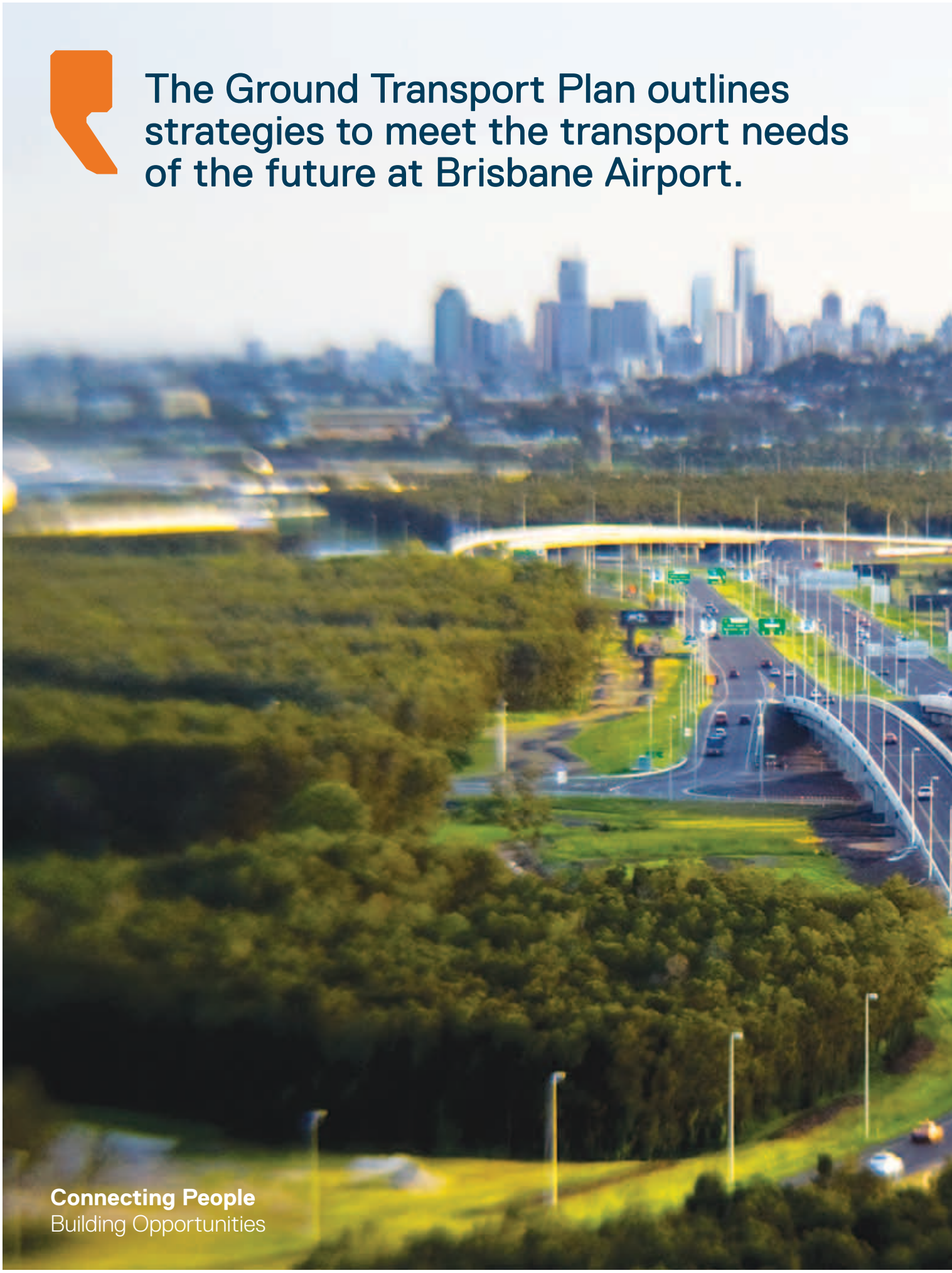
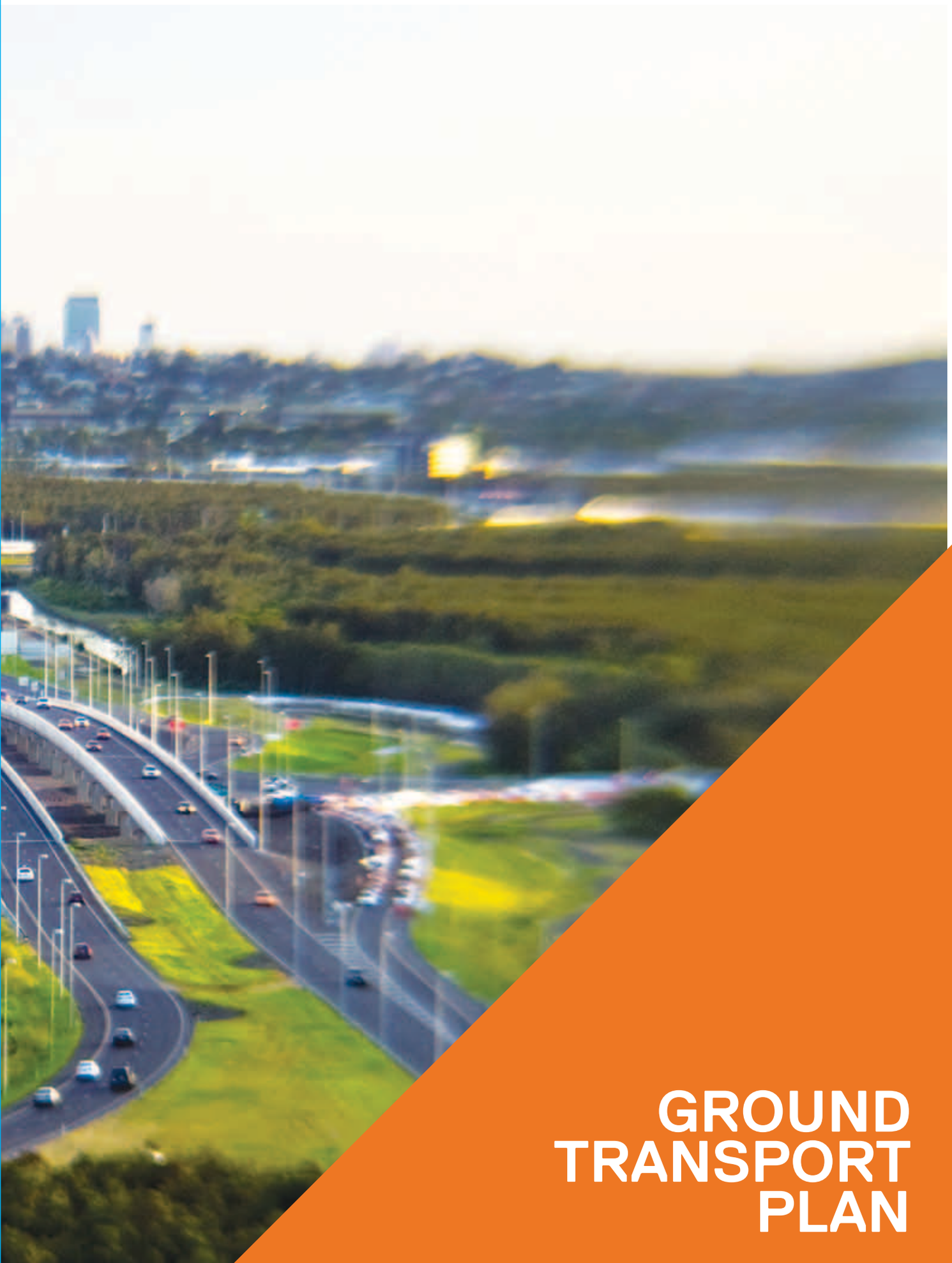
The Ground Transport Plan outlines strategies to meet the transport needs of the future at Brisbane Airport.





GROUND TRANSPORT PLAN

12

GROUND TRANSPORT PLAN

BAC has analysed all aspects of non-aviation transport into and across the airport to design strategies and initiatives that will improve accessibility for all.

12.1 About The Ground Transport Plan

BAC, as the lessee and operator of Brisbane Airport, has developed the Brisbane Airport Ground Transport Plan (GTP).

The GTP responds to legislative requirements and is an important adjunct to airport planning as outlined in this Master Plan.

The purpose of the GTP is to:

- Report on the existing and future transport trends at the airport
- Identify transport initiatives and actions to support the economic growth of the airport
- Target immediate and short-term opportunities to improve capacity, provide transport choice and encourage the use of sustainable transport modes such as public transport and cycling.

The GTP specifically addresses ground transport needs on and around Brisbane Airport for the five-year period between 2014 and 2019.

