	<b>8,400</b>	<b>7,200</b>	<b>5,500</b>	<b>21,100</b>	<b>1,800</b>	<b>1,650</b>	<b>975</b>	<b>1,025</b>	<b>800</b>	<b>650</b>	<b>6,900</b>	<b>28,000</b>

Source: Adapted from Tasmania Freight Survey 2008-9; Department of Infrastructure, Energy and Resources

## Extrapolating 2015 freight estimates

An estimate of freight demand for 2015 was developed by applying composite growth indices derived from TasPorts and ABS data.

The annual growth rates applied to the 2008-9 data by sector is shown in the following table.

TABLE 8 - ANNUAL GROWTH RATES APPLIED TO 2008-9 FREIGHT DATA TO DERIVE FREIGHT ESTIMATES FOR 2015

Sector	Annual growth rate 2009 to 2015
Forestry – logs, woodchip	-7.0%
Timber/Paper	-7.0%
Agriculture; unprocessed	6.0%
Agriculture; processed	6.0%
Construction/concrete	1.0%
Consumer goods and general freight	3.0%
Fuel	-1.4%
Mining and industrial products	-0.2%
Mining via pipeline	0.0%

The growth rates associated with agriculture, consumer goods (including food and beverages) and general freight are most relevant to the Gateway Precinct freight markets.

1. Agriculture production and processing has seen solid growth since 2009 and is forecast to continue strongly until 2020, supported with increased investment in irrigation and expansion into new niche products.
2. Growth in consumer goods and general freight is largely in line with economic activity and growth in freight demand on the mainland. Launceston is the principal distribution hub for Tasmania (for example SIW/Woolworths and IGA warehouses).

**The derived 2015 estimate for freight demand is shown in Table 9 overleaf.**

TABLE 9 - ESTIMATE OF FREIGHT MOVEMENTS FOR 2015 ('000 TONNES)

2015 ESTIMATE	Intra-regional freight flows				Interregional flows							Total (All)
	Origin	Northwest only	Northern only	Southern only	Subtotal	Northwest	Northern	Northern	Southern	Southern	Northwest	
Destination					Northern	Northwest	Southern	Northern	Northwest	Southern		
Forestry – logs, woodchip	1,488	1,682	1,100	<b>4,270</b>	453	323	323	194	129	65	<b>1,488</b>	<b>5,758</b>
Timber/Paper	194	194	194	<b>582</b>	65	323	0	194	65	129	<b>776</b>	<b>1,359</b>
Agriculture; unprocessed	1,560	1,135	284	<b>2,979</b>	426	142	142	142	142	142	<b>1,135</b>	<b>4,114</b>
Agriculture; processed	426	284	0	<b>709</b>	213	142	142	35	71	142	<b>745</b>	<b>1,454</b>
Construction/concrete	1,592	2,760	2,760	<b>7,112</b>	0	0	0	0	0	0	<b>0</b>	<b>7,112</b>
Consumer goods	358	358	0	<b>716</b>	657	358	90	239	299	119	<b>1,761</b>	<b>2,478</b>
Fuel	276	92	368	<b>735</b>	0	0	0	0	0	0	<b>0</b>	<b>735</b>
Mining and industrial products	296	296	296	<b>889</b>	0	148	198	99	99	49	<b>593</b>	<b>1,482</b>
Mining via pipeline	2,000	0	0	<b>2,000</b>	0	0	0	0	0	0	<b>0</b>	<b>2,000</b>
<b>Totals</b>	<b>8,191</b>	<b>6,801</b>	<b>5,002</b>	<b>19,994</b>	<b>1,813</b>	<b>1,437</b>	<b>894</b>	<b>903</b>	<b>804</b>	<b>647</b>	<b>6,498</b>	<b>26,492</b>

Source: Extrapolated from Tasmania Freight Survey 2008-9 data using growth indices derived from TasPorts and ABS data

### 4.3 Forecasting freight demand to 2045

Forecasts were developed to 2045 given the strategic significance and scale of the Gateway Precinct. The forecast was informed by relevant economic indicators (as shown in section 7.5), and on advice from key Government advisers, in particular State Growth.

Five year intervals were used for estimates for 2020 and 2025, with 10-year intervals used for 2035 and 2045.

TABLE 10 - FORECAST ANNUAL GROWTH RATES BY SECTOR AND INTERVAL

Sector	Annual growth rates			
	2015-2020	2020-2025	2025-2035	2035-2045
Forestry – logs, woodchip	0.0%	0.0%	0.0%	0.0%
Timber/Paper	0.0%	0.0%	0.0%	0.0%
Agriculture; unprocessed	6.0%	4.0%	2.5%	2.0%
<b>Agriculture; processed</b>	<b>6.0%</b>	<b>5.0%</b>	<b>3.0%</b>	<b>3.0%</b>
Construction/concrete	1.0%	1.0%	1.0%	1.0%
<b>Consumer goods and general freight</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.0%</b>	<b>3.0%</b>
Fuel	0.0%	0.0%	0.0%	0.0%
Mining and industrial products	1.0%	1.0%	1.0%	1.0%
Mining via pipeline	0.0%	0.0%	0.0%	0.0%

The following points and assumptions support the table:

1. The forecast growth for agriculture reflects growth over the last 5 years and expansion of cropping areas and techniques, especially in dairy (4-6%) and stone fruits (>10%); note that growth in stone-fruits is from a low base volume<sup>9</sup>.
2. Initiatives in the Midland Irrigation area are expanding production however the broad focus by growers remains with the traditional crops<sup>10</sup>.
3. The Gateway Precinct is not likely to warehouse unprocessed agriculture produce such as live animals, bulk milk or grain. The site could however could receive raw products for subsequent processing onsite, but this will not represent a warehousing task.
4. Consumer goods includes food and beverages and drives the general forecasts in consumer demand complimented by strong growth in local food production. The movement of general freight includes processed agricultural production.
5. Population growth will drive demand for local consumption of goods.
6. Industrial production forecasts remain subdued. It is likely that the Gateway Precinct could attract storage of some “clean” industrial and forestry products, albeit comparatively small volumes.

Based on the growth rates shown above, the forecast land transport freight task is expected to rise above 40 million tonnes per annum, with around 25% of the volume attributed to processed agricultural products, food, consumer goods and general freight.

Table 11 and Figure 6 overleaf show the growth in freight to 2045.

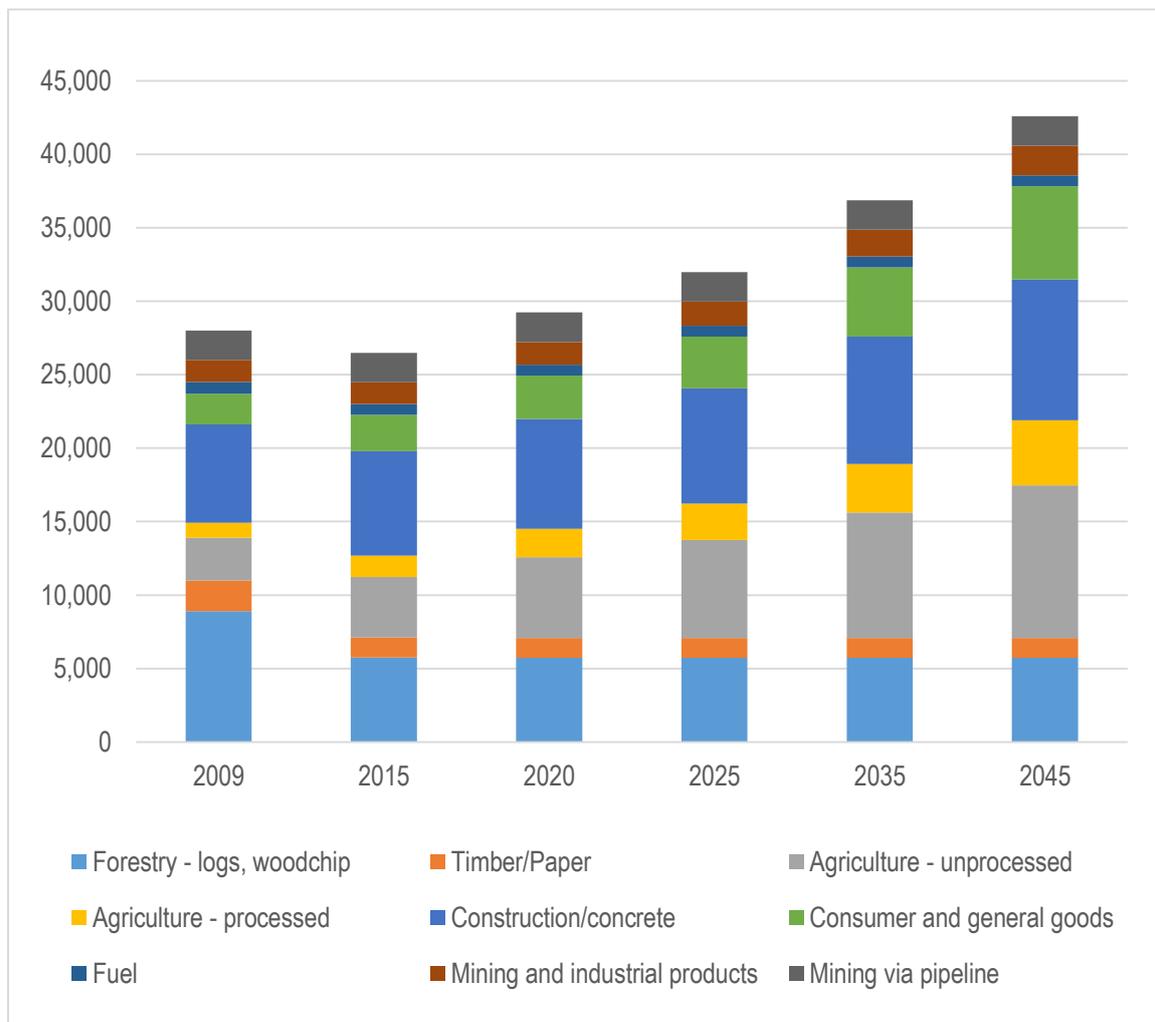
<sup>9</sup> Agriculture forecast growth developed in valuable discussions with Caroline Brown, Industry Development, AgriGrowth Tasmania

<sup>10</sup> Insights from Luke Curtain, Deputy CEO/General Manager – Commercial, Tasmanian Irrigation

TABLE 11 - FREIGHT FORECAST TO 2045 BY KEY SECTOR ('000 TONNES)

Sector	Forecast for freight transport to 2009-2045					
	2009	2015	2020	2025	2035	2045
Forestry – logs, woodchip	8,900	5,758	5,740	5,740	5,740	5,740
Timber/Paper	2,100	1,359	1,330	1,330	1,330	1,330
Agriculture; unprocessed	2,900	4,114	5,510	6,690	8,540	10,390
<b>Agriculture; processed</b>	1,025	1,454	1,940	2,460	3,300	4,440
Construction/concrete	6,700	7,112	7,470	7,860	8,680	9,580
<b>Consumer goods and general freight</b>	2,075	2,478	2,950	3,510	4,720	6,350
Fuel	800	735	740	740	740	740
Mining and industrial products	1,500	1,482	1,550	1,650	1,810	2,010
Mining via pipeline	2,000	2,000	2,000	2,000	2,000	2,000

FIGURE 6 - FREIGHT FORECAST TO 2045 BY KEY SECTOR



## 4.4 Contestable freight markets

The Gateway Precinct is well located to capture:

1. A high proportion of containerised goods moving between the sea ports to the Northern region;
2. Tasmania wide distribution of goods for tenants (manufacturers, wholesalers, retailers, etc.) who are located within the Gateway Precinct;
3. Inbound and outbound flows of goods where agricultural and industrial processors are located within the Gateway Precinct; and
4. Movement of goods from firms located “off-site” but seeking to access the proposed Gateway Precinct; this movement will depend on the relative cost of direct transport by road from origin to destination versus the aggregate cost of movement of the goods via the intermodal terminal.

Table 4 earlier provided an assessment of the industries that are likely to be attracted to the Gateway Precinct. These are discussed in more detail in the following table.

TABLE 12 - SCOPE OF CONTESTABLE FREIGHT MARKETS FOR THE GATEWAY PRECINCT

Sector / products	Scope and description
Processed agricultural products (whether manufactured on or off site)	<ul style="list-style-type: none"> <li>• Agricultural production in the Northern and Midlands areas is forecast to grow to around 10% per annum for the next 5 years, and slow marginally afterwards</li> <li>• With the focus on export markets, the Gateway Precinct provides a platform for establishing value-adding activities to support the local agricultural sector; this might include farm inputs supply, packing and storing, cool room storage, etc. The traditional model has been that these activities are duplicated across many of the farms whereas a “clustering approach” to value-adding activities may provide a more efficient use of resources and lower costs.</li> <li>• Small to medium sized food processing of agricultural production could be established at the Gateway Precinct provided that there is sufficient capacity in support infrastructure</li> </ul>
Wholesaling and distribution of general and consumer goods	<ul style="list-style-type: none"> <li>• The Gateway Precinct already accommodates two large grocery distribution centres for Woolworths and IGA</li> <li>• The site is well placed to expand its role in the wholesaling and distribution sector whether as “in-house” owned/operated facilities or as “out-sourced” contract services by freight operators</li> <li>• Expansion would include large warehouses for furniture, hardware, business services, clothing and apparel, soft goods, etc.</li> </ul>
Freight activities including third party warehousing, trucking operations and an intermodal rail terminal	<ul style="list-style-type: none"> <li>• The site also accommodates large road freight operators and could include an intermodal terminal for movement of container to Burnie/Devonport sea ports and to Hobart/Brighton</li> <li>• Establishment of a road freight precinct for parking of equipment, supported by a vehicle servicing centre and driver amenities</li> </ul>
Air freight consolidation, packing and exporting (with interface to the Launceston airport)	<ul style="list-style-type: none"> <li>• As a “special case” the freight precinct could accommodate operators focussing on the expanding airfreight market.</li> <li>• Proximity of the air freight precinct with direct access to the Launceston airport is critical for efficiency</li> </ul>
Selected industrial manufactures	<ul style="list-style-type: none"> <li>• The Gateway Precinct has the opportunity to accommodate small-medium size “clean” industrial processors for further value-adding of goods in Tasmania rather than in mainland Australia. This might include some further transformation of goods from the Bell Bay industrial zone.</li> <li>• Similarly, the distribution of industrial goods such as steel and building products is feasible</li> </ul>
Selected timber products for warehousing and distribution	<ul style="list-style-type: none"> <li>• As with agricultural and industrial goods, timber products could also be further processed and distributed/exported from the Gateway Precinct</li> </ul>

A forecast of the size of the contestable freight market for the Gateway Precinct can be determined by applying market share estimates to freight tonnage, based on:

4. Proximity to the freight flows, within and to/from the Northern region
5. Scale of suitable freight sectors and types
6. Commercial drivers relevant to enterprises and freight operators.

**The size of the contestable freight market relevant to the Gateway Precinct is estimated to be 1.5 to 1.9 Mtpa, growing to more than 4 Mtpa by 2045.**

The market shares and estimated contestable volumes are shown over page in Table 13 and Table 14.

The following diagram presents the forecast of contestable tonnage to 2045.

**FIGURE 7 - FORECAST DEMAND FROM CONTESTABLE FREIGHT MARKETS FOR THE GATEWAY PRECINCT**

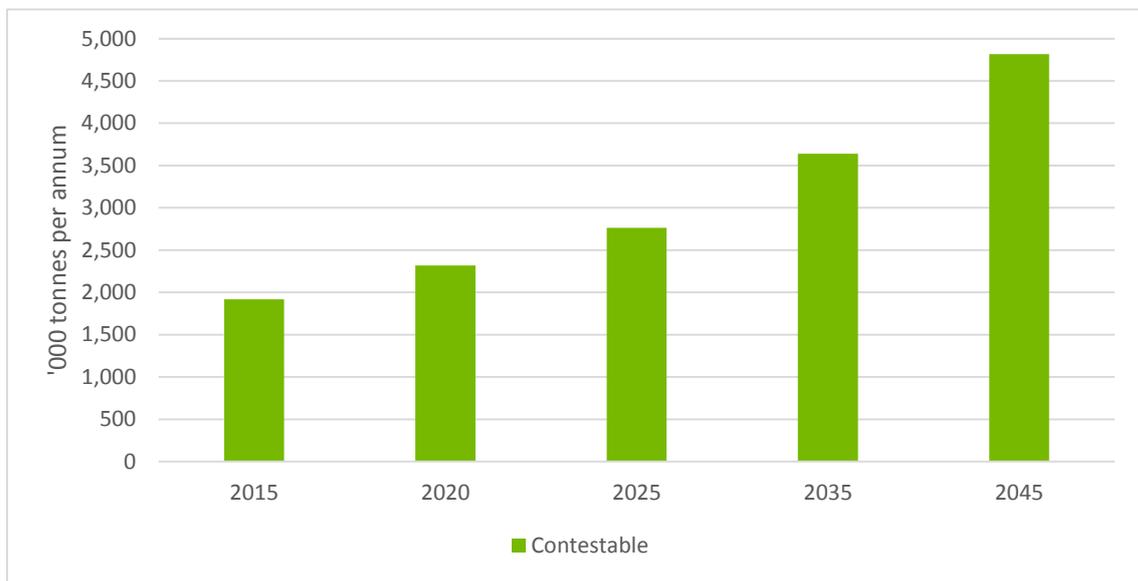


TABLE 13 - CONTESTABLE FREIGHT MARKET AS % OF TOTAL FREIGHT MARKET

Origin	Intra		Inter							
	Northwest	Northern	Southern	Northwest	Northern	Northern	Southern	Southern	Northwest	
Destination	Northwest	Northern	Southern	Northern	Northwest	Southern	Northern	Northwest	Southern	
Forestry - logs, woodchip	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Timber / Paper	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%
Agriculture - unprocessed	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Agriculture - processed	0%	50%	0%	75%	75%	50%	50%	0%	0%	0%
Construction/concrete	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consumer / general goods	0%	50%	0%	75%	75%	75%	75%	0%	0%	0%
Fuel	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mining / industrial products	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%
Mining via pipeline	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TABLE 14 - CURRENT CONTESTABLE MARKET FOR THE GATEWAY PRECINCT 2015

Origin	Intra				Inter						Total Inter	Total All contestable
	Northwest	Northern	Southern	Total Intra	Northwest	Northern	Northern	Southern	Southern	Northwest		
Destination	Northwest	Northern	Southern	Total Intra	Northern	Northwest	Southern	Northern	Northwest	Southern	Total Inter	Total All contestable
Forestry - logs, woodchip					0	0	0					
Timber / Paper					162	0	0				162	162
Agriculture - unprocessed					0	0	0					
Agriculture - processed		142		142	160	106	71	18			355	496
Construction/concrete												
Consumer / general goods		179		179	493	269	67	179			1,007	1,187
Fuel												
Mining / industrial products						74					74	74
Mining via pipeline						0						
		<b>321</b>		<b>321</b>	<b>652</b>	<b>611</b>	<b>138</b>	<b>197</b>			<b>1,598</b>	<b>1,919</b>

# 5 FREIGHT DEMAND SCENARIOS

While the contestable freight market for the Gateway Precinct is around 1.9 Mtpa, the actual share that the Gateway Precinct captures as a segment of this contestable market is dependent on many strategic, commercial and non-commercial factors. For example, an industry cluster formed around agriculture might attract many small to medium sized players to the Gateway Precinct. In contrast, there may be highly competitive drivers across some sectors (such as freight operators) which could limit the likelihood of some enterprises being co-located at the Gateway Precinct.

A scenario based approach is adopted to assess floor, ceiling and midpoint estimates for freight tonnage.

## 5.1 Freight related growth scenarios

The scope and development of the Gateway Precinct can be considered in terms of scenarios that increase in scope and sophistication over time.

Three scenarios are considered.

- Scenario 1. **Business as usual**, with the Gateway Precinct capturing a share of the future freight task and relocation of existing business from Launceston. This scenario represents the **low growth outcome**.
- Scenario 2. **A freight precinct**, encapsulating road, rail and air freight activities into a major intermodal freight hub serving the Northern region and with links to service Tasmania. This scenario also includes Scenario 1 and represents the **medium growth outcome**.
- Scenario 3. **An integrated site accommodating a rural processing cluster** with a range of processing and value-adding activities. This scenario includes Scenario 1 and 2, and represents the **high growth outcome**.

The following table defines the scope of each scenario to be modelled in the following sections.

TABLE 15 - SCOPE OF THE GATEWAY PRECINCT SCENARIOS UNDER CONSIDERATION

Sector	Low growth and development	Medium growth and development	High growth and development
Organic development across the precinct	☑	☑	☑
Intermodal terminal operations	☑	☑	☑
Major freight forwarder moves to the Gateway Precinct		☑	☑
Air freight hub development		☑	☑
Some logistics and value-adding for Midland output		☑	☑
Agricultural processing hub develops (modest industrial)			☑
Accelerated growth in production (various)			☑

**Scenario 1 – “Business as usual” – low growth**

This scenario assumes organic or autonomous growth for the Gateway Precinct. This scenario assumes the level of economic activity forecasted for the Gateway Precinct if **no additional investments** are made in precinct development other than investments already committed.

Under this scenario, the precinct will undergo autonomous growth over the next 30 years. This autonomous growth is expected to occur primarily within the Transport, Postal & Warehousing and Wholesale Trade industries due to the precinct’s location and availability of land suiting these industries.

Our modelling projects approximately 750 jobs to be created within the precinct over the next 30 years under this scenario.

In terms of freight demand, it is estimated that the Gateway Precinct captures around 25% of the volume of consumer goods and general freight travelling between the container sea ports and the Launceston region, being 600,000 tonnes. This volume is largely underpinned by inbound container flows to SIW-Woolworths and IGA at the Gateway Precinct. A range of non-food distributors/processors are also currently within the precinct.

Over time, and supported by ongoing planning frameworks and land and transport economics, it is assumed that the Gateway Precinct would capture up to 50% of new freight demand from expanding activities, as well as relocation of existing business from brownfield sites in Launceston to greenfield sites in the Gateway Precinct. Some small scale servicing of the agriculture processing is also captured.

**Market share assumptions**

The following table shows the assumptions used for captive volumes as a share of future contestable volumes for Scenario 1.

TABLE 16 - SCENARIO 1; CAPTIVE VOLUMES AS % OF FUTURE CONTESTABLE VOLUMES (LOW GROWTH)

	Intra-regional	Inter-regional			
Origin	Northern	Northwest	Northern	Northern	Southern
Destination	Northern	Northern	Northwest	Southern	Northern
Forestry - logs, woodchip	0%	0%	0%	0%	0%
Timber / Paper	0%	0%	0%	0%	0%
Agriculture - unprocessed	0%	0%	0%	0%	0%
Agriculture - processed	25%	25%	25%	25%	25%
Construction/concrete	0%	0%	0%	0%	0%
Consumer / general goods	25%	50%	50%	25%	25%
Fuel	0%	0%	0%	0%	0%
Mining / industrial products	0%	0%	0%	0%	0%

### Scenario 2 – Role as hub for road, rail and air freight activities – medium growth

Scenario 2 assumes the development of an intermodal terminal and air freight hub. It would include the re-location of a major freight forwarder to the precinct.

Under this scenario, the precinct will undergo autonomous growth and additional growth spurred on from the development of an intermodal terminal and air freight hub and the relocation of a major freight forwarder. These developments are expected to attract a greater number of transport-related businesses as compared to the business-as-usual scenario.

Similar to the autonomous growth, the additional growth is expected to occur primarily within the Transport, Postal & Warehousing and Wholesale Trade industries.

Approximately **1,200 jobs** are expected to be created within the precinct over the next 30 years under this scenario.

Scenario 2 builds on scenario 1 with the inclusion of complementary freight activities into the precinct that serve to expand the overall functionality of the precinct and attract additional tenants over and above the “business as usual” take-up rate. Specifically, this will include:

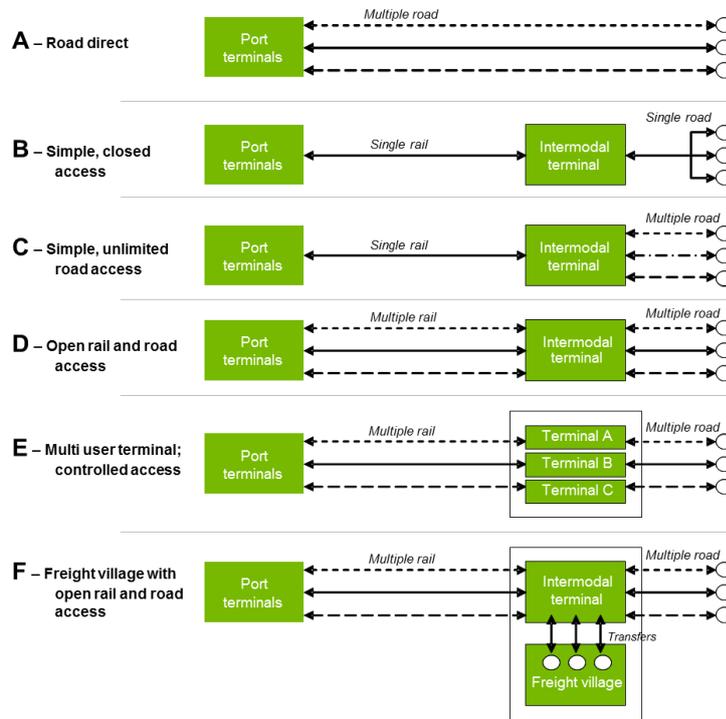
1. A major freight forwarder (such as Toll or SeaRoad) relocates to the Gateway Precinct
2. An intermodal terminal is developed linking the Gateway Precinct more directly to the sea ports and Hobart for non-bulk consignments
3. An airfreight precinct is developed with links to Launceston airport

#### Potential for intermodal terminal

An intermodal terminal allows for the transfer of cargo between road and rail modes of transport, thereby allowing rail to aggregate larger volumes for the “line haul journey” to/from port and trucks to link the terminal to the end-customer’s premises. That said, not all freight is commercially attracted to intermodal transport, and market shares can be limited to 30-50%, with trucks moving directly between origin and destination. There are a range of potential supply chain structures for integrating intermodal terminals as shown in the following diagram. The “freight village” integrating the terminal with onsite warehousing is shown in “F” below, whereas the Brighton terminal is represented as “B” or “C”.

## FIGURE 8 - RANGE OF POTENTIAL SUPPLY CHAIN STRUCTURE INTEGRATING INTERMODAL TERMINALS

Source: Sydney Intermodal Solution – Report 1 - Report by Neil Matthews for the Sea Freight Council of NSW (April 2007)



A comparison with Sydney’s proposed Moorebank Intermodal Terminal is made in this scenario and is modelled on the “freight village” concept where “pick-up and delivery” activities (and costs) are minimised<sup>11</sup>. The Brighton facility near Hobart is a smaller but similar model however it is not an open access terminal where any forwarder can access the rail capacity.

## FIGURE 9 - ARTIST IMPRESSION OF INTERMODAL TERMINAL ADJACENT TO LARGE WAREHOUSING AT SYDNEY'S MOOREBANK FACILITY



Source - Qube Holdings Limited Investor Presentation, June 2015 Moorebank Integrated Precinct

<sup>11</sup> The Moorebank development is forecast to handle 1 million TEU’s and have 850,000m<sup>2</sup> of warehousing space. Links between the terminal and the adjacent warehouses is via an internal road network thereby avoiding interaction with public roads. Vehicle carrying capacities are increased by avoiding public road weight limitations.

### Considering air freight as a special case

The co-location of the Launceston airport within the Gateway Precinct facilitates the opportunity to move increasing volumes of airfreight to mainland Australia and Asian destinations. Air freight consignments from Tasmania are estimated to be around 15,000 tonnes per annum. The air freight is moved mostly in passenger planes, with much of the cargo trans-shipped through the Melbourne airport for destinations in Asia.

Air freight is a comparatively expensive mode when compared to sea freight albeit offering significantly lower transit times, and is seen as an important capability for landing valuable Tasmanian produce into Asia. Links to more distant domestic markets such as Perth, Brisbane and Darwin are also cited as opportunities to be developed<sup>12</sup>.

Modelling growth in agricultural production and current air freight market shares suggests that the air freight opportunity could expand to 40,000 to 60,000 tonnes by 2035. In comparative terms, this is a total task similar to the export air freight volumes seen in Brisbane and Perth. Initial volumes will remain relatively small, requiring that air freight activities be supported with general freight, then be separated when a critical mass in air freight demand is achieved.

An air freight depot operation requires adequate underground layout areas, racking systems in warehouses and high security processes, especially when interfacing with Launceston "air-side" services.

### Market share assumptions

The following table shows the assumptions used for captive volumes as a share of future contestable volumes for Scenario 2.

TABLE 17 – SCENARIO 2; CAPTIVE VOLUMES AS % OF FUTURE CONTESTABLE VOLUMES (MEDIUM GROWTH)

	Intra-regional	Inter-regional			
Origin	Northern	Northwest	Northern	Northern	Southern
Destination	Northern	Northern	Northwest	Southern	Northern
Forestry - logs, woodchip	0%	0%	0%	0%	0%
Timber / Paper	0%	0%	25%	0%	0%
Agriculture - unprocessed	0%	0%	0%	0%	0%
Agriculture - processed	50%	50%	50%	50%	50%
Construction/concrete	0%	0%	0%	0%	0%
Consumer / general goods	50%	75%	75%	75%	75%
Fuel	0%	0%	0%	0%	0%
Mining / industrial products	0%	0%	25%	0%	0%

### Scenario 3 – Industry clusters – high growth

This scenario assumes the attraction of a significant rural processing plant to the precinct with supporting warehousing and logistics activities. Under this scenario, the precinct will undergo the growth experienced in scenario 2 as well as additional growth from an agricultural processor and other support services locating within the Gateway Precinct.

The additional growth in scenario 3 is expected to occur primarily within the Manufacturing (agricultural processing), Agriculture, Forestry, and Fishing, and Wholesale Trade (agricultural support services) industries.

<sup>12</sup> Valuable insights to the current situation and potential growth of new domestic and export markets were provided by Hans Van Pelt, Director-Access and Aviation, Tourism Tasmania (Department of State Growth)

Approximately **1,400** jobs are expected to be created within the Gateway Precinct over the next 30 years under this scenario.

It is assumed that the growth in agricultural production in the north eastern areas of Tasmania will continue, complemented by long run increased production from the Midlands Irrigation areas. The Gateway Precinct is strategically located for handling processed and unprocessed agricultural produce from the immediate catchment. It is more likely that the precinct will handle horticultural and cropping produce rather than dairy and livestock, given the distributed nature of production of these latter sectors.

**Processing plant**

As part of scenario 3 it is assumed a rural processing plant would be attracted to the precinct. There is a need to create scale to enable efficient production. A large rural processor in Tasmania typically employs around 200 people and produces around 60,000 tonnes of product. It is likely that the mass on the inbound unprocessed goods would be similar or larger in weight. An operator employing around 200 personnel could handle 400-600 tonnes per employee per annum (using some general logistics benchmarks).

The strategy of targeting agriculture is underpinned by the following factors:

- Increasing investment in production nearby in the Midlands Irrigation area;
- Demand in mainland Australia and Asia;
- There are capacity constraints in Bass Strait capacity for next three years which will impact connectivity in supply to processing on the mainland;
- The agricultural sector still needs to achieve collaboration and scale particularly in terms of market development in Asia. Recent industry collaboration amongst the salmon producers provides insights as to what is arguably required in other sectors; reference is made to the creation of a processing cluster at Strahan (Macquarie Harbour); and
- Opportunities for processing and value-adding close to the source of production.

**Market share assumptions**

The following table shows the assumptions used for captive volumes as a share of future contestable volumes for Scenario 3.