12.2 Structure of the Ground Transport Plan

In accordance with the Airports Act 1996 (Airports Act), the GTP forms part of the 2014 Master Plan. This GTP contains details on the transport network and options on and surrounding the airport, how BAC undertook a collaborative approach during the development of this GTP, and how this GTP links with state and local government plans.

Additionally, this GTP provides details of how the transport network is currently operating and how it will look in five years. A summary of each initiative that will be investigated to support the five-year transport plan is included in this GTP.

12.3 About Current Transport Choices

Airline Passengers

Assessments show that private vehicles are the choice of transport for 59% of passengers using the Domestic T2 and 72% of passengers using the International T1.

Taxis provide transport between the terminals and other locations for approximately 18% of passengers, with the majority of taxi trips occurring to or from the Domestic T2.

Airport-Wide Preferred Choice of Transport

Combining the transport choices of airline passengers and those who work across Brisbane Airport, then 96% of trips are typically by vehicle (inclusive of taxis) and 4% are by public transport.

Through this GTP and its initiatives, BAC seeks to increase the use of public transport across the airport. To achieve this goal BAC will address:

- The need to secure additional public transport options to cater for the large number of shift-based airport employees

View across Brisbane Airport raod network

- The significant length of time it takes to get to Brisbane Airport using public transport from geographically constrained areas in Brisbane's eastern suburbs, such as Bulimba and Cleveland
- The need to secure better public transport connectivity between Brisbane's northern suburbs and the airport, noting that the highest proportion of trips to the airport emanate from this catchment
- Limited information for aircraft passengers and employees on the modes of transport available other than the private vehicle
- The offering of on-airport car parking, particularly for employees, noting that a reduction in on-airport parking at airport business locations may encourage increased use of public transport.

12.4 About the Road Network

Brisbane Airport is well connected by a relatively new on airport and surrounding area road network. The surrounding road network is controlled and planned by the Department of Transport and Main Roads (TMR) and Brisbane City Council (BCC), while all on-airport roads are developed, operated and maintained by BAC.

The two major roads providing access to Brisbane Airport are Airport Drive and Moreton Drive. The nearby Gateway Motorway is designated a Priority 1 Freight Route[1] with Airport Drive and the Kingsford Smith Drive / Eagle Farm Road / Main Myrtletown Road corridor also supporting freight movements.

Airport Link and the flyover connecting the East West Arterial to Airport Drive completed in 2011, provides additional road capacity for travel between the airport and many external destinations, including the Brisbane Central Business District (CBD).

Some key roads such as Kingsford Smith Drive, Southern Cross Way and the Gateway Motorway are forecast to remain busy during the commuter peak hour periods.

On-airport, the Domestic Terminal Upgrade Project (DTU) completed in 2012, which included major changes to the road network at the terminal face, has alleviated daily peak pressures in the terminal precinct.

Forecast vehicle demands show that within the five year timeframe of this GTP, and with the exception of several localised upgrades, no significant on-airport road upgrades are required to address capacity constraints.

Beyond the GTP timeframes several significant road upgrades are required and planning for these will begin within the five year period of this GTP and 2014 Master Plan.

1 *Priority One Freight Routes facilitate high volume, business-to-business freight movements. These routes carry more than 1000 articulated trucks per day.*

12.5 About Public Transport

Public transport services at Brisbane Airport include:

- Airtrain, a privately owned and operated rail line connecting the Domestic T2 and International T1 to the Brisbane CBD and the Gold Coast, via Eagle Junction. Airtrain operates seven days a week
- Translink operates public bus routes serving Airport Central Skygate, Airport South Da Vinci and Airport East
- BAC operates the Terminal Bus (T-Bus) shuttle service between Skygate, the International T1 and the Domestic T2
- BAC operates the staff bus (S-Bus) service between the staff car park, located adjacent to the International T1, and the Domestic T2
- Coach and shuttle services, run by private operators that provide connections with the Brisbane CBD, and regional areas.

Airtrain operates under the Brisbane Airport Rail Link (BARL) contract, which runs until 2036. It includes restrictions on the ability to increase public transport services to Brisbane Airport, which cannot be breached by the state.

Notwithstanding current constraints, the GTP identifies opportunities for improvements within the existing bus network to include services to the terminals and other locations not competing with Airtrain, with a particular focus on serving the specific needs of shift workers.

TABLE 12.1: THE 10 GROUND TRANSPORT PLAN INITIATIVES

Initiative		
Initiative 1	Improve the on-airport road network	(Ron)
Initiative 2	Improve the off-airport road network	(Rof)
Initiative 3	Improve parking	(Pa)
Initiative 4	Improve the rail network and services	(Ra)
Initiative 5	Improve taxi, bus, coach and shuttle services	(Tb)
Initiative 6	Support freight movements through the airport	(Fr)
Initiative 7	Improve active transport facilities at the airport and link to the external network	(At)
Initiative 8	Improve information and signage for travel to, from, and within the airport	(Inf)
Initiative 9	Encourage passengers to use alternative modes	(Pax)
Initiative 10	Encourage employees to use alternative modes	(Emp)

TABLE 12.2: AGENCY AND PROGRAM ALLOCATION

Lead Agency	Short-Term (2014 – 2019)
Brisbane Airport Corporation	26
Transport and Main Roads	11
Brisbane City Council	4
TOTAL	41

12.6 About Active Transport

Walking and cycling account for less than 1% of movements at Brisbane Airport.

The airport terrain is conducive to walking and cycling and opportunities exist to improve the degree to which these modes are used.

Higher take up rates for these transport options can be achieved by providing high quality infrastructure and good intra-airport linkages, as well as connections to the external network.

Currently, some gaps still exist in the existing active transport network, however through initiatives and plans that will be delivered during the next five year period, walking and cycling will become more attractive.

12.7 About GTP Recommendations

The GTP recommends the implementation of 10 initiatives incorporating 41 programs to be implemented between 2014 and 2019. The 10 initiatives are outlined in Table 12.1 with the details of the corresponding activity programs outlined in Section 12.15 of this document.

The GTP also identifies the agency or organisation that will lead each of the 41 programs identified in this document. This division of responsibility was determined following consultation with agencies responsible for delivering road and transport programs in South East Queensland (SEQ).

Table 12.2 breaks the 41 programs down by lead agency and number.

12.8 Implementation

The implementation of the GTP programs will involve coordination between BAC and other stakeholders, including local and state government agencies and public transport operators. BAC's role ranges from a supporting stakeholder to active implementation.

More complex programs will require further investigation and planning work before advancing to construction/ implementation, with investigation required to determine the feasibility, design, costs and benefits for each program.

12.9 Background

As outlined earlier, the Brisbane Airport GTP is in response to legislative requirements and is an important adjunct to airport planning. The GTP provides a planning framework that enables BAC to confirm transport agencies short term plans and work collaboratively with them to plan and implement the initiatives and plans contained within this document.

OBJECTIVES OF THE GTP

- Maximise connectivity and accessibility
- Facilitate safe and secure movement of people and freight
- Deliver innovative, efficient and continuous airport services
- Continue agency partnering which builds on an integrated transport connection plan
- Timely delivery of seamless transport system that provides new and improved capacity
- Minimise adverse environmental impacts
- Deliver proactive response to climate change
- Contribute to regional economic wealth and employment generation
- Ensure selective, profitable and timely commercial development at Brisbane Airport
- Delivers on BAC's vision of world best and preferred choice for passengers, airlines, business and the community.

BAC INVESTMENT IN TRANSPORT INFRASTRUCTURE

Brisbane Airport is located approximately 8 km from the Brisbane CBD and is strategically positioned between the Gold Coast and Sunshine Coast. Brisbane Airport consists of the International T1 and Domestic T2 and operates 24 hours a day, seven days a week.

Since Brisbane Airport was privatised in 1997, BAC has invested significantly in infrastructure, and over the past 10 years has invested almost $600 million in transport infrastructure.

Table 12.3 outlines BAC's level of investment in transport infrastructure since 2004.

BAC has also contributed in planning studies and resources to support the development of major road infrastructure projects such as the Gateway Motorway and Airport Roundabout Upgrade projects. Land transferred from the Commonwealth to state is another form of transport investment by BAC to support these significant projects.

LEGISLATIVE REQUIREMENT FOR A GTP

The Australian Government's National Aviation Policy Issues Paper released in April 2008 initiated discussion on key areas for consideration in long-term aviation planning, including transport planning.