**TABLE 18 - SCENARIO 3; CAPTIVE VOLUMES AS % OF FUTURE CONTESTABLE VOLUMES (HIGH GROWTH)**

	Intra-regional	Inter-regional			
Origin	Northern	Northwest	Northern	Northern	Southern
Destination	Northern	Northern	Northwest	Southern	Northern
Forestry - logs, woodchip	0%	0%	0%	0%	0%
Timber / Paper	0%	0%	25%	0%	0%
Agriculture - unprocessed	0%	0%	0%	0%	0%
Agriculture - processed	75%	75%	75%	75%	75%
Construction/concrete	0%	0%	0%	0%	0%
Consumer / general goods	90%	90%	90%	90%	90%
Fuel	0%	0%	0%	0%	0%
Mining / industrial products	0%	0%	25%	0%	0%

## 5.2 Forecast freight volumes by scenario

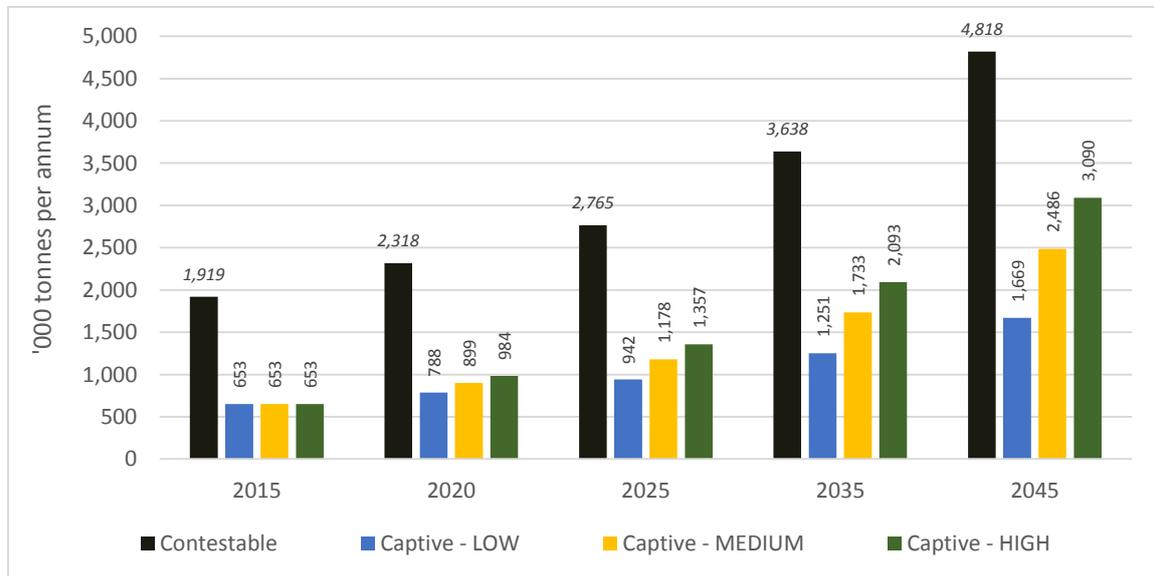
The following diagram shows the modelled results derived for each scenario to 2045.

It is acknowledged that the next stages of the precinct are yet to be commenced. Therefore, the volume shown for 2020 is for analytical purposes only and assumes that the infrastructure was in place.

4. The precinct presently handles around 600,000 tonnes per annum.
5. By 2025, the precinct could capture 950,000 to 1.4 million tonnes per annum, depending on scope of the development and profile of the future tenants.
6. By 2045, the volume could increase to 1.7 to 3.0 million tonnes.

Note that these volumes will be moved by both road and rail transport to/from the site.

FIGURE 10 – MODELLED SCENARIO RESULTS FOR CONTESTABLE AND CAPTIVE TONNAGE TO 2045



Assuming a 35% mode share<sup>13</sup> outcome for rail, the intermodal terminal could handle the volume shown in the following table. While the volumes are not as large as mainland terminals, these volumes however indicate a prime facie a case for further and more detailed justification of the intermodal terminal, including commercial modelling of prices and costs.

TABLE 19 - POTENTIAL CONTAINER TRAFFIC BASED ON 35% SHARE OF THE GATEWAY PRECINCT VOLUMES

Throughput volumes – full and empty ('000 TEU's pa)	Year				
	2015	2020	2025	2035	2045
Scenario 1 (Low growth)	36	44	53	70	94
Scenario 2 (Medium growth)	36	50	66	97	139
Scenario 3 (High growth)	36	55	76	117	173

As a comparison, QUBE's intermodal terminal at Minto in southwest Sydney handles around 100,000 TEU's, mostly to/from Port Botany. The terminal has been operational for 15 years and has on site tenants as well as other nearby customers, served by road vehicles. The terminal has an integrated empty container park.

<sup>13</sup> Mainland intermodal terminals serving key industrial and warehousing precinct generally achieve 30-45% of market share however outcome depends on price and degree of contestability by road freight operators

# 6 IMPLICATIONS FOR SITE OCCUPANCY

This section describes the spatial implications of the three scenarios in terms of site occupancy.

## 6.1 Warehouse areas

Based on a range of underlying assumptions, a direct relationship between volume throughput and warehouse area (under roof) can be made.

The following sections link the volume forecasts to 2045 to warehouse floor area, with recognition of the rate of turnover of inventory.

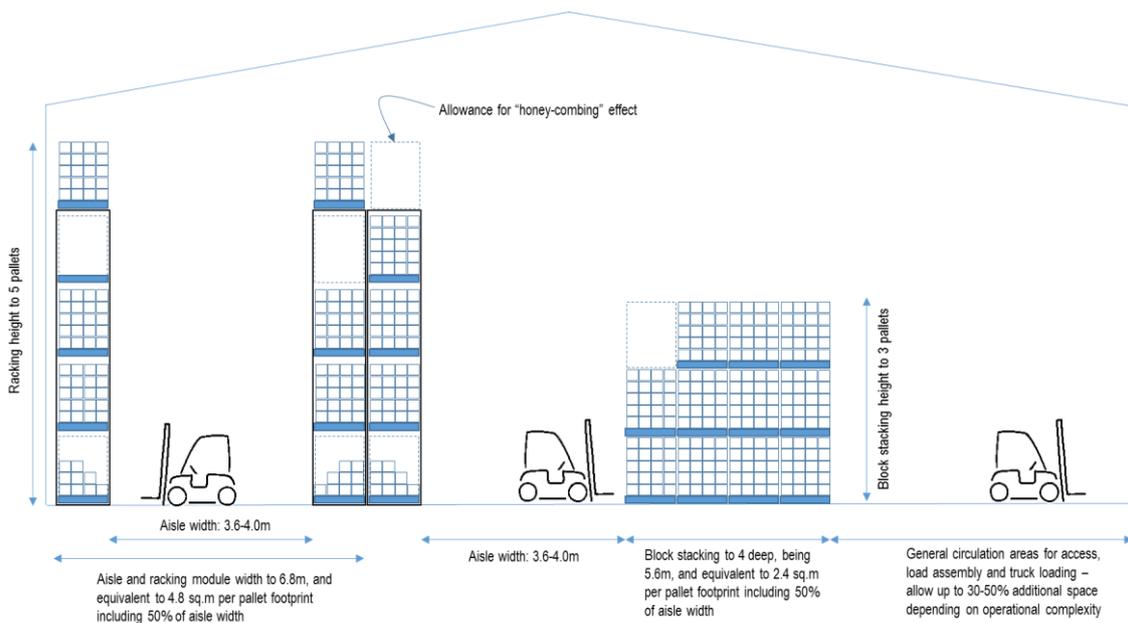
### Warehouse configuration

Most warehouse configurations in Australia adopt a “low bay” configuration encompassing racked and blocked storage, access aisles, despatch and receipt areas, and general circulation areas (including offices).

The following diagram shows a typical low-bay warehouse configuration that is assumed across the Gateway Precinct. The existing SIW and Woolworths warehouses align with this configuration.

The analysis herein is based on a low-bay warehouse configuration.

FIGURE 11 - TYPICAL CONFIGURATION OF A LOW-BAY WAREHOUSE



In contrast, some warehouses can adopt a high-bay configuration with automatic storage and retrieval cranes operating to a significant height and narrower access aisles, to minimise the size of the

warehouse footprint relative to the volume throughput. High-bay configuration involves higher initial capital costs and lower operating costs. Operational flexibility is reduced.

### **Inventory stock turns**

Inventory stock turns are a significant driver for determining warehouse areas relative to throughput. Stock turns refer to the number of times (or cycles) that an inventory holding is turned over in a 12-month period.

In sectors having a low to moderate demand and a wide range of products, stock turns can be as low as 15 turns per annum (or 3 to 4 weeks cover). By contrast, sectors like food grocery distribution have a higher number of stock turns of 26-30 turns per annum (or 1-2 weeks cover). End market demand and the range of products held influences stock turns.

At the enterprise level, this will vary significantly, and it therefore is difficult to estimate with confidence without a profile of the future Gateway Precinct tenants.

The analysis below reflects the impact of stock turns on warehouse space.

### **Relationship between volume scenarios, stock turns and warehouse areas**

Nominal warehouse areas were modelled with varying throughput, stock turns, storage ratios, stacking heights and ancillary areas. An example of the analysis is shown in the Appendix for Scenario 2 Medium growth and 20 stock turns per annum (Table 26).

The results of scenarios are shown overleaf in Figure 12 and Table 20. The nominal warehouse areas are shown. Assuming an overall site occupancy of 50%, the overall land use requirement can be derived by doubling the warehouse areas shown.

From the Figure 12 and Table 20 show that:

- For scenario 1, the freight demand by 2025 equates to a cumulative warehouse footprint between 10 and 20 hectares. By 2045, this area increases to between 20 and 30 hectares;
- For scenario 2, demand by 2025 equates to a cumulative warehouse footprint between 16 and 28 hectares. By 2045, this area increases to between 30 and 50 hectares; and
- For scenario 3, demand by 2025 equates to a cumulative warehouse footprint between 15 and 24 hectares. By 2045, this area increases to between 35 and 60 hectares.

The aggregate land areas can be derived by doubling the warehouse areas.

FIGURE 12 - RELATIONSHIP BETWEEN VOLUME SCENARIOS AND WAREHOUSE AREA (BY STOCK TURNS) OVER TIME

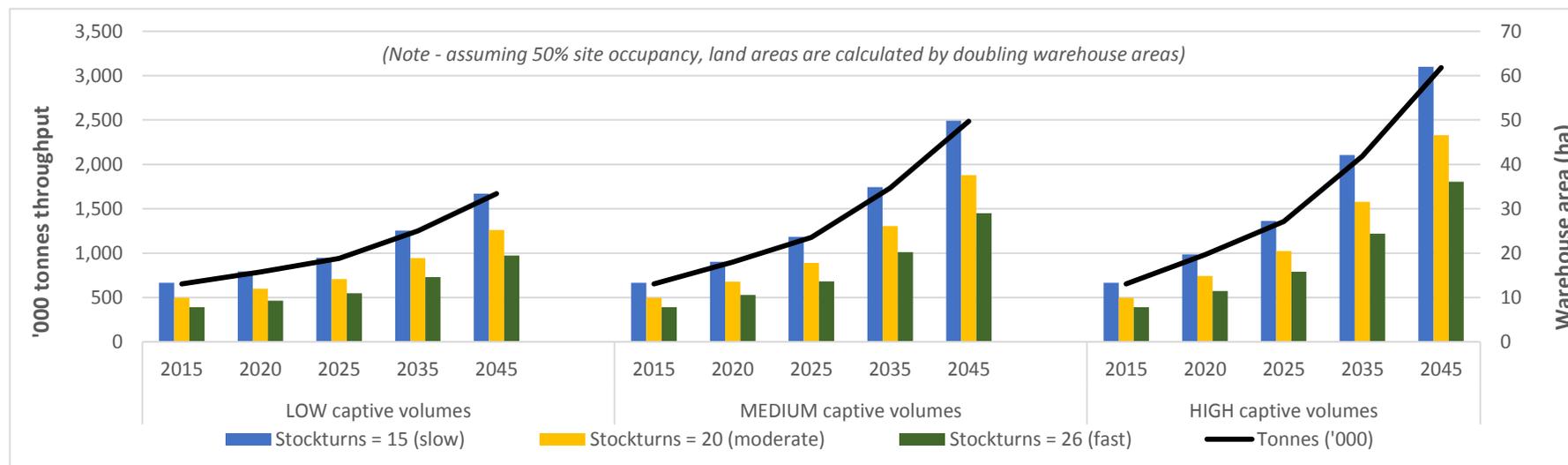


TABLE 20 - WAREHOUSE AREAS BY VOLUME SCENARIO AND STOCK TURNS PER ANNUM (HECTARES)

Scenario	1 - LOW captive volumes					2 - MEDIUM captive volumes					3 - HIGH captive volumes				
Year	2015	2020	2025	2035	2045	2015	2020	2025	2035	2045	2015	2020	2025	2035	2045
Tonnes ('000)	653	788	942	1,251	1,669	653	899	1,178	1,733	2,486	653	984	1,357	2,093	3,090
	<i>Hectares- warehousing</i>					<i>Hectares- warehousing</i>					<i>Hectares- warehousing</i>				
15 stock turns per annum (slow)	13	16	19	25	33	13	18	24	35	50	13	20	27	42	62
20 stock turns per annum (moderate)	10	12	14	19	25	10	14	18	26	38	10	15	20	32	47
26 stock turns per annum (fast)	8	9	11	15	19	8	11	14	20	29	8	11	16	24	36

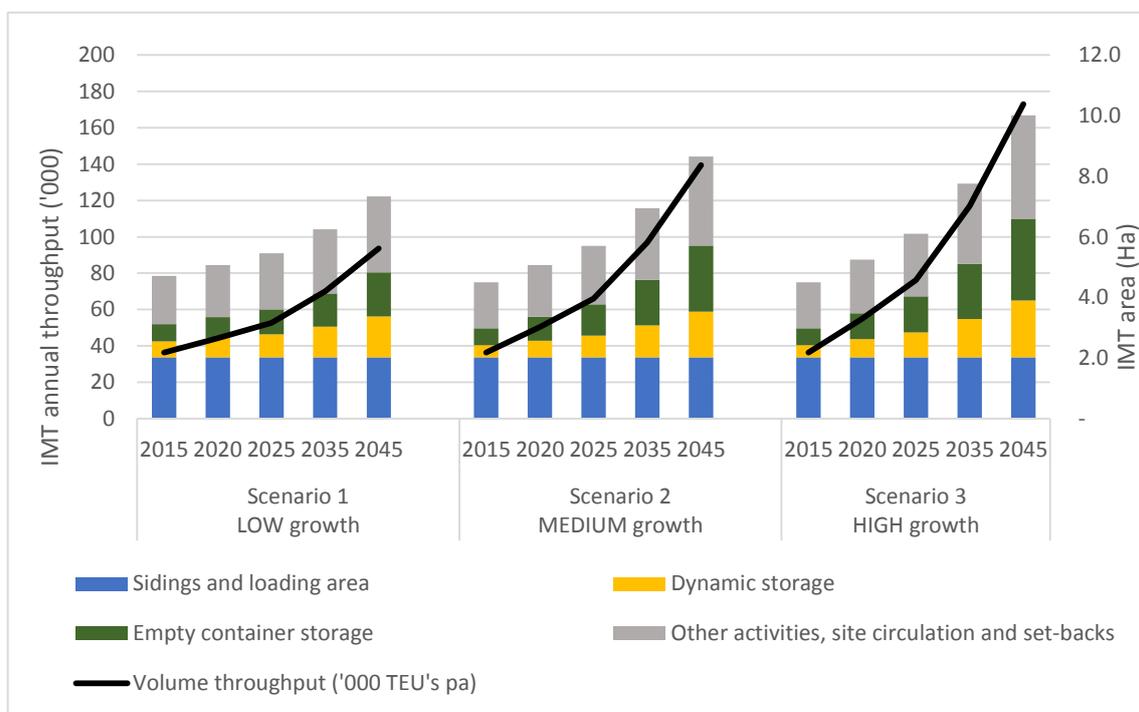
## 6.2 Intermodal terminal areas

The requisite area for the intermodal terminal largely depends on volume throughput and the range of services provided. Most new intermodal terminals have been designed to integrate empty container storage for shipping lines.

While larger terminals are “scalable” with volume over time, it is likely to be more cost effective to build the Gateway Precinct intermodal terminal as a single stage. The average number of daily trains varies from 2 to 10, and there is a need for two sidings to meet demand. A third siding might be required for the high growth scenario after 2035. An additional siding for long term train storage has not been included in the land estimate.

**The area required for all scenario varies from 8 to 10 hectares.**

FIGURE 13 - NOMINAL INTERMODAL TERMINAL AREAS (HECTARES)



## 6.3 Rural processing area

Under scenario 3, the Gateway Precinct would attract a significant rural processing plant, comparable to the Simplot processing plant in Devonport.

In terms of land area, the likely uptake would be in the area of 7.5 ha.

# 7 ECONOMIC IMPACTS OF THE FREIGHT PRECINCT

## 7.1 Introduction

An Economic Impact Assessment (EIA) measures the degree to which some particular economic stimulus accumulates in total economic activity levels within a defined region, i.e. after measuring the cumulative impact of all the buyer/ supplier transactions that are induced in the region.

The basic steps in undertaking an EIA include:

1. Isolating the direct impact on the regional economy caused by the relevant economic stimulus;
2. Generating region specific econometric models and subsequently deriving economic multipliers for major regional industry groups; and
3. Applying these multipliers (by relevant industry group) to the direct impacts to estimate total regional impacts in terms of regional value-added and employment.

This type of assessment is beneficial in understanding the demand for freight within an economy, as the induced economic impacts generated from a particular economic stimulus will create a further demand for freight. Such information is essential for a freight demand analysis.

## 7.2 Regional definition

Two different regions were defined for the purpose of this analysis:

- Northern Midlands Municipality; and
- Northern Tasmania Region

The assessment was undertaken twice using these different regions each time. In doing so, the economic impacts relating to the increased economic activity at the Gateway Precinct could be identified at both a local and regional level, which is necessary to determine the demand for freight from the Gateway Precinct within the Northern Midlands area and across the Northern Tasmania region.

## 7.3 Growth scenarios

Along with the context of two different regions, the economic impact assessment was undertaken under three different growth scenarios relating to the Gateway Precinct's economic activity over the course of the next 30 years.

Descriptions of each of the scenarios can be found in Section 5.1.

## 7.4 Regional economic multipliers

To calculate the indirect impacts associated with the increased economic activity, SGS has used regional economic multipliers generated by its internal econometric modelling techniques.

In essence, SGS takes the inter-industry relationships (buyer–supplier transaction) that are measured by the Australian Bureau of Statistics in the National Accounts<sup>14</sup> and scales these relationships down to a state level initially, and then subsequently a regional level using available datasets and accepted mathematical techniques.

The results of this scaling process are a set of regional industry specific multipliers which estimate how spending in a specific regional industry, via the assessed direct impacts (i.e. increased economic activity), flows through to total regional value added (or contribution to GRP net of taxes), and full time equivalent employment levels.

## 7.5 Economic impacts

Over the course of the next 30 years, the economic activity generated within the Gateway Precinct, which is a product of businesses being created and producing various goods and services as well as uplifts in labour productivity due to agglomeration benefits, presents a direct economic stimulus that will have further induced or indirect impacts on the local economy. The extent of these impacts are measured through economic indicators (i.e. output, value-added<sup>15</sup>, FTE employment).

Under the three different scenarios, the Gateway Precinct’s economic activity is expected to grow at different rates. Hence, the economic levels of activity under the three scenarios will differ in magnitude.

Results of the economic activity analysis is summarised in the table below at 10-year, 20-year, and 30-year increments:

TABLE 21 ECONOMIC ACTIVITY AT THE GATEWAY PRECINCT 10, 20, & 30 YEARS

Northern Midlands (C)		10 Years			20 Years			30 Years		
		BaU / sc 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3
Value-Added (\$ million)	Direct	\$174	\$182	\$189	\$197	\$219	\$234	\$223	\$264	\$289
	Flow-on	\$47	\$49	\$51	\$52	\$58	\$63	\$59	\$69	\$78
	<b>Total</b>	<b>\$221</b>	<b>\$231</b>	<b>\$241</b>	<b>\$249</b>	<b>\$277</b>	<b>\$298</b>	<b>\$282</b>	<b>\$333</b>	<b>\$367</b>
Employment (average annual FTE positions)	Direct	1,798	1,859	1,917	2,041	2,242	2,372	2,323	2,714	2,931
	Flow-on	476	524	550	536	627	679	606	752	837
	<b>Total</b>	<b>2,274</b>	<b>2,383</b>	<b>2,468</b>	<b>2,578</b>	<b>2,868</b>	<b>3,051</b>	<b>2,929</b>	<b>3,466</b>	<b>3,769</b>

Source: SGS Economics & Planning.

As shown by the results, in the highest growth scenario, the precinct could generate \$289 million in value-added per annum and attain 2,931 average annual FTE jobs in year 30. In addition, indirectly, the Gateway Precinct would generate another \$78 million in value-added and 837 jobs within the region. The total value add would be \$367 million per annum and 3,769 jobs.

<sup>14</sup> Particularly the Australian Input-Output Tables (ABS Cat. No. 5209.0).

<sup>15</sup> Value added includes the sum of wages paid out to employees and Gross Operating Surpluses retained by firms, net of input or material costs. In other words, value added measures labour and business surpluses retained within a region. It does not include taxes paid to government.

In the Business as Usual scenario, the precinct would generate approximately \$223 million in value-added and attain 2,323 FTE jobs in year 30. Indirectly, through flow-on effects, the Gateway Precinct would generate \$59 million in value-add and 606 jobs. In total, by year 30, the Gateway Precinct would generate \$282 million in value-add and 2,929 jobs.

The economic impact of investing in the Gateway Precinct concept, i.e. enabling an intermodal hub (scenario 2 and 3) and of supporting rural processing (scenario 3), is relatively significant compared to doing nothing, i.e. Business as Usual, scenario 1 (Table 22). Compared to BaU, scenario 2 generates a value-added of \$50 million per annum, and 538 jobs. Scenario 3 generates a value-add of \$84 million per annum, and 830 jobs.

TABLE 22 ECONOMIC IMPACTS OF THE GATEWAY PRECINCT COMPARED TO BAU – SCENARIO 1

Northern Midlands (C)		10 Years		20 Years		30 Years	
		Scenario 2	Scenario 3	Scenario 2	Scenario 3	Scenario 2	Scenario 3
Value-Added (\$ million)	Direct	\$8	\$15	\$22	\$37	\$40	\$66
	Flow-on	\$2	\$5	\$5	\$11	\$10	\$19
	<b>Total</b>	<b>\$10</b>	<b>\$20</b>	<b>\$27</b>	<b>\$48</b>	<b>\$50</b>	<b>\$85</b>
Employment (average annual FTE positions)	Direct	61	120	201	331	391	609
	Flow-on	48	74	90	143	147	232
	<b>Total</b>	<b>109</b>	<b>194</b>	<b>291</b>	<b>474</b>	<b>538</b>	<b>840</b>

Source: SGS Economics & Planning

Scenario three has the greatest impact overall in terms of value-add and employment over all three observed periods.

## 7.6 Limitations to analysis

Input-output modelling has some limitations, as follows, but is a cost effective technique, recognising that the only feasible alternative is to utilise partial or general equilibrium econometric models. Having said this, general equilibrium models require an annual stimulus of >\$100 million before the impacts start to be measurable across the economy. Hence, the results above provide an indicative estimate of how the economy will be affected by the direct stimulus created by the Gateway Precinct’s economic activity.

Limitations to the analysis include:

- The input-output (econometric) model assumes relationships between industries are static over the forecast period. That is, productivity improvements are not factored in and historic relationships are assumed to hold.
- The input-output (econometric) model derives relationships between industries using total production estimates. Consequently, the relationships are ‘average’, whereas the stimulus used as an input is ‘marginal’. Such an approach does not account for any ‘underutilised capacity’ at the industry level or additional economies of scale that might ensue, as production expands from its existing base.
- All of the stimuli (direct impacts) are assumed to be ‘new’ economic activities for each regional economy. That is, crowding out or industry substitution effects are assumed to be negligible, meaning that key economic inputs such as labour and capital are assumed to be unconstrained, i.e. there is sufficient slack in the economy to service these stimuli without transferring significant resources from other productive uses. It also means that the activities that are promoted by the subject project do not adversely affect operations elsewhere.

# 8 NETWORK AND INFRASTRUCTURE ISSUES

## 8.1 Scope

The Gateway Precinct forms part of a number of industrial precincts currently supporting the import and export industry in Northern Tasmania. These precincts vary in size and provide a range of types, sizes and locations. Based on the site assessments of industrial precincts with vacant and suitable industrial land, and considering projected demand for industrial land for the next 15 to 30 years, the location of the following precincts of regional importance are shown in Figure 14 below:

- TRANSlink (approximately 54 hectares, mostly large lots over 5,000 sqm)
- Bell Bay (1,126 hectares of a limited number of very large lots)
- Westbury (73 hectares over a range of mostly large lots)
- Simplot (19 hectares over four large lots)
- Connector Park (less than 11 hectares due to recent uptake of large lots)
- Brighton Transport Hub (50 hectares)

FIGURE 14 INDUSTRIAL PRECINCTS OF REGIONAL SIGNIFICANCE



To fully appreciate the potential of the Gateway Precinct to attract its fair share of the future freight demand it is important to understand what is required of the area to service this demand. To do so

requires an appraisal of the existing infrastructure as it relates to freight planning in the short, medium and long term. Key issues include:

- Transport and logistics requirements, new or upgraded infrastructure and utilities, including any redundancy;
- Workforce requirements (skills needs);
- Associated opportunities, risks, and other considerations (e.g. industry relocation to enable higher value uses in City of Launceston, additional co-location benefits, knowledge sector opportunities);
- Capacity of existing infrastructure to manage potential freight task, and;
- Gaps/un-met demand in managing the potential freight task.

In all instances, improved integration of transport and land use planning is essential to meeting these key transport objectives. Any assessment of this nature also needs to identify best practice considerations for intermodal hubs, and identify and prioritise projects resulting from the above.

The Gateway Precinct is a planned integrated consolidation of the Launceston Airport and the TRANSlink industrial precinct, both of which are aimed at further developing this key logistics precinct within Tasmania. Launceston Airport and the TRANSlink precinct will play a significant role in the movement of tourists and freight in/out of the Northern region, both of which are forecast to grow.

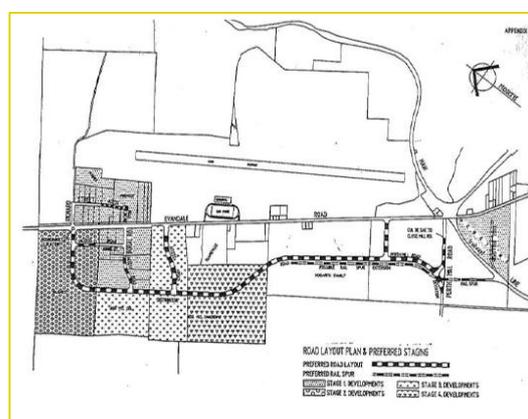
The Gateway Precinct is located on Evandale Road, Western Junction in Northern Midlands between the Midland Highway and Mill Road. The Precinct is ideally positioned north-west of the Launceston Airport mainly on the western side of Evandale Road and at the intersection of the rail network, the State highway network and the main entry to the Launceston Airport.

The extent of the current and future development is shown in Figure 15 below.

FIGURE 15 THE GATEWAY PRECINCT



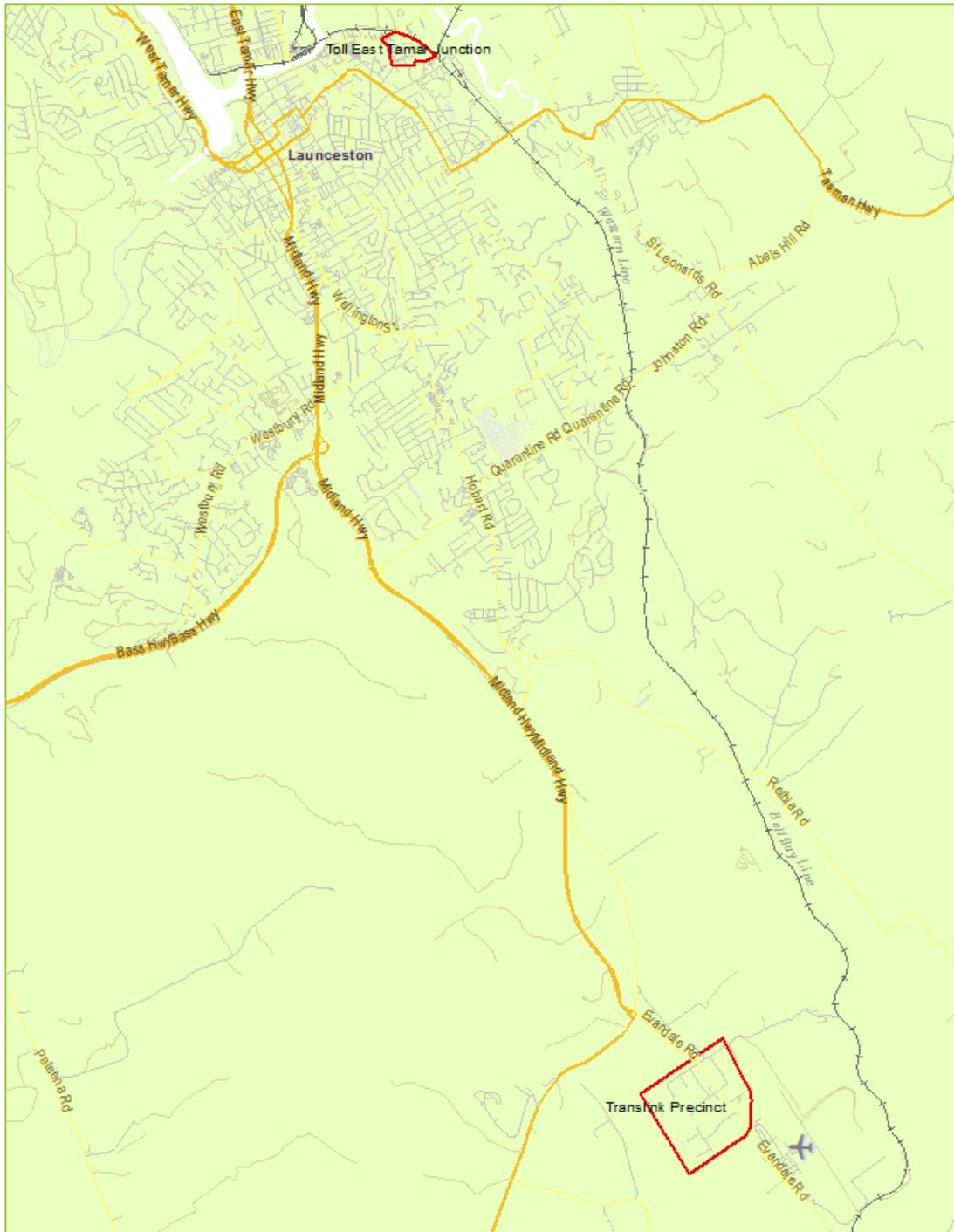
Source: Launceston Airport and Northern Midland Council Presentation (October 2015)



Source: Launceston Airport and Northern Midland Council Presentation (October 2015)

Figure 16 below shows the location of the Gateway Precinct relative to Launceston and, significantly, some 15 minutes' drive to the south of the Toll East Tamar Junction, the detail of which is shown in Figure 17 below. The reason why it is important to recognise the function and location of Toll East Tamar Junction Intermodal Terminal by comparison is that it has the benefit of being located directly alongside the Western Line and the Bell Bay Line. This means that a terminal at this location is currently more-readily able to receive and dispatch goods that can be transported by rail. There is no similar rail spur off the Western Junction into the Gateway Precinct established as yet.

FIGURE 16 THE GATEWAY PRECINCT LOCALITY PLAN RELATIVE TO THE TOLL EAST TAMAR JUNCTION



In 2014 Launceston released its Greater Launceston Plan (GLP) which sets out a strategic direction for the next 20 years and beyond. The Greater Launceston Plan (GLP) acknowledges the significance of the Gateway Precinct for tourism and freight.

Demand for industrial land is generated primarily by general industrial uses (workshops, light industry and local service industries) and transport and warehousing. The integrated master plan for the Launceston Airport and TRANSlink industrial precinct with complementary road transport and warehousing services includes:

- A long term plan to meet the optimal future requirements of the Launceston Airport;
- A coordinated plan for the sustainable consolidation of the TRANSlink industrial precinct as Tasmania’s pre-eminent logistics precinct;
- Coordinated access planning to link air and rail access to the national highway network;
- A rail model interchange project at the of the western and main lines; and
- Plans for phased upgrading of key freight transport roads in the area.

Employment by industry demonstrates that the biggest growth has been in the public service, retail and building sectors. While this is not problematic in itself, this increase in employment is not necessarily growing in response to an increase in the demand for rail industry related skills. The increase will however address the key challenge of stimulating future economic development of the region as the fundamental driver of prosperity, but with the underlying focus on changing the way in which goods are sourced, manufactured and exported, but then ultimately transported by road.

## 8.2 Air, Roads, Rail and Intermodal Terminals

Given the inland location of the Gateway Precinct, there will be a high dependency on the suitability of the land based freight corridors linking to the site. As opposed to the Toll East Tamar industrial precinct, the Gateway Precinct does not have the benefit of a railway line passing by immediately adjacent to the boundary of the site. To achieve the same level of access it will be necessary to construct a new rail spur off the Western Junction or extend the precinct further south.

FIGURE 17 TOLL EAST TAMAR JUNCTION LOCALITY PLAN



The Gateway Precinct does, however, have a strong spine road linking with the Midland Highway in the north and the Launceston Airport in the south. Figure 18 illustrates the major north-south road corridors characterising the region and linking with the site.

FIGURE 18 THE GATEWAY PRECINCT (EXISTING)



Infrastructure which has the ability to complement the intended freight logistics activities for the Gateway Precinct is as follows:

- Road transport and warehousing services linking the site to the major cities in the north and the south, with complimentary sea freight operations
- Road-based shuttle services with the Western Rail line services linking to the Hobart port and the Brighton terminal (near Hobart)
- High value low volume air freight cargo handling services between Launceston Airport and the Australian mainland.