Subsequent review processes led to the amendment of the Airports Act in 2011 to include a requirement for airports to produce a ground transport plan relating to landside areas, incorporating:

TABLE 12.3: TRANSPORT INFRASTRUCTURE INVESTMENT FROM 2004

Item	Spend (AU$)	Timing
Domestic long-term multi-level car park expansion	$28 million	2004
International T1 undercover car park	$37 million	2007
New major road access to terminals relieving significant congestion	$220 million	2009
Central Parking Area (CPA), Stage 1, taxi area	$47 million	2010
Domestic undercover short-term car park	$190 million	2012
Domestic T2 pedestrian access project and road improvements	$43 million	2012
Bus stops and connecting bus roads	$1.1 million	2002–2013
Cycle and pedestrian paths	$1.5 million	2002–2013
Road sign upgrades and improvements	$0.5 million	2002–2013
Minor road works	$2.55 million	2002–2013
Intersection upgrade Qantas and Lomandra Drive	$7.6 million	2013
Moreton Drive off ramp to Nancy Bird Way	$3.6 million	2014
TOTAL	$581 million	

- A road network plan
- Facilities for moving people (including passengers, employees and other airport users) and freight at the airport (including the airport's road infrastructure, road connections, car parking facilities, public transport services and facilities for taxis and private coach or shuttle services)
- Linkages between the road network and public transport system outside the airport
- Arrangements for working with state and local authorities or other bodies responsible for the road network and ground transport system
- The capacity of the ground transport system to support airport operations and other airport activities
- The likely effect of the proposed developments set out in the Master Plan on the ground transport system and traffic flows surrounding the airport.

While this GTP responds to the legislative requirement, BAC considers transport planning to be a continual and an essential component of its obligation to operate Brisbane Airport responsibly and efficiently. Comprehensive transport plans have formed part of its master planning process since 1997.

GTP FRAMEWORK

Figure 12.1 illustrates the framework used to develop the GTP initiatives and programs. It also shows the alignment between the GTP initiatives, the sustainability pillars as outlined in this Master Plan and the wider Brisbane and SEQ transport plans.

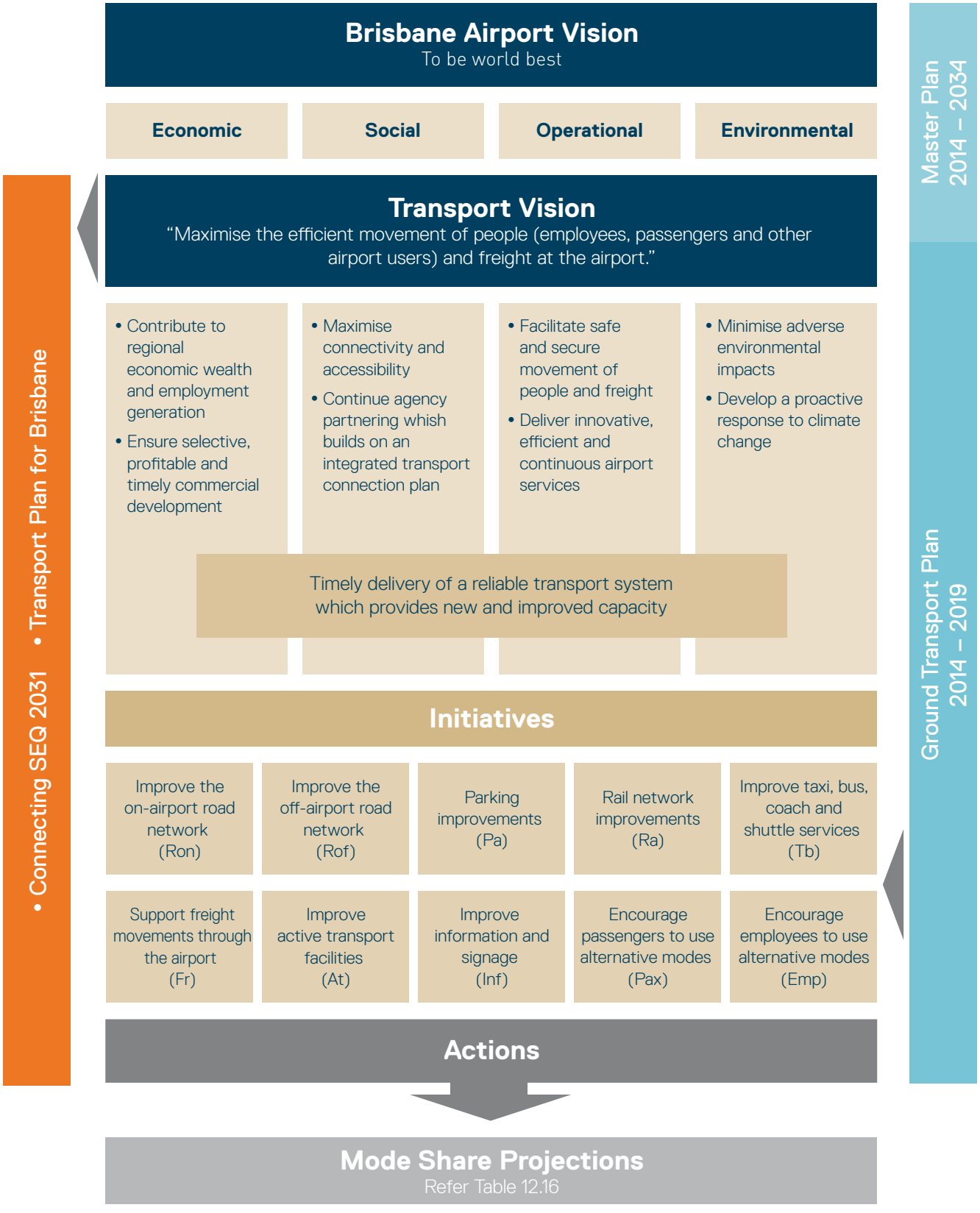
1 International T1 multi-level car park.

2 Shuttle bus enters the Domestic T2 precinct.

2

1

FIGURE 12.1: GROUND TRANSPORT PLAN POLICY FRAMEWORK



12.10 Engagement Framework

INTRODUCTION

The GTP has been developed with the assistance and input of government bodies responsible for the delivery of transport networks across Queensland. Their experience, insights and technical knowledge have contributed to the development of a range of programs and initiatives that will, over time, improve ground transport options and services at Brisbane Airport, while improving connectivity to areas around the airport.

AGENCY ENGAGEMENT

Stakeholder consultation and participation has played an integral role in developing the GTP. Consultation activities included a visioning workshop with all agencies and two detailed workshops, supplemented by feedback and endorsement processes. Ongoing consultation and input are planned as part of the GTP implementation.

In 2012, BAC released an agency endorsed version of its GTP which has been used as the platform for this document. The summaries of outcomes from those workshops are important to include as background for this version of the GTP to provide input and alignment between 2012 and 2013 priorities and plans.

It is important to note that BAC has undertaken a consultative approach with the agencies to developing a long-term GTP vision to ensure benefits of this plan continue past the five-year framework of this GTP.

Stakeholder engagement activities comprised:

Workshop 1 (2012)

Workshop 1 was held on 24 January 2012 involving representatives from BAC, BCC, TMR and TransLink Transit Authority (TTA).

Airport raod network

The purpose of the workshop was to:

- Outline the purpose and objectives of the GTP and provide details about studies and research used to define the transport context for Brisbane Airport
- Identify initiatives and programs that the GTP should contain, with emphasis on programs that would need to be led by external agencies, or involve multiple agencies
- Understand links with the external transport network and begin to establish responsibilities for initiatives and programs that will involve working with state and local government agencies.

Between workshops, BAC:

- Refined and tested transport options resulting from Workshop 1
- Planned and programmed initiatives based on outcomes of Workshop 1
- Prioritised initiatives based on the GTP framework
- Issued reports to the agencies to seek agreement on workshop outcomes.

Workshop 2 (2012)

Workshop 2 was held on 5 June 2012 with representatives from BAC, BCC, TMR and TTA to:

- Inform stakeholders of work undertaken since the Workshop 1
- Provide responses to stakeholder feedback
- Present the findings from further technical assessment
- Discuss proposed programs, benefits and agency responsibilities
- Present the proposed seven-year implementation timeline (2012 to 2019).

Agency Visioning Workshop

As the first of several workshops held specifically for the 2014 Master Plan, the purpose of this workshop held on 23 July 2013 was to seek input from the agency representatives and to identify opportunities and projects that would benefit both BAC and the agencies.

Representatives from BCC and TMR, identified two major topics as a result of the workshop, being transport networks including public transport and property development at Brisbane airport. As the two topics are interrelated, several themes emerged from the discussions including:

- Transport between employment nodes;
- Functionality of the transport networks
- Generating a shift toward public transport
- The need for a third rail station
- Public transport servicing for a 24/7 airport
- The balance between BAC's parking business and road demands.

As a result of the themes arising from the visioning workshop, working groups would discuss and agree the key priorities and programs to address how these themes could be converted to implementation.