## Air

Launceston Airport is owned and operated by Australia Pacific Airports (Launceston) Pty Ltd with a 10% share owned by the Launceston City Council. Launceston is Tasmania's second largest airport in terms of passengers and is the primary airport of the State's north coast. The airport includes a large domestic terminal, a freight terminal and general aviation facilities. Launceston Airport is the major airport in the Region. It provides connections to Melbourne, Sydney, Brisbane and Flinders Island. It is anticipated that the Launceston Airport and the TRANSLink precinct will play a significant gateway role in the transit of tourists and freight movements in the northern region, both of which are forecast to grow.

Of note is that Tasmania is significantly more reliant on air transport than the other Australian mainland States. This is particularly so when needing to transport time sensitive freight such as fresh produce and

agricultural products. The new Gateway Precinct is likely to play a key part in the future economic prosperity of this airport. The need for Launceston Airport to better coordinate their activities with that of the adjacent Gateway Precinct is therefore paramount.

## Roads

The Tasmanian road infrastructure is comprised of:

- 576km of National roads,
- 3,848km of State roads, and
- 1,248 bridges and other structures

Road segments with the highest traffic volumes connect the major ports, intermodal facilities, and the major population centres of Burnie, Devonport, Launceston and Hobart. These include:

- The Bass Highway, a Category 1 Trunk Road, is designated as National Highway 1 and connects the major cities across the north of the state - Burnie, Devonport and Launceston,
- The Midland Highway, also a Category 1 Trunk Road, is designated as National Highway 1 and runs for a further 176 kilometres south between Launceston and Hobart, and
- Illawarra Main Road (not part of the National Network) which runs between the Midland Highway and the Bass Highway to the south of Perth.

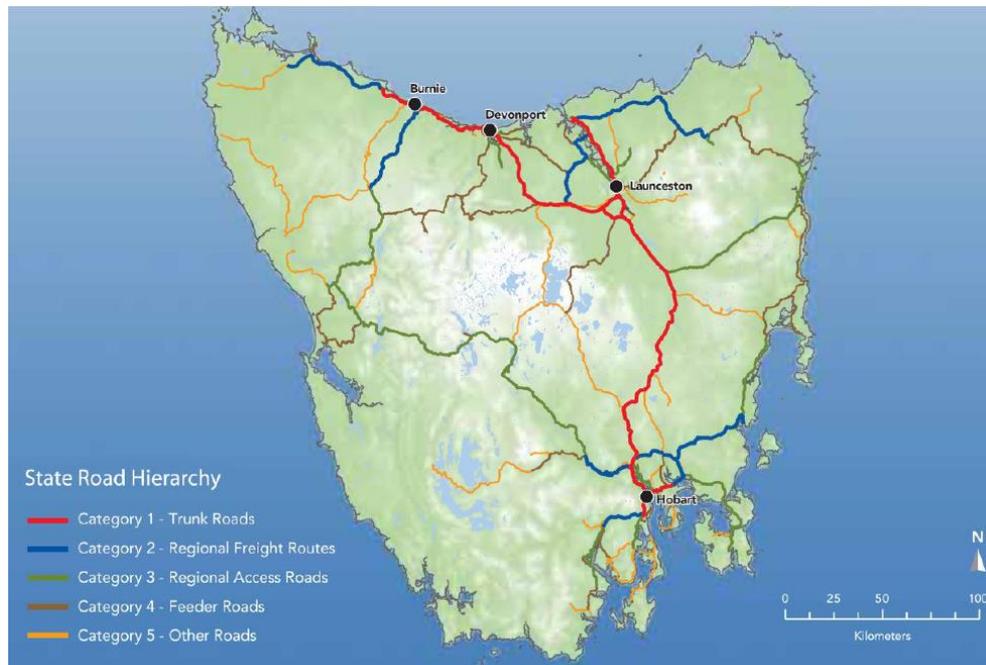
These two National Highways in addition to Illawarra Main Road, serve as the most important inter-regional road links for vehicles travelling between the North West and the South. See Figure 19.

According to the Infrastructure Report Card prepared for Tasmania in 2010, the National road network continues to deteriorate, mainly due to increasing freight usage and road pavements exceeding their design life. Recently completed major infrastructure projects referred to at the time include:

- Brighton Bypass and Transport Hub projects
- Bass and Tasman Highways upgrades
- South Arm Highway from Oceana Drive to Pass Road upgrade
- East Tamar Highway upgrade
- North East regional freight network strategic upgrades
- Kingston Bypass.

With the largest change in the freight task being the increase in agricultural freight, road corridors in the State's key agricultural regions are likely to experience the most significant changes in freight volumes. Key inter-regional corridors carry the largest increases in freight. The Bass Highway is projected to nearly double its freight volumes in 2029, with the Midland Highway and East Tamar Highway also projected to have significant growth. The approved HPV/HMLV networks allow movement of vehicles up to the size of B-doubles along most of the most important freight routes.

FIGURE 19 TASMANIAN ROAD HIERARCHY



Source: Engineers Australia Infrastructure Report Card 2010

## Rail

Tasmania's commercial rail infrastructure consists of 626 km of narrow gauge railway. The network consists of freight-only rail with a number of small sections of historic rail. Rail freight in Tasmania consists mainly of bulk forestry and mining products, and containerised freight.

There are three main lines in operation in Tasmania at present.

- Western Line, a 179km section running from East Tamar Junction to Burnie
- Melba Line, a 130km section running from Burnie to Melba Flats
- South line, a 199km section running from Western Junction to Hobart

The importance of the Southern and Western Rail Lines as key inter-regional links is largely as a result of freight between the South and North West regions, with just a small component having an origin or destination in the Northern Region. Less than 5% of Tasmania's freight task by weight is carried by rail. The East Tamar Junction acts as the main inland rail hub.

Major developments that have characterised the rail sector over the past few years include:

- The departure of the rail operator, Pacific National Tasmania (PNT) in 2009
- The formation of the Tasmanian Government-owned TasRail.
- The purchase of the Melba Line by the Tasmanian Government
- The suspension of rail services to Bell Bay in 2010.
- A significant increase in expenditure on maintenance and capital works in a climate of continual decline in rail freight volumes

Tasmania has not run any passenger services since 1978.

FIGURE 20 MAJOR RAIL LINKS



### Intermodal Terminals

Tasmanian Ports Corporation Pty Ltd (Tasports) is a state-owned company responsible for ten Tasmanian Ports. In addition to seaports, Tasports operate Devonport Airport and the Burnie and Bell Bay Woodchip Export Terminals.

TasRail operates freight terminals from a number of these publicly-owned ports strategically located at the following centres:

- Burnie
- Devonport
- Bell Bay
- Brighton

In 2013-14, over 85% of the 15 million tonnes of export freight moved through Tasmania's ports, with the highest volumes recorded at Burnie, Devonport and Bell Bay.<sup>16</sup> Bulk freight accounts for up to two thirds of Tasmania's port throughput by volume. Major bulk freight sectors include mining, mineral processing and forestry.

<sup>16</sup> Department of State Growth, Tasmanian Government

Agricultural products and retail goods account for the highest volume of containerised commodities. Container volumes were the highest at Burnie and Devonport ports. In 2013-14, 451,304 TEUs were moved through Tasmania's ports. The main operators are Toll and SeaRoad at Burnie port and TT-line at Devonport.

Significant investment in intermodal infrastructure has included the Brighton Transport Hub (\$83 million), Burnie Port redevelopment (\$12 million) and Bell Bay intermodal hub (\$7 million). All of these terminals are designed to support multi modal operations and the efficient, seamless and timely transfer of freight. As the rail network is essentially a network to facilitate the export of bulk commodities and the import/export of containers, the continued investment in these intermodal terminals is essential to maintaining rail productivity.

The following section provides an overview of these major intermodal freight terminals as a means to better understanding the role of the Gateway Precinct within the overall supply chain network.

### **Burnie port**

Burnie port is located on the north coast of Tasmania adjacent to Burnie. The intermodal terminal includes a bulk minerals concentrate ship-loader (1,000 tonnes per hour capacity), a bulk woodchip loader (1,200 tonnes per hour capacity) and stockpile area (200,000 tonne capacity). The main access is via road (Bass Highway) and rail (Western Line, Melba Line).

Bulk minerals concentrate trains on the West Coast line normally operate around 6 days a week. The south/east bound "Paper Train" departs around 12.30 (Sunday to Friday), with the Intermodal service for Hobart arriving around 9am. There is an on-dock rail loading facility available at Burnie which means that the wharf cannot be used concurrently with road vehicles. The Burnie Port Optimisation Project is therefore aimed at expanding the existing container storage areas by relocating the current rail unloading area elsewhere. The existing port access road will also be realigned.

FIGURE 21 BURNIE PORT



Source: Tasmanian Government / TasRail Website

### **Devonport port**

The Devonport port is located on both sides of the Mersey River at Devonport. Container freight (SeaRoad Shipping) and passenger services (TT-Line) are located on the eastern side of the river at

Devonport East; bulk freight is located at Devonport West. A rail line is located on the western shore only. As a result, rail container traffic needs to be shuttled via road to access the western side of the port where the ships berth. Land transport connections are via the Bass Highway on both sides. Road freight travels through a mix of commercial and residential areas to reach the port.

The Railton to Devonport cement train operates seven days a week, depending on shipping schedules. A coal train runs four times a week as far as Railton. Road freight has to travel on local government roads passing through residential and commercial areas to reach a major highway.

The Spirit of Tasmania is a significant player in the movement of on-road freight across the Bass Strait.

FIGURE 22 DEVONPORT INTERMODAL TERMINAL



Source: TasRail Website



Source: QUBE Logistics

### Bell Bay

The Bell Bay port is located on the Tamar River, nine nautical miles from the sea. The Port of Bell Bay is located on the eastern bank of the Tamar River adjacent to a major Tasmanian industrial estate, 48 kilometres north of Launceston. Land transport connections are via Bell Bay Main Road to the East Tamar Highway.

The port provides both bulk handling (including minerals, fuels, timber, timber products and food) and container handling. However, commercial rail operations to the Bell Bay Port were abandoned in 2010 because the commercial shipping operator, Toll-ANL, decided to transfer its container shipping business to Burnie. While there remains a rail access to the port, its constraints include limited siding length, limited location on berths and steep departure grades. Bell Bay's shunting yard is located away from the port and requires trains to be split up before accessing the port.

There is still a strong relationship between the port and businesses located in the adjacent Bell Bay Industrial Estate although plans to progress the \$150 million Bell Bay Integrated Gateway Project have not progressed. Tasports made a submission to Infrastructure Australia, but despite other major port, rail and road projects receiving funding in Tuesday's budget, Bell Bay missed out.<sup>17</sup>

<sup>17</sup> <http://www.abc.net.au/news/2009-05-14/bell-bay-to-expand-without-federal-dollars/1682894>

FIGURE 23 BELL BAY FREIGHT TERMINAL



Source: abc.net.au



Source: TasRail Website

### Brighton Transport Hub

Another intermodal terminal of significance is the new \$79 million Tasmanian Government funded Brighton Transport Hub operated by TasRail in conjunction with the private transport company, Toll. The project opened in 2012 and involved the construction of a modern road-rail facility and freight distribution hub, 23km north of Hobart.

The Hub is on a 50 hectare site adjoining the existing Brighton Industrial Estate, and has good road and rail connections as it is beside the Midland Highway and the North-South Rail Line. Trains into the old Hobart yard ceased in June 2014. Trains now terminate at the Brighton Freight terminal, just north of Bridgewater.

The facility handles general and refrigerated freight, offers warehousing and distribution services, and provides container storage for both domestic and international shipping requirements. The Brighton Transport Hub caters for customers who establish at the site as well as those who transact via TasRail's hardstand operations.

FIGURE 24 BRIGHTON INTERMODAL HUB



Source: Port of Hobart



Source: Brighton Community News

## 8.3 Are there any flaws or constraints emerging?

There are a number of constraints that need to be borne in mind as the move towards growing an industrial precinct at the Launceston Airport unfolds. The increase in container traffic across Bass Strait together with a significant increase in the movement of north-south freight will increase the demand for improved port and land transport infrastructure. Challenges to implementing a more integrated approach to transport planning within the Tasmanian context include:

- Ageing transport infrastructure;
- Small and dispersed permanent resident population, and slow population growth, and
- Uncoordinated investment decisions by the government versus the private sector.

Tasmania’s ports and airports are mainly concentrated in the north with the three most populated major urban centres being located in Devonport, Burnie and Launceston. The growth in bulk and general shipping trade combined with the current duplication of functions across the northern ports will increase the need for more efficient freight operations. This is supported by a number of current government initiatives aimed at supporting further private investment, especially in close proximity to the ports. The Gateway Precinct, being somewhat remote, is currently not part of this commitment.

The Tasmanian economy is supported by an extensive road system reflecting the need to connect a highly dispersed population separated by rugged mountainous terrain. There is a high dependency on road transport for the movement of goods and freight. Although not insignificant, tourism forms a lesser part of the road network connectivity challenge.

Topographical constraints have affected the ready expansion of road and rail infrastructure. The majority of the road and rail transport network is mature, and incurs a high maintenance cost because of the difficulty in achieving economies of scale in the provision of transport infrastructure and supporting services. Increased road funding is required to address the backlog and accommodate the growing traffic volumes.

Urban areas generate significant numbers of intra-urban light truck trips in addition to the long-distance trips undertaken by the larger trucks. Uncoordinated decisions by both private sector and government transport infrastructure owners and users can undermine strategic transport plans such as improved last mile connections to the ports.

## 8.4 Need to stage developments to minimise impacts of “sunrise” CAPEX

The Tasmanian Infrastructure Strategy (2010) sets the overarching direction for how infrastructure, including transport, is to be planned, provided, used and maintained. This 10-year State-wide strategy introduced a number of new infrastructure development processes that aims to increase the rigour by which projects are selected. As an extension to this initiative in the context of the Gateway Precinct, the issue of contestability remains. That is, what proportion of the existing movement of import and export freight can be encouraged and therefore benefit from the addition of the Gateway Precinct to the network of intermodal terminals already in operation. Studies confirm that the freight task is heavily focussed on the State road network. In 2008/09 the state road network carried 78% of the Northern Region’s heavy freight task in tonne-kilometres.<sup>18</sup> Coordination between the airport owners and the State Growth/local governments is therefore essential to overcoming the challenge of relocating existing industries and encouraging change.

The additional traffic volumes that would arise from the large-scale commercial development at the Launceston Airport would result in additional local road congestion and increased local road maintenance costs. Based on the scenario approach discussed earlier in this report, the table below provides an indication of where the shortcomings in the available infrastructure provision surrounding the Gateway Precinct may appear in response to a low, medium and high growth scenario as follows.

<sup>18</sup> Northern Integrated Transport Plan (2013)

Scenario	Key Attributes	Infrastructure Response
1. Business as usual	<ul style="list-style-type: none"> <li>Autonomous development across the precinct</li> <li>Intermodal terminal operations</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of road network within the precinct</li> <li>Increased light weight manufacturing, product distribution and warehousing.</li> </ul>
2. Freight hub	<ul style="list-style-type: none"> <li>Autonomous development across the precinct</li> <li>Intermodal terminal operations</li> <li>Major freight forwarder moves to the Gateway Precinct</li> <li>Air freight hub development</li> <li>Some logistics and value-adding for Midland output</li> </ul>	<ul style="list-style-type: none"> <li>Significant airport investment in air freight infrastructure including the duplication of Evandale Road south</li> <li>Increased warehousing facilities leading to more road/air intermodal activities.</li> <li>Greater focus on high value low volume import export commodities market via air</li> <li>Local product manufacturing and distribution network established</li> <li>Construction of a new rail spur off the Western Junction allowing for genuine intermodal road/rail transfer to occur at the junction of the Western and Main Lines</li> </ul>
3. Integrated site accommodating a rural processing cluster	<ul style="list-style-type: none"> <li>Autonomous development across the precinct</li> <li>Intermodal terminal operations</li> <li>Major freight forwarder moves to Gateway Precinct</li> <li>Air freight hub development</li> <li>Some logistics and value-adding for Midland output</li> <li>Agricultural processing hub develops (modest industrial)</li> <li>Accelerated growth in production (various)</li> </ul>	<ul style="list-style-type: none"> <li>Secondary/tertiary enterprises in manufacturing, wholesaling, distribution, retail and businesses services established</li> <li>The transport of agricultural produce, forestry and mining products via rail from Launceston to the coastal shipping ports begins to take hold.</li> </ul>

Amongst others, the following road infrastructure projects have been committed to by the Australian, Tasmanian and Local Governments in recent years:

- A \$42.5 million upgrade of north east freight routes under the Tasmanian Infrastructure Strategy to address future projected freight volume increases, largely made up of agricultural products freight.
- The A\$191 million Brighton Bypass, a north/south bypass of the Midland Highway diverting traffic away from the northern Hobart satellite suburb of Brighton. (This project commenced and opened in 2012).