Transport Agency Working Group – Workshop 1

The first of the transport working group meetings was held on 27 August 2013 and was represented by BCC, TMR and the Department of State Development, Innovation and Planning (DSDIP). The purpose of the working group gathering was to:

- Provide an overview of BAC's work completed to date since the 2012 GTP
- Understand the agencies overview and strategic directions for transport
- Discuss the outcomes of the visioning workshop
- Allow for an open discussion on programs or ideas, identification of the most significant challenges facing ground transport at the airport and to prioritise a list of top programs for the next five years.

The group identified four critical drivers for ground transport and planning as prioritised below:

- Public transport including transfers from terminals and outside airport to airport precincts, alignment of public transport services with peaks, transition of employees to public transport, mass transit opportunities and consideration of CityCat connection from Northshore
- Road capacity including the need to invest to maintain egress and access to standards as experienced at 2013, identify how new parts of the road network can be addressed (e.g. Kingsford Smith Drive and Doomben Interchange) including the importance of freight movements and the road space it occupies
- Active transport including linkages from off to on-airport networks, roll out of end of trip facilities, active to public transport links and road safety education programs
- Parking including linkages of mass parking to public transport connections.

As a result of the workshop, the group were to interrogate their respective organisations transport plans to identify what opportunities existed to progress the above priorities and ensure that these were valued options to ratify at the following working group meeting.

A view across to the International T1 with Airtrain in foreground

Transport Agency Working Group – Workshop 2

Prior to the second working group, held on 12 November 2013, the group was provided with an updated initiative plan that reflected programs from the 2012 GTP. The working group identified each agency's role from the initiatives and confirmed timing of those initiatives where known.

Additionally, the working group members confirmed where the priorities as established at 27 August 2013 workshop lay in the initiative program. Specifically by priorities, the following points were discussed:

- Public transport: Until 2016, new agency public transport services will be difficult to implement, the need for a third Airtrain station is endorsed subject to contractual agreements, opportunities to extend on to off airport bus services will be reviewed
- Road capacity: A western connection option can be supported subject to capacity considerations, other connecting projects such as Doomben interchange to Lomandra Drive are not identified as an agency high priority
- Active transport: Support in general for initiatives to improve active transport links
- Parking: General agency support for opportunities to explore public transport and parking links.

Transport Agency Working Group – Workshop 3

Prior to the workshop each member of the Working Group was provided with a copy of the Preliminary Draft GTP for review and comment.

Because the GTP had been compiled in close consultation with Working Group members over a period of two years, the plan was considered comprehensive and complete, requiring only minor alterations.

ENDORSEMENT PROCESS

Following the transport agency workshops, stakeholders conducted internal consultation within their organisations to establish if there were any substantial program changes. Stakeholders then held briefings within their organisation on an initial draft GTP. Feedback from these briefings has been incorporated into the final GTP.

COMMUNITY ENGAGEMENT

BAC consults closely with all levels of government in the management, operation and development of Brisbane Airport, including the development of this GTP.

This commitment to actively engage with stakeholders also includes building strong relationships with the Brisbane community, facilitated through regular forums and group presentations.

Matters ranging from aircraft noise, environmental management and the operation of Brisbane Airport's road network, including the GTP, are canvassed in these meetings, which include:

- The Brisbane Airport Community Engagement Program, which involves regular presentations on airport initiatives, issues and activities to ensure that all levels of government and the community are involved and informed about planning and growth at Brisbane Airport
- The Brisbane Airport Community Forum (BACF) which is designed as an open platform for members of the community to find out more about the airport and for BAC to gain feedback on issues affecting areas surrounding the airport
- The Brisbane Airport Community Aviation Consultative Group (BACACG), which is independently chaired and provides opportunities for BAC to share information on development plans for the airport, among other matters. This forum involves community members, representatives of the Queensland Government and BCC, as well as major airlines, Airservices Australia and BAC
- BAC also has a range of consultative forums with the Queensland Government and BCC to ensure integrated planning and delivery of key infrastructure on and off the airport. To that extent, BAC has initiated the Brisbane Airport Area Round Table (BAART) as a Planning Co-ordination Forum (PCF) including BAC and all levels of government, which is designed to deliver better planning outcomes.

It is expected that through these forums and others held specifically in relation to the initiatives and programs in the GTP, BAC will continue to engage with transport agencies to ensure off and on-airport activities are integrated and aligned.

Growth forecasts have been analysed to assess and plan for future transport needs.

New Domestic T2 road system

12.11 Planning Context

INTRODUCTION

In preparing the GTP and its initiatives and programs, BAC considered a range of relevant growth forecasts to assess future transport needs, as well as existing airport planning tools and documents prepared by BAC, and state and local government planning documents that relate specifically to transport planning for Brisbane and the SEQ region. Outlined in this section are the forecasts and major planning tools used to inform the GTP.

BRISBANE AIRPORT POPULATION

The programs outlined in this GTP arise from an assessment of forecast growth in aircraft passenger numbers and the number of people likely to work at Brisbane Airport and, what this growth means in terms of providing appropriate and efficient ground transport infrastructure. Further details on passenger forecasts can be found in Chapter 5.

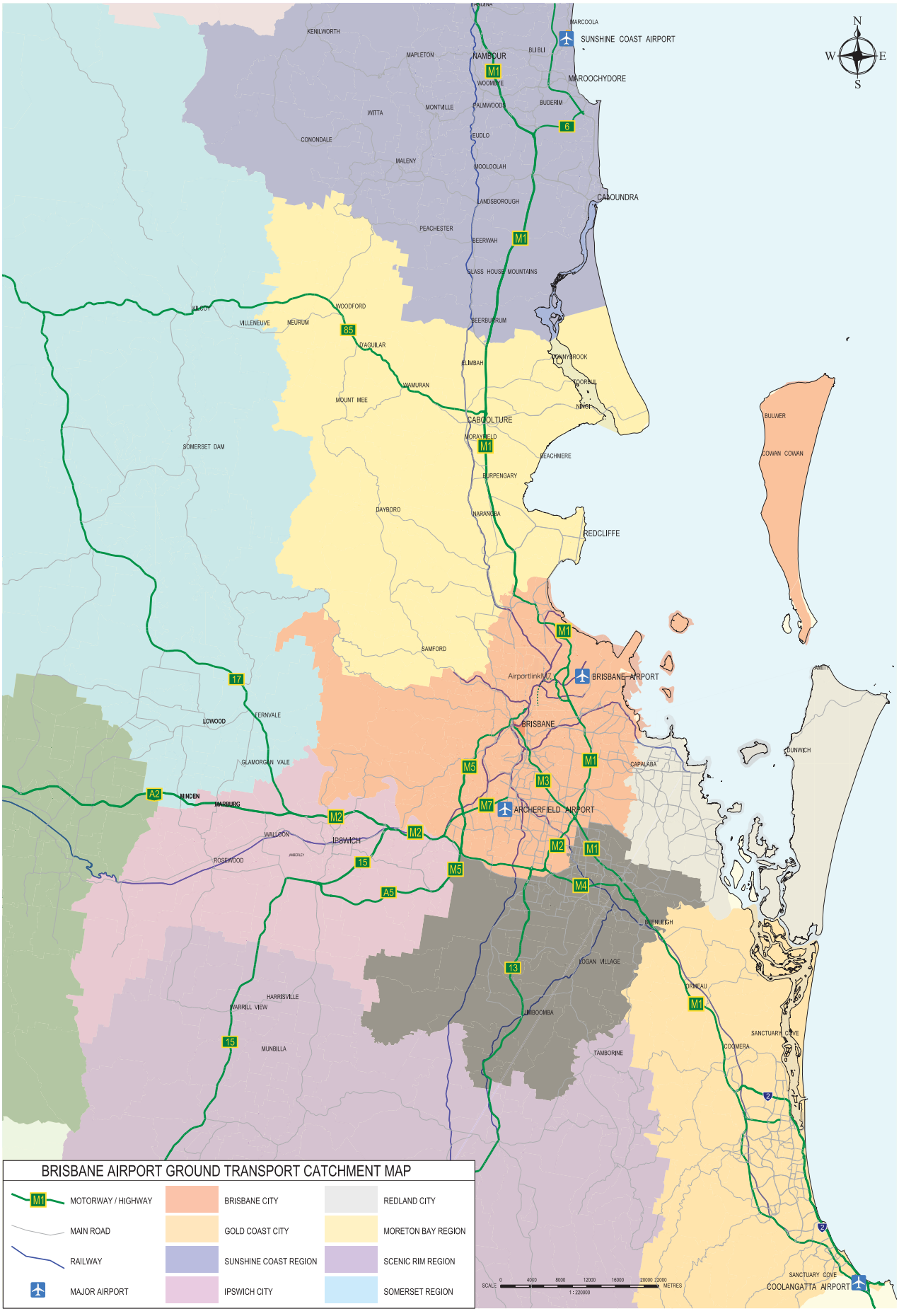
Brisbane Airport's passenger catchment comprises a regional population of approximately 3.4 million people, as illustrated in Figure 12.2, and a greater catchment within Queensland and northern New South Wales of up to five million people.