Projects already commenced under the AusLink five year investment programme and the Tasmanian Government Programme include:

- The \$72 million Midland Highway Duplication Perth to Breadalbane. (This project started in Dec 2015).
- The \$84 million Illawarra Road (South Perth) Bypass to provide alternate access, particularly for heavy vehicles away from the Perth Township.<sup>19</sup> (This project is due to start in 2018).

In addition, the Australian Government has been approached for funding to undertake a number of additional significant projects in the Northern Region through the Nation Building Program, including:

- The \$65.6 million Midland Highway access route around the Launceston Central Area,
- The \$35 million Bagdad Bypass and interim safety upgrades through Bagdad,

<sup>19</sup> Tasmanian Government 2012 Transport Submission to Infrastructure Australia

- The new \$535 million Bridgewater Bridge which will take over the role of carrying the Midland Highway traffic, and
- Various freight rail revitalisation projects between Brighton and Western Junction to reduce north-south turnaround times and increase the pulling capacity of locomotives.

## 8.5 Capacity of the network to handle the future task

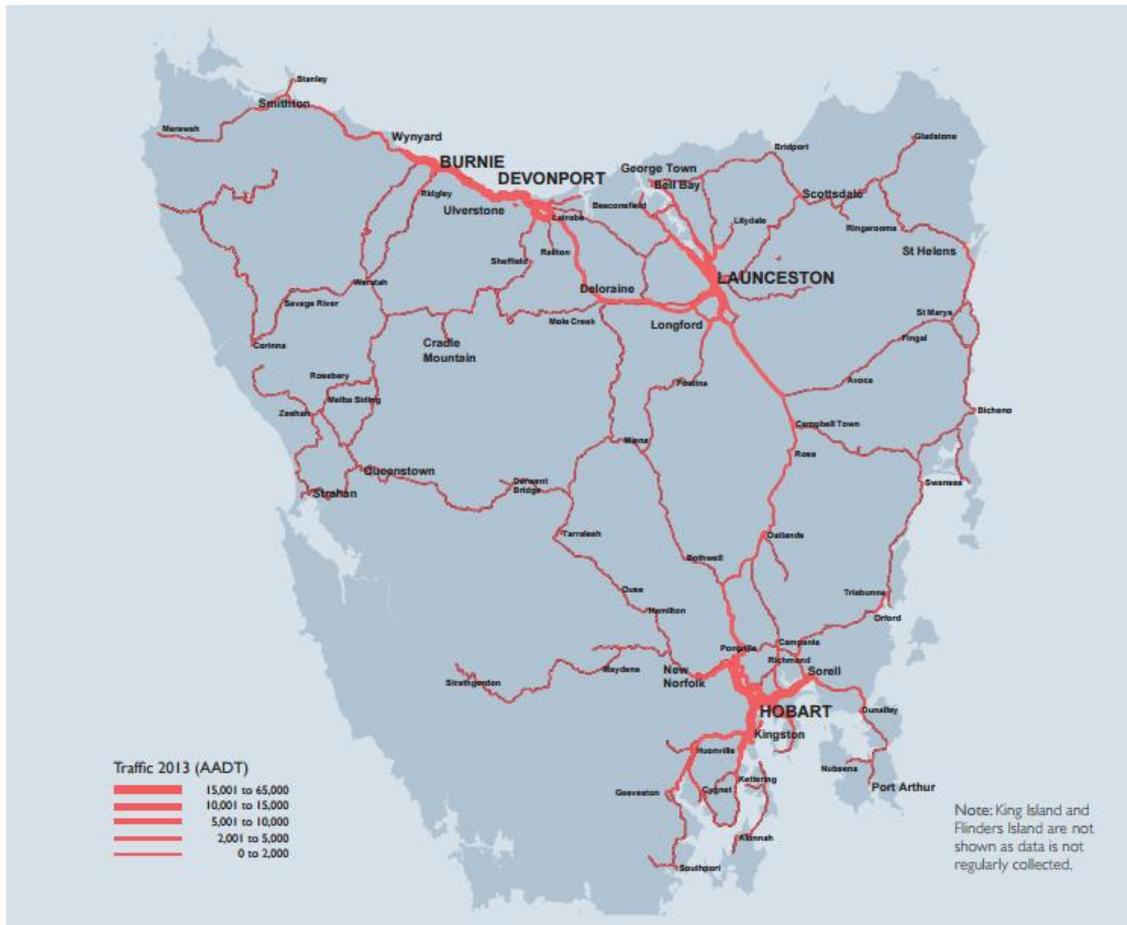
The State roads with the highest recorded levels of use in 2013 were:

- the Tasman Highway (reaching a maximum of about 66,000 average annual daily traffic movements (AADT)) over the Tasman Bridge);
- the Brooker Highway (about 52,000 AADT between Risdon Road and the Domain Highway);
- the Southern Outlet Highway (34,000 AADT between Kingston and Mt Nelson); and
- the East Tamar Highway (30,000 AADT at the Charles St Bridge).

Between 2003 and 2013, permanent road counters with large numerical increases in AADT were:

- Midland Highway near South Launceston (increase of about 6,000 AADT);
- the Tasman Highway near Cambridge Park (increase of about 5,000 AADT);
- the Tasman Bridge (increase of about 3,000 AADT); and
- the Bass Highway over Victoria Bridge in Devonport (increase of about 2,000 AADT).

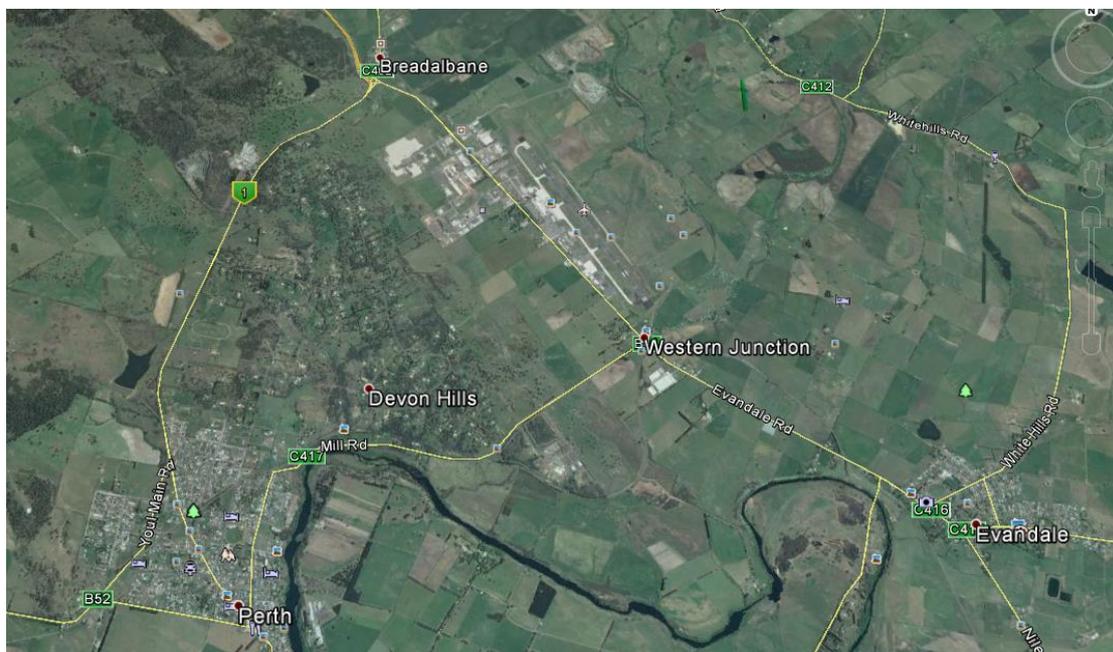
FIGURE 25 AVERAGE ANNUAL DAILY TRAFFIC BY ROAD CATEGORY



Source: State of our Roads 2014, Department of State Growth, Tasmanian Government

Of most relevance to the Gateway Precinct is the planned duplication of the section of the Midland Highway from Breadalbane to Perth which is carrying in the order of 5,000 to 10,000 vehicles per day. Between 2003 and 2013 this section also showed an increase of about 6,000 AADT. Any additional traffic generated by the Gateway Precinct will therefore be adding to this amount.

FIGURE 26 SURROUNDING ROAD NETWORK



Source: Google Earth

This study has confirmed that the size of the contestable freight market relevant to the Gateway Precinct is estimated to be in the order of 1.5 to 1.9 Mtpa, growing to more than 4 Mtpa by 2045. Based on these projected freight volumes, and input assumptions noted in yellow below, the estimated number of additional truck trips using the existing road network based on the captive site volumes is as follows:

TABLE 23 ADDITIONAL TRUCK MOVEMENTS

SCENARIO	Captive - LOW					Captive - MEDIUM					Captive - HIGH				
	2015	2020	2025	2035	2045	2015	2020	2025	2035	2045	2015	2020	2025	2035	2045
Tonnage throughput ('000)	653	788	942	1,251	1,669	653	899	1,178	1,733	2,486	653	984	1,357	2,093	3,090
Equivalent tonnes per load (mix general + containers on semi and B-Doubles)	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Loaded movements per annum	23,308	28,136	33,627	44,676	59,609	23,308	32,107	42,063	61,906	88,781	23,308	35,134	48,451	74,736	110,344
Backloading factor to derive total trips	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Empty movements per annum	11,654	14,068	16,813	22,338	29,805	11,654	16,054	21,031	30,953	44,391	11,654	17,567	24,225	37,368	55,172
<b>Total truck trip to/from Gateway per annum</b>	<b>34,962</b>	<b>42,204</b>	<b>50,440</b>	<b>67,014</b>	<b>89,414</b>	<b>34,962</b>	<b>48,161</b>	<b>63,094</b>	<b>92,860</b>	<b>133,172</b>	<b>34,962</b>	<b>52,701</b>	<b>72,676</b>	<b>112,105</b>	<b>165,515</b>
Operating days per annum (based on 5.5 working days per week)	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275
Truck trips per day	127	153	183	244	325	127	175	229	338	484	127	192	264	408	602
Operating hours per day	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Truck movements per hour	7.9	9.6	11.5	15.2	20.3	7.9	10.9	14.3	21.1	30.3	7.9	12.0	16.5	25.5	37.6

Based on the current estimate of 5,000 to 10,000 AADT along the Midland Highway south of Launceston, the impact of any future development of the Gateway Precinct will be in the order of a 1.6–3.8 %

increase in traffic in the near term, potentially rising to 2.0-4.0 % by 2025. Similarly, for the routes to the south via Western Junction, i.e. 2,000 to 5,000 AADT, the impact of any future development of the Gateway Precinct will be in the order of a 0.8–1.6 % increase in traffic in the near term, potentially rising to 1.5-3.0 % by 2025.

In response to this increased demand for access to the road network over time, there will be an increased need to improve the level of access and egress to the Gateway Precinct. This will come mainly in the form of a gradual development to the south along with the establishment of a freight hub in close proximity to the Western Line. Although not currently identified in any long term plans, it is anticipated that more attention will need to be given to upgrading the Western Junction roundabout and the lesser route C417 (Mill Road) to the west towards Perth.

## 8.6 What priority projects result when we consider scenarios and staging?

The following projects in the immediate area of the Gateway Precinct result when we consider scenarios and staging:

TABLE 24 PRIORITY PROJECTS

Scenario	Associated Infrastructure Improvement	Indicative Capital Cost
1. Business as usual	<ul style="list-style-type: none"> <li>Expansion of road network within the Gateway Precinct in keeping with the master plan to accommodate future land development further south over time.</li> </ul>	\$2 million
2. Freight hub	<ul style="list-style-type: none"> <li>Upgrade of Evandale Road and Western Junction roundabout to provide a high quality alternative southern entry to the Gateway Precinct</li> <li>Construction of a new rail spur off the Western Junction (various)</li> </ul>	\$5 million \$15 million
3. Integrated site accommodating a rural processing cluster	<ul style="list-style-type: none"> <li>Illawarra Road (South Perth) Bypass</li> <li>Midland Highway – Duplication Perth to Breadalbane</li> <li>Upgrade of Mill Road (Route C417), Western Junction to Perth</li> </ul>	\$84 million \$72 million \$50 million

Source: SMEC and other cross references contained within this report

In addition to the future road network upgrades proposed, it is important to note that the rail network will remain an important part of the overall freight task. However, it is likely that the rail network will continue to suffer from poor reliability and aged infrastructure, resulting from track and rolling stock deficiencies and leading to operational constraints such as reduced speed limits. This will in turn place more pressure on the road network and continue to affect the attractiveness of the Gateway Precinct as an intermodal hub. The key message is therefore that the Commonwealth Government and the Tasmanian Government need to continue to refine the Strategic Regional Freight Network including the upgrade of bridges, better roads, more efficient ports, bigger airports and expanded intermodal facilities linking to the Principal Freight Network.

Intermodal Terminals are clearly a key part of an efficient, integrated multi-modal freight network given the critical link they provide between transport modes. It is recommended that the Commonwealth Government and the Tasmanian Government therefore continue to work with the private sector to provide guidance on mutually beneficial approaches to policy, planning and investment along this key freight corridor. Included in this ongoing effort will be the need to acquire a much broader

understanding of approaches to improve the competitiveness of rail freight and the identification of a framework with a greater focus on containerised freight.

# 9 OTHER CONSIDERATIONS

## 9.1 Policy issues

There are a number of State policy areas which potentially impact on the future development of the Gateway Precinct:

- *Strategies and policies in regard to agricultural production and export promotion to China and other overseas markets.* The Tasmanian Government is active in promoting Tasmania's produce to export markets. The role of the Coordinator General was developed with the aim of promoting investment and trade in Tasmania. It is still early days, and the possible impacts of the government's focus on investment and trade promotion, especially in regard to agricultural production for the Chinese market, is yet unknown. If successful, increased exports would significantly drive growth in agricultural production and processing. The Gateway Precinct is well positioned to accommodate rural processing and distribution activities, with the benefit of having an air freight connection.
- *Launceston's position and actions towards redevelopment of inner urban industrial areas.* The strategic view towards industrial land in inner urban areas of Launceston is to minimise movements of heavy vehicles through the city and, where possible, have industrial activities relocate to areas where less freight movements through the city are generated. This view is expressed in the GLP, NTILS and the Launceston Industrial Land Strategy. To date, no known firm policies or initiatives have been launched to effectuate the relocation of major freight generating operators from the inner urban area.

In regard to the Gateway Precinct it would be beneficial if investment and export promotion for agricultural and other products is successful. It is recommended the proponents of the Gateway Precincts continue to work with the Coordinator General and other trade promoting services to strengthen its position as a central hub for transport, logistics and rural processing.

A key issue in regard to the Gateway Precinct's potential to develop into an intermodal hub, is the attraction of a major freight forwarder to the precinct. Toll is currently operating from East Tamar Junction, which is very strategically located around a rail siding. The current building area is approximately 1 ha and the total site area is approximately 7.5 ha. To enable a relocation of a freight forwarder of this magnitude it is essential that a) the intermodal hub at the Gateway Precinct offers functionalities at least as good as the current location, b) certain incentives for relocation are offered and c) Launceston actively promotes the relocation of freight generating activities. It is recommended that a strategy for attracting a major freight forwarder be developed.

## 9.2 Regulation and planning

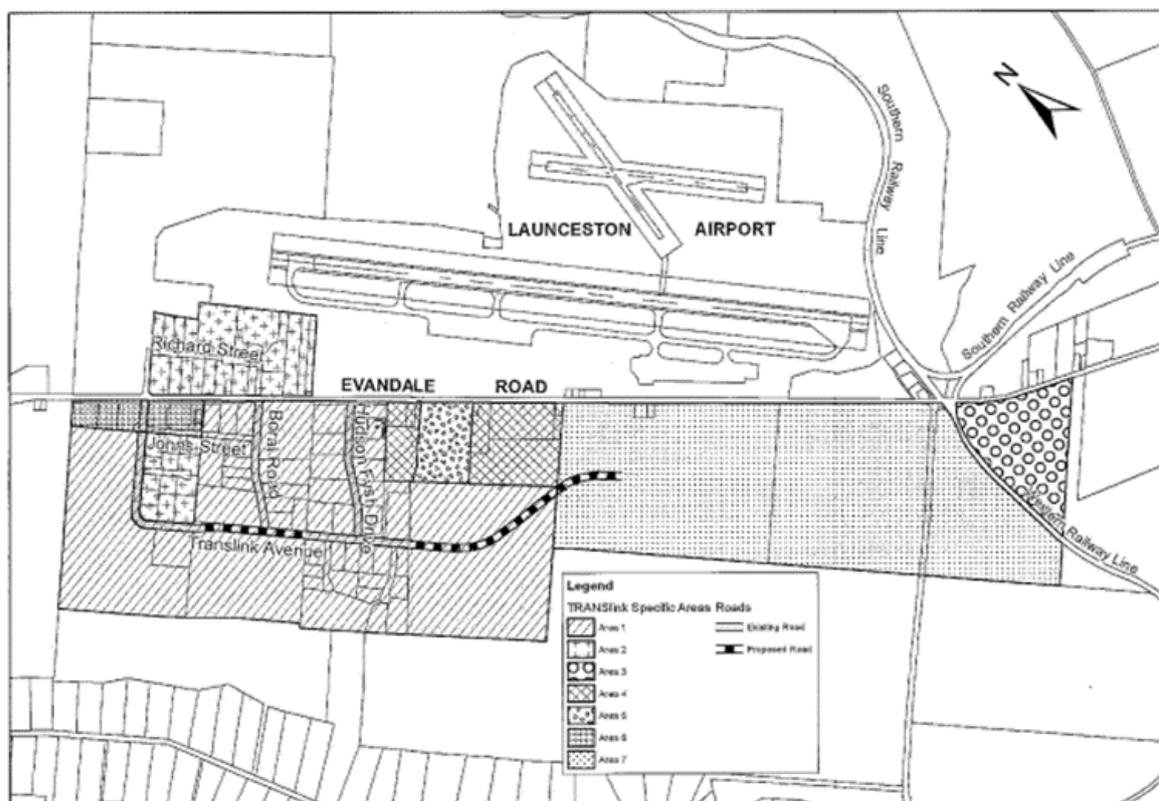
As well as being zoned General Industrial, an Australian Noise Exposure Forecast Overlay (due to the proximity to the Launceston Airport) applies, along with a Specific Area Plan Overlay. The purpose of the TRANSLink Specific Area Plan is to:

- Provide for industrial and commercial uses and developments which serve the strategic needs of the Launceston and Northern Midlands region and the State, and which would derive a particular benefit from a location having proximity to Launceston Airport, access to the State's road and rail network or links to the port of Bell Bay;
- Cater primarily for storage, transport and industrial uses;
- Provide for a limited range of retail or other activity, which supports storage, transport and industrial uses;

- Provide for a limited range of retail or other activity, which can demonstrate that the location offers a particular strategic advantage;
- Provide an area within which business-support facilities for the TRANSLink Industrial Zone and Airport operations can locate;
- Provide opportunities for the development of accommodation adjacent to and serving the Airport;
- Provide detailed guidance on use and development within the General Industrial Zone at TRANSLink, particular to the unique characteristics of the area.

The specific area plan applies to the area of land designated as TRANSLink Specific Area Plan as shown in the figure below. It identifies seven areas with different permitted and discretionary uses (see attachment).

FIGURE 27 TRANSLINK SPECIFIC AREA PLAN



Source: Northern Midlands Council Interim Planning Scheme, 2013

The intended uses for the seven areas, identified as permitted uses in the specific area plan, are as follows:

- Area 1 – primarily transport and distribution, storage and commercial services
- Area 2 – primarily transport and distribution, storage
- Area 3 – primarily transport and distribution, storage
- Area 4 – primarily bulky goods, commercial services, accommodation, residential and community uses
- Area 5 – primarily residential
- Area 6 – primarily accommodation, food and fuel services
- Area 7 – primarily commercial services, accommodation, food services, residential, sport and recreation

There is a need to quarantine land in area 3, 7 (and possibly some land in area 1) for future intermodal activities, and change use tables to suit intermodal activity. Preliminary, broad estimates indicate between 6 to 10 hectares would need to be quarantined.

The current use table for area 3 land appears to allow for intermodal activities. In area 3, utilities is a discretionary use, in addition to storage transport and distribution which are permitted uses.

The current use table of area 7, of which land will need to be quarantined, includes transport depot and utilities in the discretionary uses, but does not include storage and distribution. The use table may need adjustments to allow for future intermodal activities, once the need for quarantining has been confirmed.

Manufacturing and processing is not identified as a primary (permitted) use in any of the seven areas. Manufacturing and processing is discretionary in areas 1, 2 and 3. With a view to accommodating rural processing activities, some manufacturing and processing activities should be considered as permitted uses in an appropriate area (either, or area 1, 2 and 3).

# 10 SUMMARY AND CONCLUSIONS

1. The freight task in Tasmania can be segmented into bulk unprocessed and processed commodities, and non-bulk processed goods, dominated by food and beverages. Presently growth in the bulk sector is minimal, however the non-bulk freight growth has been 3-6% over the last few years.
2. The Gateway Precinct development is located at the nexus of the key road and rail corridors linking the container ports to Launceston and Hobart.
  - a. Launceston itself is a key distribution hub for food and consumer goods, and in particular, the Statewide Independent Wholesalers (Woolworths) and SRT warehouses are already located at the Gateway Precinct.
  - b. The Gateway Precinct development provides an opportunity to relocate large scale logistics and processing operations into a greenfield location away from more sensitive residential and commercial areas nearer to Launceston CBD.
  - c. The actual freight task captured by the Gateway Precinct will obviously depend on the composition, characteristics and scale of any future tenants. The site is well suited for the location and development of large scale “big box” warehousing for wholesalers and retailers, as well as “clean” processors.
3. Segmentation and analysis of the freight sector indicates that the portion of the freight task “contestable” in proximity to the Gateway Precinct is around 1.9 Mtpa, with approx. 0.6 Mtpa of freight already handled into/from the Gateway Precinct site. Growth in contestable demand could exceed 4 Mtpa by 2045.
  - a. Growth over the next 5 years is expected to be modest in volume terms.
  - b. Scenario-based modelling of the future freight tasks suggests that the Gateway Precinct could conceivably capture between 0.9 and 1.3 Mtpa (including its existing freight of 0.6 Mtpa) by 2025.
4. The non-bulk freight market in Tasmania is dominated by three large integrated logistics players (Toll, SeaRoad and SRT) and a large number of smaller players offering simple transport services.
  - a. There was a clear reluctance by the logistics players to participate in this study
  - b. Toll, SeaRoad and SRT exhibit a high degree of competitive tension and are unlikely to collaborate
  - c. The Gateway Precinct (like the Brighton development near Hobart) needs to attract a large logistics player early on to establish a substantial volume base as an intermodal hub

5. Government policies have identified the opportunity and need to develop Tasmania's unique agricultural sector, with a view to supplying increased volumes of value added produce to mainland Australia and Asia.
  - a. While ambitious plans exist and are articulated, action plans and growth are embryonic
  - b. Recent investments in and around the Midlands area demonstrate what is possible
  - c. Investment and export promotion for agricultural production and processing in Tasmania has intensified since the role of the Coordinator General was created. The future investments and related increase in production will create opportunities for the Gateway Precinct
  - d. Use tables for the seven areas of TRANSLink do currently not identify agricultural processing activities as a primary (i.e. permitted) use. Processing is permissible as a discretionary use in some areas.
6. There is potential for intermodal development, complemented with expanded air freight logistics, under certain conditions.
  - a. The Gateway Precinct, including an integrated Launceston airport, is well suited to provide a sophisticated logistics platform.
  - b. There is potential for an intermodal terminal to be developed within the Gateway Precinct: however rail and terminal operations require a rapid build-up of volume to be commercially viable in the short to medium term. Depending on service and price, the terminal may measure between 6 and 10 hectares and be located near to the rail corridor at the southern end of the Gateway Precinct.
  - c. Air freight services could potentially expand to around 40,000 tonnes pa. There is a need to develop end markets and verify the market preparedness to meet the higher costs for more rapid air-freight supply in lieu of sea freight cargoes.
7. A viable rail freight market exists between Hobart and Devonport/Burnie with TasRail providing services through the Brighton intermodal terminal near Hobart. A similar terminal could be developed at the Gateway Precinct over the medium to long term, provided the right balance of volume, revenue and cost is achieved.
  - a. The comparative advantage achieved by rail transport relative to road transport to/from Hobart is due to the longer pathway distances to/from port.
  - b. This advantage will be comparatively weaker for movements to Launceston, as the distance to port is considerably reduced.
  - c. There is a need for a more comprehensive review of current and potential transport costs between each of the modes, before any firm commitment can be made for an intermodal terminal at the Gateway Precinct.
8. The Gateway Precinct has the potential to accommodate an additional 750 (low, scenario 1) to 1,500 (high, scenario 3) jobs depending on the ability to invest in intermodal infrastructure, to attract a major freight operator and a significant rural processing plant.
9. Investing in the Gateway Precinct (compared to Scenario 1 – Business as Usual, no further investment) is projected to generate a value-add of \$50 million (scenario 2) to \$85 million (scenario 3) per annum (by year 30), and generate 538 to 840 additional jobs (by year 30).

10. Current road infrastructure is able to accommodate substantial growth in freight movement. In the longer term, depending on the increase in freight demand, some infrastructure upgrades, primarily in regard to road duplication and the roundabout may be required.

Contestable freight demand and growth exists within the catchment area of the Gateway Precinct development. However, the Gateway Precinct development needs to secure a large scale processor (e.g. Simplot) and another major logistics player (e.g. Toll or SeaRoad).

Autonomous marginal growth in the freight demand is not going to deliver the impetus needed to “kick start” the next tranche of development, leading to the need for investment in a comprehensive site Master Plan.

Aspirational growth in the agriculture sector is yet to deliver immediate outcomes that can be solely relied on to underpin the investment in the Master Plan. In addition, growth in consumer goods and food and beverages will continue - however the Gateway Precinct already captures a sizable proportion of this volume with existing tenants (e.g. Statewide). Future marginal growth is modest in volume terms.

There is a need to develop and articulate the Gateway Precinct concept more fully, with stronger references to the freight network nodes and corridors. Specific reference to the rail/intermodal terminal and airfreight capabilities should be made. A more extensive Concept Plan will act as a Stage 1 to the Site Master Plan.

Areas within the Gateway Precinct should be quarantined for the intermodal terminal (in the area of 6 to 10 ha) and air-freight precincts, with optimal size, orientation, access and linkages. It is impossible to retrofit these facilities “after the event”.

## Action

The following is recommended:

- **Complete Concept Plan as Stage 1** for a Master Plan. This plan would need to identify the need for quarantining of land for a future intermodal hub, and preferred locations and planning use tables for rural processing (including required supporting infrastructure).
- Use the Concept Plan (underpinned by an attraction strategy and possible incentives) to **attract large existing businesses** to the Gateway Precinct (including processors and logistics firms).
- **Ensure the Special Area Plan Overlay provides for appropriate opportunities** for the development of intended uses (export, transport, logistics and processing).
- Liaise with Coordinator General and other trade promoting State services to **advocate for the Gateway precinct as a central hub for export, transport, logistics and rural processing** to drive the State’s objectives in regards to growing the agricultural sector and its exports.
- Develop a strategy for **attracting a major freight forwarder** to the Gateway Precinct.
- **Formally quarantine land** for future intermodal terminal and air freight precincts.
- **Review** immediate progress and potentially revisit need for Master Plan in 2018-2020.

# APPENDIX

## Use tables for TRANSLink specific area plan

### F1.3.1 AREA 1 USE TABLE: TRANSLINK SPECIFIC AREA PLAN

Use Class	Qualification
<b>No permit required</b>	
– Utilities	If for minor utilities
– Passive recreation	
<b>Permitted</b>	
– Research and development	
– Service Industry	
– Storage	If not a liquid fuel depot or solid fuel depot
– Transport depot and distribution	
– Utilities	If not minor utilities
– Vehicle fuel sales and service	
– Vehicle parking	
<b>Discretionary</b>	
– Bulky goods sales	If a showroom with a floor area no greater than 200m <sup>2</sup>
– Emergency services	
– Manufacturing and processing	
– Resource processing	
– Storage	If a liquid fuel depot or solid fuel depot
<b>Prohibited</b>	
– All other uses	

Source: Northern Midlands Interim Planning Scheme, 2013

### F1.3.2 AREA 2 USE TABLE: TRANSLINK SPECIFIC AREA PLAN

Use Class	Qualification
<b>No permit required</b>	
– Utilities	If for minor utilities
– Passive recreation	
<b>Permitted</b>	
– Storage	If not a liquid fuel depot or solid fuel depot
– Transport depot and distribution	
– Vehicle parking	
<b>Discretionary</b>	
– Bulky goods sales	If a showroom If motor vehicle, boat or caravan sales
– Emergency services	
– Manufacturing and processing	
– Business and professional services	If an office
– Transport depot and distribution	If a passenger transport terminal
– Food services	If for existing
<b>Prohibited</b>	
– All other uses	

Source: Northern Midlands Interim Planning Scheme, 2013

### F1.3.3 AREA 3 USE TABLE: TRANSLINK SPECIFIC AREA PLAN

Use Class	Qualification
<b>No permit required</b>	
– Utilities	If for minor utilities
<b>Permitted</b>	
– Storage	If not a liquid fuel depot or solid fuel depot
– Transport depot and distribution	
<b>Discretionary</b>	
– Manufacturing and processing	
– Research and development	
– Resource processing	
– Storage	If a liquid fuel depot or solid fuel depot.
– Utilities	If not minor utilities
<b>Prohibited</b>	
– All other uses	

Source: Northern Midlands Interim Planning Scheme, 2013

### F1.3.4 AREA 4 USE TABLE: TRANSLINK SPECIFIC AREA PLAN

Use Class	Qualification
<b>No permit required</b>	
– Utilities	If for minor utilities
– Passive recreation	
<b>Permitted</b>	
– Bulky good sales	If existing motor vehicle, boat, or caravan sales
– Community meeting and entertainment	
– Visitor accommodation	If not a motel
– Residential	If a home based- business
– Business and professional services	If an office
– Food services	If a restaurant
<b>Discretionary</b>	
– Food services	If takeaway shop
– General retail and hire	The floor area must not exceed 250 sqm
– Transport depot and distribution	If a passenger transport depot
– Utilities	If not minor utilities
– Vehicle fuel sales and service	If a service station
– Visitor accommodation	If a motel
<b>Prohibited</b>	
– All other uses	

Source: Northern Midlands Interim Planning Scheme, 2013

### F1.3.5 AREA 5 USE TABLE: TRANSLINK SPECIFIC AREA PLAN

Use Class	Qualification
<b>No permit required</b>	
– Utilities	If for minor utilities
– Passive recreation	
– Natural and cultural values management	
<b>Permitted</b>	
– Residential	If a home-based business
<b>Discretionary</b>	
– Business and professional services	If an office
– Community meeting and entertainment	
– Educational and occasional care	
– Food services	If a restaurant
– General retail and hire	The floor area must not exceed 250 sqm

- Hotel industry
- Tourist operation
- Visitor accommodation If a holiday unit  
If a motel
- Utilities If not minor utilities

**Prohibited**

- All other uses

Source: Northern Midlands Interim Planning Scheme, 2013

### F1.3.6 AREA 6 USE TABLE: TRANSLINK SPECIFIC AREA PLAN

Use Class	Qualification
<b>No permit required</b>	
- Utilities	If for minor utilities
- Passive recreation	
- Natural and cultural values management	
<b>Permitted</b>	
- Food services	If a restaurant If a takeaway shop
- Hotel industry	
- Utilities	If not minor utilities
- Vehicle fuel sales and service	If a service station
<b>Discretionary</b>	
- Business and professional services	If an office
- Bulky goods sales	If a showroom
- General retail and hire	The floor area must not exceed 250 sqm
- Visitor accommodation	If a motel
<b>Prohibited</b>	
- All other uses	

Source: Northern Midlands Interim Planning Scheme, 2013

### F1.3.7 AREA 7 USE TABLE: TRANSLINK SPECIFIC AREA PLAN

Use Class	Qualification
<b>No permit required</b>	
- Natural and cultural values management	
- Passive recreation	
- Resource development	If not for: <ul style="list-style-type: none"> <li>a. Plantation forestry on prime agricultural land; or</li> <li>b. Controlled environment agriculture on prime agricultural land; or</li> <li>c. Intensive animal husbandry on prime agricultural land; or</li> <li>d. A dwelling; or</li> <li>e. Forestry or plantation forestry on non-prime agricultural land.</li> </ul>
- Utilities	If for existing uses and the curtilage does not increase by more than 30% as at the effective date and not located on prime agricultural land
<b>Permitted</b>	
- Business and professional services	If for a veterinary centre or similar specialist animal breeding or care services
- Domestic animal breeding, boarding or training	If not on prime agricultural land
- Community meeting and entertainment	If for existing premises used for public purposes
- Crematoria and cemeteries	If for crematoria and not on prime agricultural land
- Extractive industries	If not <ul style="list-style-type: none"> <li>a. Located on prime agricultural land or;</li> <li>b. For a level 2 activity</li> </ul>
- Food services	If for existing uses and the curtilage does not increase by more than 20% at the effective date
- Hotel industry	If for existing uses and the curtilage does not increase by more than 30% as at the effective date
- Residential	If for existing uses or home- based business in an existing dwelling