Within the regional catchment, airports competing for domestic and international passengers exist at the Gold Coast and to a lesser extent the Sunshine Coast. These airports are both approximately 110 km south and north from Brisbane Airport respectively.

In 2013, Brisbane Airport and businesses within the Brisbane Airport boundary employed approximately 21,000 full-time equivalent employees. This is forecast to increase to around 51,000 employees by 2034.

12 GROUND TRANSPORT PLAN

FIGURE 12.2: BRISBANE AIRPORT OUTBOUND PASSENGER CATCHMENT



History of Transport Infrastructure Planning and Development

Investment in transport infrastructure at Brisbane Airport in the 10 years from 2004 to 2014 has been around $581 million. This investment has provided significant transport capacity to meet passenger growth and commercial development through a progressive change in capacity introduced by major transport infrastructure. Therefore, while BAC will continue to invest in this area to 2019, it is likely to be to a lesser extent.

AIRPORT 2014 MASTER PLAN

The Master Plan identifies the framework for on-airport development between 2014 and 2034. Table 12.4 lists five development precincts that are defined in the Master Plan and which were considered in the preparation of this GTP. Refer to Chapter 6 for the locations of these precincts across the airport and the five-year development strategy.

STATE AND LOCAL GOVERNMENT PLANNING

Connecting SEQ 2031: An Integrated Regional Transport Plan for South East Queensland

Connecting SEQ 2031[2] is the Queensland Government's long-term transport plan, and includes a multi-modal plan and policies for public transport, active transport, private vehicles and freight.

The plan details the following priorities for action:

- Creating compact and connected communities
- Changing travel behaviour
- Improving transport system efficiency and safety
- Supporting economic vitality
- Protecting environmental quality and health
- Delivering an integrated transport network.

2 *Department of Transport and Main Roads 2011.*

Key priorities relevant to Brisbane Airport are:

- Expanding and modernising the rail network. The plan identifies passenger rail upgrades between Eagle Junction and the Domestic T2, and AirportlinkM7 is included as part of an UrbanLink network with high frequency services and a bus-rail interchange at Skygate
- Transforming the bus network, including a new UrbanLink bus network, with high frequency services on strategic corridors. Skygate is included in the UrbanLink network, with connections to Toombul in the east and Cannon Hill in the south
- Providing priority principal cycle routes between activity centres and completing the cycle network, improving integration with public transport stops and stations, providing high quality end-of-trip facilities, and ensuring end-of-trip facilities are considered in new developments

TABLE 12.4: BRISBANE AIRPORT PRECINCTS

Airport Precinct	Sub-Precinct	Intent
Airport Central	Skygate, Moreton Drive West, Airport Drive West, International T1 and Domestic T2	» Concentrated activity with high quality and urban public realm » Energetic precinct for events and 24 hour gateway » Created as the airport spine, it attracts naturally ventilated and quality subtropical public realm
Airport East	Airport East	» Maximises airside connection potential for industrial and business activities » A precinct which can respond to changing market demands and industry requirements
Airport South	Export Park, Da Vinci, Airport Industrial Park	» Efficient and flexible land options which have good transport connections » Provisions for high quality built form which is scaled and proportioned to interface with street and landscape settings
Airport North	Airport North	» Logistics hub for airside industrial developments and businesses » Large footprint sites protective of airside operations
Airport West	CPA	» Integrated with central parking area with direct connections to the terminals through rapid transit options » Provides a link to recreation and tourism uses with walking and cycle trails through ecological areas linking to Moreton Bay and Kedron Brook

- Ensuring business and industry areas are accessible with good connections to the priority freight network. The Gateway Motorway, traversing the airport, is part of the National Highway network and a key link within the priority freight route network
- Improving efficiency of the local transport system
- Enhancing multi-modal integration.

The plan also sets the following mode share targets for SEQ at 2031:

- Increasing the share of trips by public transport from 10.3% in 2006 to 20%, taking daily trips from 360,000 in 2006 to 860,000 in 2031
- Increasing the share of trips by walking from 10.6% in 2006 to 13% by 2031
- Increasing the share of trips by cycling from 1% in 2006 to 11% by 2031
- Decreasing the share of trips by car from 78.1% to 56%. This would see all private car trips reduce from 2.7 million in 2006 to 2.4 million in 2031.

The plan acknowledges that population growth outside the BCC area would mean that car trips would continue to increase.

Queensland Transport and Roads Investment Program 2013 – 2014 to 2016 – 2017

The Queensland Transport and Road Investment Program (QTRIP) is TMR's detail of transport and road infrastructure projects to deliver over the 2013/14 to 2016/17 years for roads, bridges railways marine infrastructure and public transport.

Amongst other purposes of the plan, it ensures integrated strategies and policies across the public sector with the private sector and enables co-ordination of infrastructure and services across various transport nodes.

Of relevance to the area surrounding Brisbane Airport, the QTRIP identifies the following program commitments:

- Continuation of the additional northbound lane construction on the Gateway Motorway between Sandgate Road and the Deagon Deviation as part of the National Building program funded by the Australian Government
- Provide funding for the upgrade of the Toombul Bus Interchange located off Sandgate Road.

Moreton Drive opened in late 2011

Brisbane Active Transport Strategy 2012 – 2026

BCC's active transport strategy forecasts that by 2026, one in five transport trips will be by walking and cycling, enabled through a vision to create a high quality, connected and accessible pathway network.

The strategy is supported by five active transport priorities which are:

- Encouraging walking and cycling
- Walking and cycling friendly suburbs
- A connected commuter network
- A safe and accessible network
- Information at your fingertips.

The strategy aligns with BCC's Transport Plan and the City Plan which encourages uptake of cycling and walking to support a reduction in commuter private vehicle trips and an increase in recreational trips. This GTP aligns the active transport priorities by encouraging an uptake in cycling and walking to airport.

Transport Plan for Brisbane 2008 – 2026

The Transport Plan for Brisbane 2008 to 2026 is BCC's strategy for building a better, more responsive and accessible transport system in a climate of ongoing population growth and lifestyle pressures. The transport plan has been developed to act as an integrated local transport plan under the objectives of the SEQ Regional Plan.

The transport plan aims to tackle the key challenges[3] facing Brisbane and incorporates six strategies and actions:

- Quality public transport – creating public transport as the preferred mode of travel to the city's major centres, reducing the need to use a car
- Managed travel demand – creating a sustainable level of travel demand where growth in traffic is less than the growth in population
- Coordinated transport and land use – managing transport and land uses to create a preferred urban form that increases accessibility, connectivity and supports sustainable travel behaviour
- A safe and efficient road network – ensuring people and goods can move safely on the road network by the most efficient modes and routes while minimising the impact of traffic on neighbourhoods and the environment
- Delivering goods on time to the right place – ensuring freight moves efficiently and safely within Brisbane, while liveability of residential areas is protected
- More clean and green personal transport – ensuring personal transport is clean, green, safe and attractive, while providing a genuine alternative to driving.

3 *The Transport Plan for Brisbane 2008-2026 identifies the key issues to Brisbane's transport network as population growth and dispersal, changing demography, employment forecasts, journey to work and car usage.*

12.12 Existing Transport Network

INTRODUCTION

This section outlines the transport network that currently operates at Brisbane Airport, including a summary of the various roads, transport services, upgrade work and facilities that provide access into and around the airport.

TRANSPORT NETWORK AND SERVICES

Internal Road Network

Figure 12.3 shows the on-airport, road network.

Moreton Drive and Airport Drive provide the primary access to and from Brisbane Airport. These roads connect to the surrounding road network comprising the Gateway Motorway, Southern Cross Way and the East-West Arterial.

Prior to 2009, Airport Drive was the only primary access to Brisbane Airport, which was constrained as a cul-de-sac at the Domestic T2 and also by severe congestion at the Airport Drive / Gateway Motorway roundabout, which has since been converted to a "fast diamond" signalised intersection. Airport Drive is still a major access point, but since 2009 the primary access from the Gateway Arterial to the International T1 and Domestic T2 is via Moreton Drive.

The secondary network within Brisbane Airport comprises:

- Lomandra Drive, providing access from Airport Drive to Main Myrtletown Road and to existing and longer-term industrial land use developments
- Pandanus Avenue, providing access to Airport East
- Qantas Drive, providing access to the on-airport industrial precincts

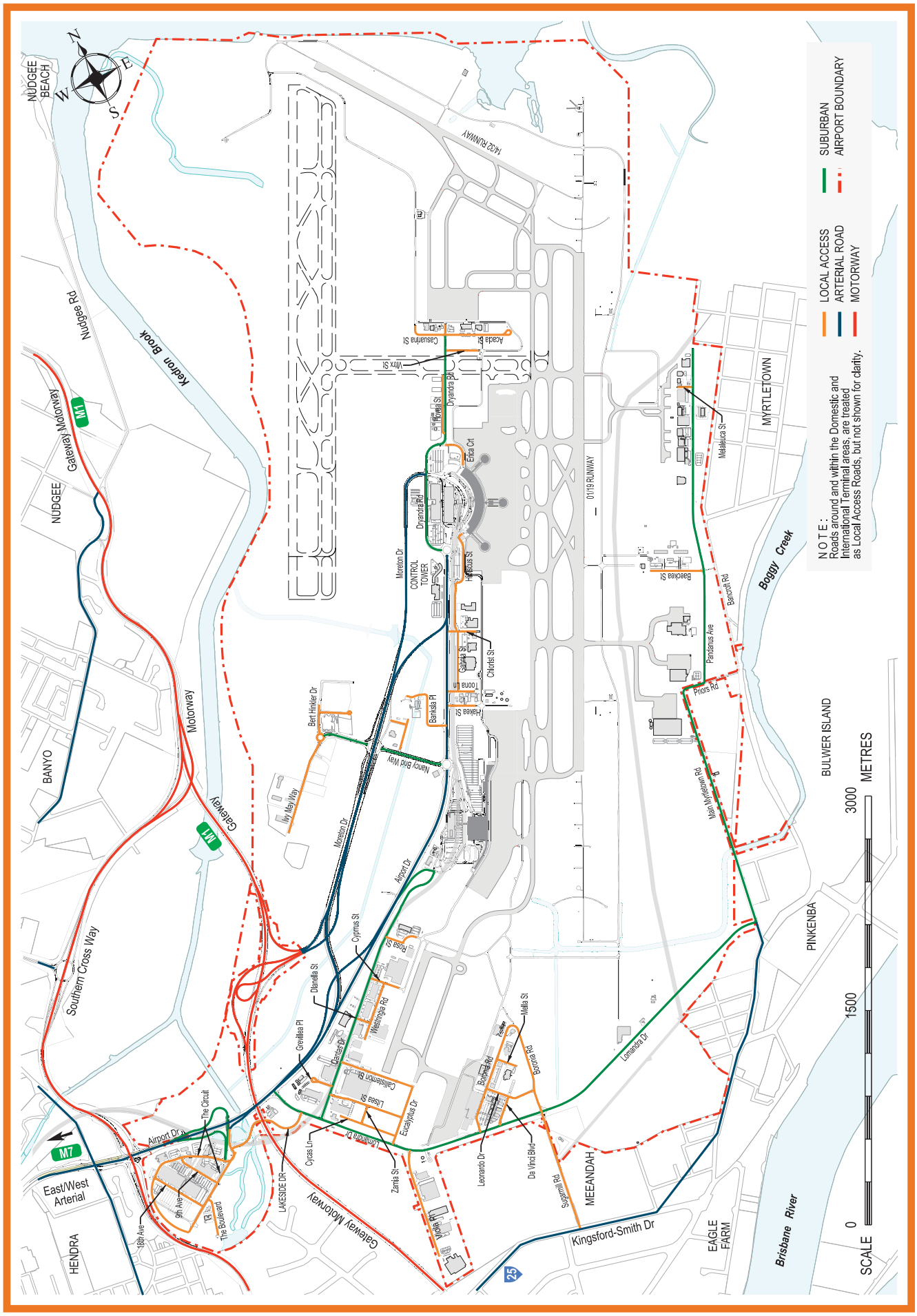
Projects such as the BAC-funded Moreton Drive, combined with the AirportlinkM7 tunnel and Airport Roundabout Upgrade have alleviated traffic congestion along major airport access routes.

- Nancy-Bird Way, providing access to the International T1 and the CPA in Airport West, which provides waiting facilities for taxis and buses. It also connects Moreton Drive and Airport Drive
- Dryandra Road, providing access to the Airport North, general aviation precinct and the Domestic T2 long-term and short-term car parks
- Lakeside Drive, connecting Lomandra Drive to Airport Central, Skygate
- Boronia Road, providing access to the Da Vinci precinct in Airport South
- Sugarmill Road, connecting to Lomandra Drive from Eagle Farm Road.

The majority of the access routes are free-flowing, however at critical locations such as entries to major airport precincts there are a number of at-grade intersections that control the flow of vehicles. Important controlled intersections include:

- Moreton Drive / Dryandra Road signalised intersection
- Airport Drive / Dryandra Road roundabout

FIGURE 12.3: BRISBANE AIRPORT ROAD NETWORK PLAN



1 Active transport infrastructure has been delivered in the past five years.

2 Staff car park at International T1.

3 Buses transfer visitors between terminal and Skygate.

- Airport Drive / Nancy-Bird Way roundabout
- Airport Drive / Lomandra Drive signalised intersection
- Nancy-Bird Way and Moreton Drive ramp roundabout
- Lomandra Drive / Qantas Drive signalised intersection
- Lomandra Drive / Sugarmill Road roundabout
- Lomandra Drive / Main Myrtletown Road priority intersection
- Pandanus Avenue / Main Myrtletown Road priority intersection
- Skygate roundabout linking The Circuit to Lakeside Drive.

As demand increases, these intersections will be considered for upgrades.

Major upgrades recently completed include the DTU, to improve vehicle and pedestrian circulation at the Domestic T2. Key features of the DTU include:

- Segregation of pedestrians and cars
- A new elevated covered walkway (Skywalk) connects the multi-level car parks with the terminal
- Separation of taxis, pick-up and drop-off private vehicles and other general transport such as coaches, buses, and limousines
- A new coach access road
- A new public access road for passenger drop-offs
- A new designated area for passenger pick-up waiting
- The widening of kerbside space in front of the terminal for pedestrians.

Proposals for future upgrades to the airport road network include:

- Additional lanes on Moreton Drive
- Increased capacity for Lomandra Drive
- Realigning Airport Drive to cater for future aviation and terminal support development
- Grade separating the Lomandra Drive/Airport Drive intersection
- Upgrading the roundabout at the Domestic T2.

External Road Network

Figure 12.4 shows the external, or off-airport, road network providing access to and from Brisbane Airport. The strategic road network comprises:

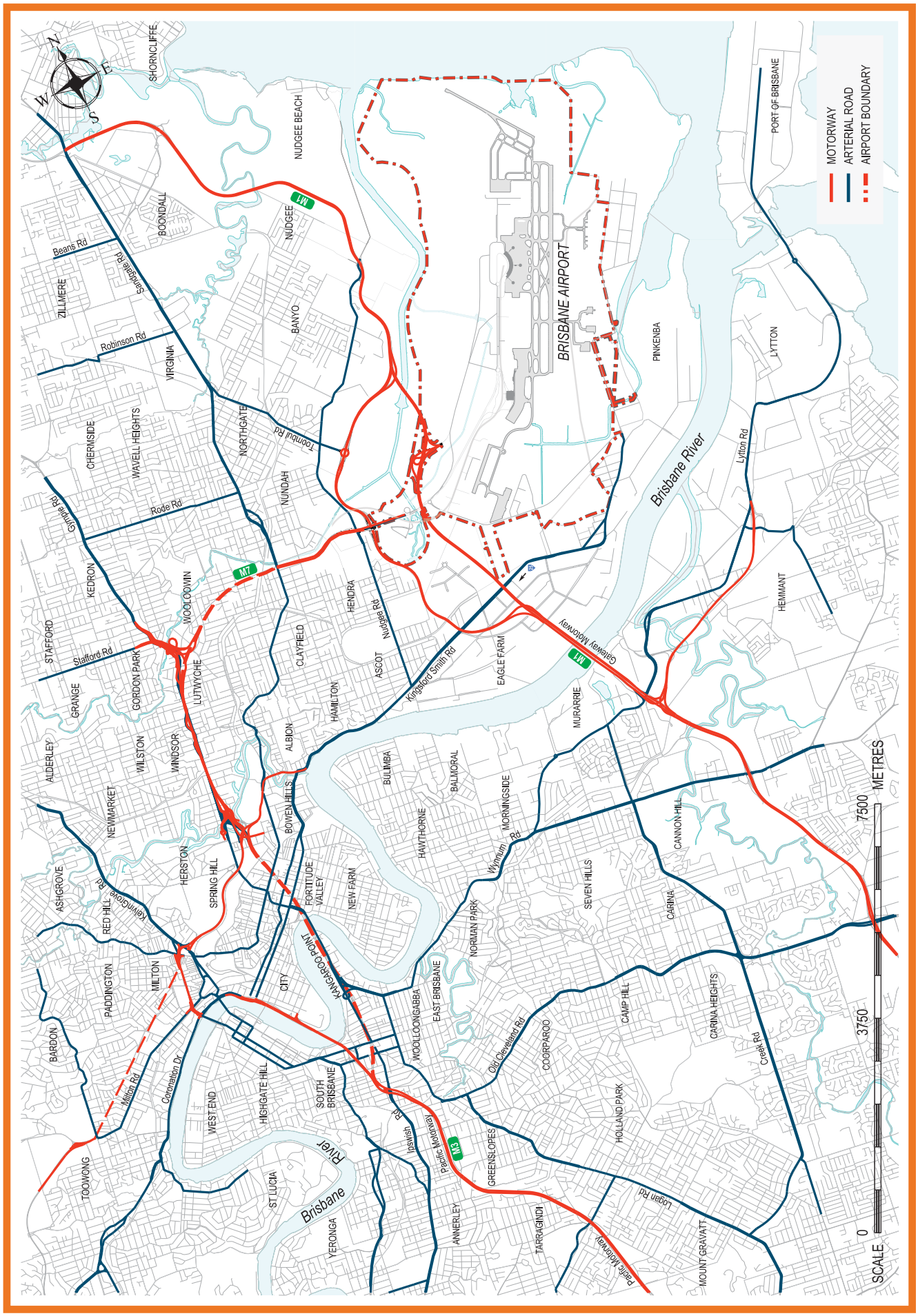
- The Gateway Motorway
- Southern Cross Way
- East-West Arterial Road
- AirportlinkM7
- Kingsford Smith Drive
- Nudgee Road.