<ul style="list-style-type: none"> <li>- Resource development</li> <li>- Resource processing</li> <li>- Sports and recreation</li> <li>- Visitor accommodation</li> </ul>	<p>If not for:</p> <ul style="list-style-type: none"> <li>a. Plantation forestry on prime agricultural land; or</li> <li>b. Controlled environment agriculture on prime agriculture land; or</li> <li>c. Animal husband on prime agriculture land</li> </ul> <p>If directly associated with produce from the subject site</p> <p>If for existing uses and the curtilage does not increase by more than 30% as at the effective date</p> <p>If for existing uses and the curtilage does not increase by more than 30% as at the effective date</p>
<b>Discretionary</b>	
<ul style="list-style-type: none"> <li>- Bulky good sales</li> <li>- Business and professional services</li> <li>- Educational and occasional care</li> <li>- Emergency services</li> <li>- Equipment and machinery sales and hire</li> <li>- Extractive industries</li> <li>- Food services</li> <li>- General retail and hire</li> <li>- Hotel industry</li> <li>- Motor racing facility</li> <li>- Recycling and waste disposal</li> <li>- Residential</li> <li>- Research and development</li> <li>- Resource development</li> <li>- Resource processing</li> <li>- Service industry</li> <li>- Sports and recreation</li> <li>- Tourist operation</li> <li>- Transport depot</li> <li>- Utilities</li> <li>- Vehicle fuels sales and service</li> <li>- Visitor accommodation</li> </ul>	<p>If for rural supplies, landscapes supplies and timber yard</p> <p>If not for a veterinary centre or similar specialist animal breeding or care services</p> <p>If providing education services for the resource development use class</p> <p>If located on prime agricultural land, or if for a level 2 activity.</p> <p>If:</p> <ul style="list-style-type: none"> <li>a. Not for existing uses or</li> <li>b. The curtilage increases by more than 30% as at the effective date</li> </ul> <p>If for:</p> <ul style="list-style-type: none"> <li>a. Existing uses and the curtilage increases by more than 30% as at the effective date; or</li> <li>b. Cellar door sales, micro- breweries or micro- distilleries</li> </ul> <p>If not a new facility on prime agricultural land</p> <p>If for single dwelling</p> <p>If directly associated with resource development</p> <p>If:</p> <ul style="list-style-type: none"> <li>a. For controlled environment agriculture or animal husbandry on prime agricultural land; or</li> <li>b. Not for plantation forestry on prime agricultural land.</li> </ul> <p>If not directly association with produce from the subject site</p> <p>If:</p> <ul style="list-style-type: none"> <li>a. Not for existing uses or</li> <li>b. The curtilage increases by more than 30% as at the effective date</li> </ul> <p>If:</p> <ul style="list-style-type: none"> <li>a. For existing uses on prime agricultural land; or</li> <li>b. Not for existing uses; or</li> <li>c. The curtilage increases by more than 30% as at the effective date</li> </ul> <p>If:</p> <ul style="list-style-type: none"> <li>a. Not for existing uses or</li> <li>b. The curtilage increases by more than 30% as at the effective date</li> </ul>
<b>Prohibited</b>	
<ul style="list-style-type: none"> <li>- All other uses</li> </ul>	

Source: Northern Midlands Interim Planning Scheme, 2013

TABLE 25 - SUMMARY OF TOTAL PORT TRADE FROM 2009 TO 2015, SHOWING TONNES AND COMPOUNDED ANNUAL AVERAGE GROWTH RATES

All port locations - imports and exports								CAGR
Sector	Commodity description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2009-15
<b>Agriculture - bulk</b>								
	Barley	20,824	11,203	5,617	9,325	8,646	5,220	
	Fertilisers	174,641	230,873	228,587	209,810	178,499	197,404	2.1%
	Wheat	83,617	66,994	93,816	100,124	111,829	114,006	5.3%
	Other grains	61,725	64,209	48,231	34,658	63,574	66,178	1.2%
	<b>Agriculture - bulk Total</b>	<b>340,807</b>	<b>373,280</b>	<b>376,251</b>	<b>353,916</b>	<b>362,547</b>	<b>382,808</b>	<b>2.0%</b>
<b>Agriculture - processed</b>								
	Dairy Products	77,969	151,915	176,852	177,670	185,387	205,644	17.5%
	Meat	27,614	30,359	31,327	36,087	43,791	47,829	9.6%
	Fish meal and oils	37,918	44,286	37,148	32,829	34,252	47,321	3.8%
	<b>Agriculture - processed Total</b>	<b>143,501</b>	<b>226,561</b>	<b>245,326</b>	<b>246,586</b>	<b>263,430</b>	<b>300,794</b>	<b>13.1%</b>
<b>Construction materials</b>								
	Cement	1,171,881	1,130,229	1,150,802	1,295,419	1,309,052	1,328,471	2.1%
	Clay	38,611	15,600	15,425	13,320	15,239	14,436	-15.1%
	Plant Screenings			21,991				
	<b>Construction materials Total</b>	<b>1,210,492</b>	<b>1,145,829</b>	<b>1,188,218</b>	<b>1,308,739</b>	<b>1,324,291</b>	<b>1,342,907</b>	<b>1.7%</b>
<b>Empty containers</b>								
	Empty Containers	367,964	403,086	380,987	361,318	346,434	362,384	
	<b>Empty containers Total</b>	<b>367,964</b>	<b>403,086</b>	<b>380,987</b>	<b>361,318</b>	<b>346,434</b>	<b>362,384</b>	<b>-0.3%</b>
<b>Fuels and liquids</b>								
	Av Gas	24,503	28,073	20,146	20,143	21,224	15,896	-7.0%
	Diesel	292,971	314,119	278,368	261,934	364,454	352,777	3.1%
	Gas	24,306	24,001	23,416	21,303	20,482	18,197	-4.7%
	Pitch	16,163		14,404	14,674		15,225	-1.0%
	Bitumen and pitch	12,793	14,769	18,827	13,941	28,648	7,149	-9.2%
	Fuel - leaded/unleaded	426,923	448,968	370,137	364,847	315,739	316,659	-4.9%
	Oils (incl. heating)	11,575	4,669	6,152	11,735	13,852	19,183	8.8%
	<b>Fuels and liquids Total</b>	<b>809,235</b>	<b>834,600</b>	<b>731,449</b>	<b>708,577</b>	<b>764,398</b>	<b>745,086</b>	<b>-1.4%</b>
<b>Horticulture</b>								
	Fruit	25,312	20,214	29,497	36,497	35,537	36,637	6.4%
	Onions	86,694	84,681	94,921	83,000	60,387	63,094	-5.2%
	Vegetables	299,962	223,119	94,992	91,997	83,870	58,171	-23.9%
	<b>Horticulture Total</b>	<b>411,968</b>	<b>328,014</b>	<b>219,410</b>	<b>211,493</b>	<b>179,794</b>	<b>157,902</b>	<b>-14.8%</b>
<b>Industrial</b>								
	Aluminum Products	172,521	181,319	110,662	102,791	121,670	146,700	-2.7%
	Alumina	346,432	342,829	343,761	371,696	342,534	365,634	0.9%
	Aluminum Scrap			21,708	59,040	34,221	5,440	
	Caustic Soda	15,016	9,778	4,348	4,993	6,785	7,180	-11.6%
	Copper	93,185	95,797	113,557	113,877	69,568	14,412	-26.7%
	Copper Slag	27,004		27,500				
	Fe & Si Manganese	284,373		196,451	213,710		212,407	-4.7%
	Hazardous	160,761	131,742	141,357	126,973	121,728	130,466	-3.4%
	Met Fines	422,842	608,280	542,625	564,525		647,805	7.4%
	Metals - Other	125,475	115,563	85,470	56,978	64,941	73,501	-8.5%
	Petroleum Coke	68,642	67,075	74,416	70,240	65,687	74,968	1.5%
	Scrap Metal	41,855	71,866	73,007	81,263	72,568	52,840	4.0%
	Sinter	95,009	67,967	69,933	129,644	56,511	94,969	0.0%
	Slag			64,193		26,900		
	Starch	10,370	1,176	355	844	612	748	-35.5%
	Sulphuric Acid	372,344	325,041	339,063	339,657	352,069	333,884	-1.8%
	Tallow	11,136	10,820	14,109	13,648	15,109	14,425	4.4%
	Waelz Oxide			12,500	5,403		2,203	
	<b>Industrial Total</b>	<b>2,251,977</b>	<b>2,029,341</b>	<b>2,240,192</b>	<b>2,259,870</b>	<b>1,360,613</b>	<b>2,185,908</b>	<b>-0.5%</b>
<b>Livestock</b>								
	Cattle	40,224	41,273	31,360	45,611	46,611	55,590	5.5%
	Livestock	12,955	12,098	10,450	8,865	6,840	12,597	-0.5%
	Sheep	636	550	895	1,720	1,704	3,219	31.0%
	<b>Livestock Total</b>	<b>53,815</b>	<b>53,921</b>	<b>42,705</b>	<b>56,196</b>	<b>55,155</b>	<b>71,406</b>	<b>4.8%</b>
<b>Mining</b>								
	Calcite					25,085	36,518	

Sector	Commodity description	All port locations - imports and exports						CAGR
		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2009-15
	Coal	16,658	12,070	15,399	6,980	20,640	26,665	8.2%
	Coke	116,837	153,491	125,001	102,556	144,565	136,082	2.6%
	Gypsum	45,489	73,723	49,965	68,901	62,728	70,673	7.6%
	Iron Ore	9,649			2,002	130,909		
	Lead Concentrate	94,275	107,192	118,167	98,179	109,259	93,968	-0.1%
	Limestone Chips	21,511	25		52			
	Magnetite	107,595	138,349	152,686	147,902	254,067	200,163	10.9%
	Manganese		264,275			851,327		
	Paragoethite	73,264	57,537	87,571	105,716	119,483	110,189	7.0%
	Phosphate Rock	445	116,960	53,024	114,133	66,852	65,448	
	Silica	27,401	29,797	35,249	41,003	40,494	40,574	6.8%
	Tin	4,373	9,923	9,479	11,983	12,080	4,447	0.3%
	Zinc Concentrate	1,079,243	983,073	1,053,863	993,102	982,439	932,712	-2.4%
<b>Mining Total</b>		<b>1,596,739</b>	<b>1,946,415</b>	<b>1,700,405</b>	<b>1,692,508</b>	<b>2,819,928</b>	<b>1,717,439</b>	<b>1.2%</b>
<b>General break bulk</b>								
	Machinery	8,239	46,261	53,586	46,849	34,449	31,584	25.1%
	Motorbikes	6,222	4,889	4,834	4,470	5,061	5,174	-3.0%
	Push Bikes	31	1	0	0	7	4	-29.2%
	Trade And Tourist Vehicles	321,163	300,341	273,548	261,493	276,250	298,329	-1.2%
<b>General break bulk Total</b>		<b>335,654</b>	<b>351,491</b>	<b>331,969</b>	<b>312,813</b>	<b>315,767</b>	<b>335,091</b>	<b>0.0%</b>
<b>Food, beverage and general</b>								
	Beverages	190,700	181,374	265,589	281,563	250,277	304,130	8.1%
	Food Products	269,547	418,321	433,369	427,314	440,111	439,200	8.5%
	General Cargo	1,288,620	1,370,987	1,395,143	1,404,405	1,451,482	1,471,351	2.2%
<b>Food, beverage and general Total</b>		<b>1,748,866</b>	<b>1,970,682</b>	<b>2,094,101</b>	<b>2,113,282</b>	<b>2,141,870</b>	<b>2,214,681</b>	<b>4.0%</b>
<b>Forestry, timber and paper</b>								
	Logs	70,625	247,282	312,525	226,703	256,407	250,755	23.5%
	Newsprint	157,993	237,797	233,278	228,465	189,516	235,668	6.9%
	Paper Products	349,313	75,517	37,666	39,322	40,859	37,905	-30.9%
	Pulp	119,732	675		190	157	153	-67.1%
	Timber Products	167,499	164,459	126,046	117,828	105,015	106,081	-7.3%
	Veneer	140,966	159,969	165,474	81,048	100,843	95,352	-6.3%
	Woodchips	3,148,195	2,989,107	788,932	904,189	1,877,290	2,145,233	-6.2%
<b>Forestry, timber and paper Total</b>		<b>4,154,324</b>	<b>3,874,806</b>	<b>1,663,921</b>	<b>1,597,746</b>	<b>2,570,086</b>	<b>2,871,147</b>	<b>-6.0%</b>
<b>Grand Total</b>		<b>13,425,343</b>	<b>13,538,025</b>	<b>11,214,933</b>	<b>11,223,044</b>	<b>12,504,314</b>	<b>12,687,553</b>	<b>-0.9%</b>

TABLE 26 - CALCULATING WAREHOUSE AREAS FOR MEDIUM SCENARIO AND 20 STOCK TURNS (EXAMPLE)

Scenario	Year	Scenario 2 - MEDIUM captive volumes				
		2015	2020	2025	2035	2045
Target volume throughput	000 tonnes	653	899	1,178	1,733	2,486
Operating days per annum	Days	250	250	250	250	250
Tonnes handled in or out per day	Tonnes	2,610	3,596	4,711	6,934	9,944
Nominal inventory stock turns per annum	No.	20	20	20	20	20
Volume on hand balance as inventory	Tonnes SOH	32,631	44,950	58,888	86,669	124,294

Cubic conversion (Tonnes per cubic mtr)	tonnes/m3	0.6	0.6	0.6	0.6	0.6
<b>Pallets stored</b>	<b>Pallets</b>	<b>54,000</b>	<b>75,000</b>	<b>98,000</b>	<b>144,000</b>	<b>207,000</b>
<b>Pallets throughput per day (one-way)</b>	<b>Pallets</b>	<b>4,400</b>	<b>6,000</b>	<b>7,900</b>	<b>11,600</b>	<b>16,600</b>
<hr/>						
% racked	80%	<b>80%</b>	<b>80%</b>	<b>80%</b>	<b>80%</b>	<b>80%</b>
% block stacked	20%	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>
Pallets racked	Pallets	43,200	60,000	78,400	115,200	165,600
Pallets block stacked	Pallets	10,800	15,000	19,600	28,800	41,400
<b>Honey combing of space</b>	%	<b>75%</b>	<b>75%</b>	<b>75%</b>	<b>75%</b>	<b>75%</b>
<hr/>						
<b>Daily turns in receipt/despatch</b>	No.	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
<hr/>						
<b>Storage heights</b>						
Racked (levels)	No.	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>
Blocked (levels)	No.	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>
Receival/despatch	No.	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>
<hr/>						
<b>Equivalent Footprints</b>						
Racked area	Slots	14,400	20,000	26,133	38,400	55,200
Block stacked area	Slots	5,760	8,000	10,453	15,360	22,080
Receival/despatch (in + out)	Slots	1,467	1,000	1,317	1,933	2,767
<hr/>						
<b>Nominal area per footprint</b>						
Racked area - area per pallet	sq.m	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>
Block stacked area - area per pallet	sq.m	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>
Receival/despatch (holds 25% daily demand)	sq.m	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>
<hr/>						
<b>Areas</b>						
Racked area	sq.m	63,360	88,000	114,987	168,960	242,880
Block stacked area	sq.m	13,824	19,200	25,088	36,864	52,992
Receival/despatch	sq.m	2,347	1,600	2,107	3,093	4,427
Total	sq.m	79,531	108,800	142,181	208,917	300,299
<b>Ancillary areas (circulation, offices, etc)</b>		<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>
<hr/>						
<b>Total warehouse area</b>	sq.m	<b>99,413</b>	<b>136,000</b>	<b>177,727</b>	<b>261,147</b>	<b>375,373</b>
	Ha	<b>10</b>	<b>14</b>	<b>18</b>	<b>26</b>	<b>38</b>
Site occupancy ratio	%	50%	50%	50%	50%	50%
<b>Gross site area (excludes public roadways)</b>	Ha	<b>20</b>	<b>27</b>	<b>36</b>	<b>52</b>	<b>75</b>

## Bibliography

1. *Senate Standing Committee on Rural and Regional Affairs and Transport inquiry in to: The future role and contribution of regional capitals to Australia*, Northern Tasmania Development
2. *Northern Tasmania Industrial Land Strategy*, Northern Tasmania Development (2014), SGS Economics.
3. Northern Integrated Transport Plan (Nov 2013), Northern Tasmania Development.
4. Launceston Airport Master Plan 2015,
5. Aviation Access strategy
6. Northern Integrated Transport Plan (2013), Tasmanian Government and Northern Tasmanian Development
7. State of Our Roads 2014, Department of State Growth, Tasmanian Government.
8. Infrastructure Report Card 2010, Engineers Australia

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