The Gateway Motorway, incorporating the Sir Leo Hielscher Bridges across the Brisbane River, caters for long distance trips and connects areas north and south of Brisbane to the Sunshine Coast and Gold Coast.

The Gateway Upgrade Project completed in 2010 significantly enhanced the strategic road network in the area surrounding Brisbane Airport, by providing:

- Twelve lanes over the Brisbane River (six in each direction)
- Seven km of new motorway between the Brisbane River and Nudgee Road

FIGURE 12.4: EXTERNAL ROAD NETWORK PLAN



» Additional access point to Brisbane Airport at Moreton Drive.

AirportlinkM7 is a motorway and tunnel network completed in July 2012. It connects the airport to the Brisbane CBD, Clem7 Tunnel and northern suburbs. The project included the Airport Roundabout Upgrade, which was completed in 2011.

This project replaced a roundabout at the Airport Drive entry to Brisbane Airport with a fast diamond signalised intersection and included the construction of a flyover between the East-West Arterial Road and Airport Drive, over the Gateway Motorway.

The strategic roads are supported by the following urban arterials:

» Kingsford Smith Drive, connecting Southern Cross Way with the Brisbane CBD. Kingsford Smith Drive is currently the primary route between the Brisbane CBD and the airport

» Toombul Road, connecting the Virginia industrial area to the Gateway Motorway

» Nudgee Road, connecting Kingsford Smith Drive with Toombul Road.

Other lower order roads providing access to Brisbane Airport and surrounding land are Sugarmill Road, Main Myrtletown Road, Main Beach Road, Eagle Farm Road and Schneider Road.

BAC has longer-term plans for a future connection between Lomandra Drive and Toombul Road and also for a western corridor connection into the CPA from the Gateway Motorway or Southern Cross Way, which has state conditional endorsement.

BCC's recently upgraded section of Kingsford Smith Drive between Harvey Street and Theodore Street, Eagle Farm has improved capacity, but further planning for Kingsford Smith Drive is continuing. These upgrades will benefit capacity and safety and will provide access for pedestrians and cyclists.

Land use development is occurring in areas immediately surrounding Brisbane Airport and there are preliminary proposals to upgrade the road network to cater for associated growth.

These proposals include:

» A new interchange on Southern Cross Way at Doomben

» Realignment of Main Myrtletown Road

» Upgrades to intersections along Nudgee Road

» Extensions to the road network south of Lomandra Drive.

These future road extensions include Trade Coast Drive and Scheider Road. No firm funding or timeframe commitments have been made in relation to these infrastructure proposals.

CONNECTION

A western connection to the airport is part of long-term planning.

Airtrain is an important public transport link

Car park payment machines in operation at Brisbane Airport

PARKING

Over 10,000 public parking spaces are available.

On-Airport Parking

Figure 12.5 shows all parking facilities within the airport boundary. Existing parking facilities at Brisbane Airport include:

- Undercover and open air public parking at the terminals including valet services provided by BAC, Qantas and Virgin Australia
- Staff parking adjacent to the International T1
- Rental car parking at the terminals
- Employee and public parking in non-terminal precincts
- Specialist parking, including taxi holding areas and ground transport operations.

The opening of an additional multi-level car park at the Domestic T2 in 2012 significantly increased the amount of parking available. Parking capacity at the Domestic T2 now comprises 8,130 public undercover spaces, 180 public open air spaces, and 740 rental car spaces.

A multi-level car park at the International T1 offers approximately 1,670 public undercover spaces and 530 public open air spaces. An open air car park beside the terminal provides approximately 2,480 spaces for airport employees working at both the International T1 and Domestic T2.

The number of public and employee parking spaces available at the terminals meets the current demand.

The CPA within Airport West, adjacent to Moreton Drive, includes a taxi holding area and areas for other ground transport operators such as limousines and coaches. The area is currently being developed to include rental car storage and maintenance, and areas for other general transport operations. There are also plans for long-term public parking and additional staff parking, as the staff parking area at the International T1 reaches capacity and are displaced by aircraft apron expansion.

For other facilities within the airport, parking is either within or adjacent to individual sites. The provision of parking spaces is generally as per local government guidelines, and the current car parking facilities for employees is sufficient. The Airport Central, Skygate precinct also has approximately 2,500 visitor parking spaces to service retail outlets and the airport hotel.

Near Airport Parking

Figure 12.5 also shows the locations of current off-airport parking facilities near Brisbane Airport. Passengers park their vehicles at these facilities and transfer to and from the airport terminals by mini-bus. BAC does not control the location or pricing of these facilities and they are not considered within the GTP.

Freight

Figure 12.6 shows the Brisbane Airport freight access plan, which details the B-Double access routes to, from and within Brisbane Airport.

Brisbane Airport carries a small volume of priority and high value cargo that is typically carried in the cargo hold of passenger aircraft. Infrequently, specific large-volume cargo aircraft will use Brisbane Airport for the international transfer of high-value, large-sized freight. The existing annual airfreight volumes comprise approximately 56,000 tonnes of imports and around 47,000 tonnes of exports, with modest future growth expected. There are plans by BAC to target growth in cargo handling at Brisbane Airport, but not significant in volume.

FIGURE 12.5: BRISBANE AIRPORT PARKING MAP

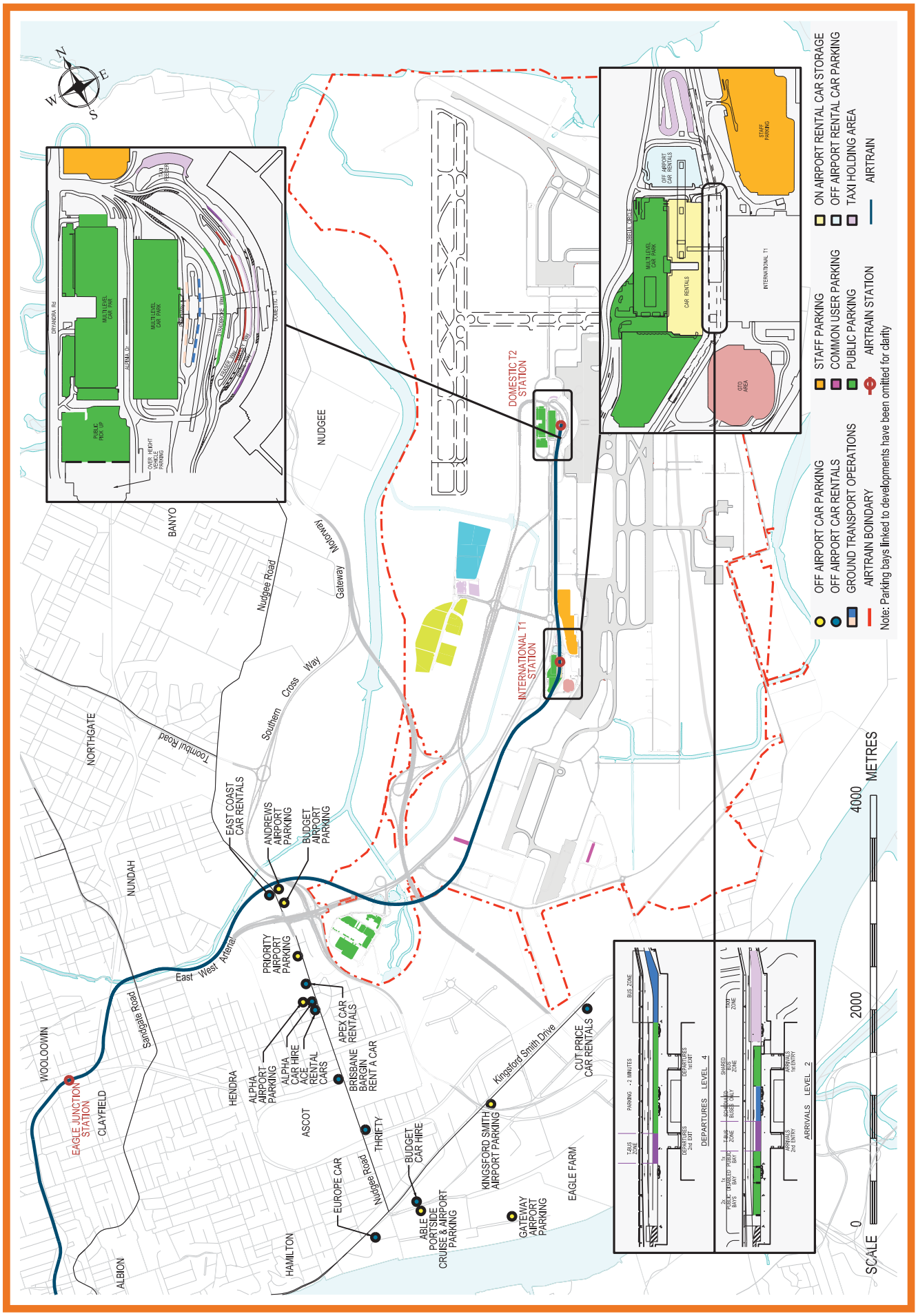
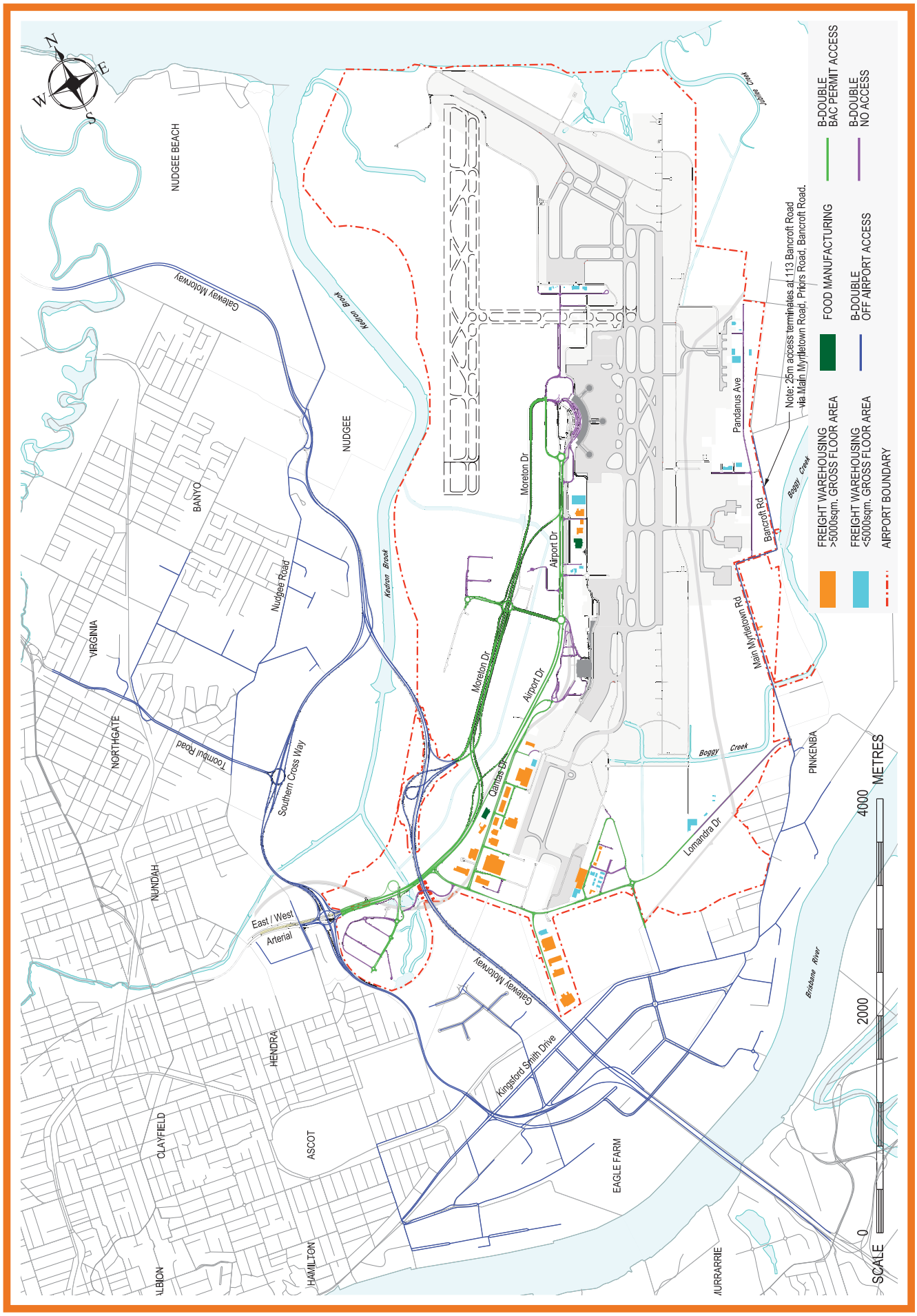


FIGURE 12.6: FREIGHT ACCESS PLAN



There are freight warehousing and distribution centres within Airport South, Export Park and Da Vinci precincts, with vehicle access from Lomandra Drive. Heavy vehicles servicing these centres use Lomandra Drive for access to and from the Gateway Motorway, either via Airport Drive, or via Sugarmill Road and Kingsford Smith Drive. The Gateway Motorway is the only Priority 1 Freight Route through northern Brisbane.

The proportion of heavy vehicles using these areas of the Brisbane Airport road network is currently between 10% and 12%.

Passenger Rail

Rail Infrastructure

Figure 12.7 shows rail infrastructure servicing Brisbane Airport. The rail network comprises the Airtrain link, which is an 8.5 km elevated railway operating between Eagle Junction and the Domestic T2. The rail link was constructed as a public private partnership with Airtrain the private company operating the service. The Airtrain service connects the Domestic T2 and International T1 to the Brisbane CBD and Gold Coast via Eagle Junction Station. To connect to the wider rail network, passengers transfer to or from the Airtrain service at either Eagle Junction, or at stations within the Brisbane CBD.

Airtrain operates 50 services on a weekday between 5:04am and 10:04pm, with services running every 15 minutes during peak periods, and every 30 minutes at off-peak times. On weekends, services run every 30 minutes between 6am and 10pm.

Brisbane Airport Rail Link Contract

Airtrain services are managed through the BARL agreement, which is between Airtrain and the State Government. The BARL agreement is in place until 2036 and includes contract conditions that restrict introducing public transport services that would compete with Airtrain services. The implications of the BARL agreement needs further clarification so that public transport service enhancements proposed as part of the GTP do not contravene the conditions of the agreement.

Buses And Shuttle Services

Translink Bus Services

Figure 12.7 shows the TransLink bus routes servicing Brisbane Airport. TransLink bus routes do not operate to the terminals, but service Airport Central Skygate, Airport South Da Vinci, Airport Industrial Park and Airport East. Table 12.5 outlines the route details, operating times, and frequency.

To service the airport precincts, TransLink bus routes use Kingsford Smith Drive, Eagle Farm Road, Main Myrtletown Road, Nudgee Road, East-West Arterial Road, Airport Drive, Lomandra Drive, Boronia Road, Sugarmill Road and the Gateway Motorway.

1

2

3

1 Drop-off and pick-up road at Domestic T2.

2 New technology in car parks provides information on spaces available.

3 Lights indicate available car parks.

FIGURE 12.7: BRISBANE AIRPORT PUBLIC TRANSPORT MAP

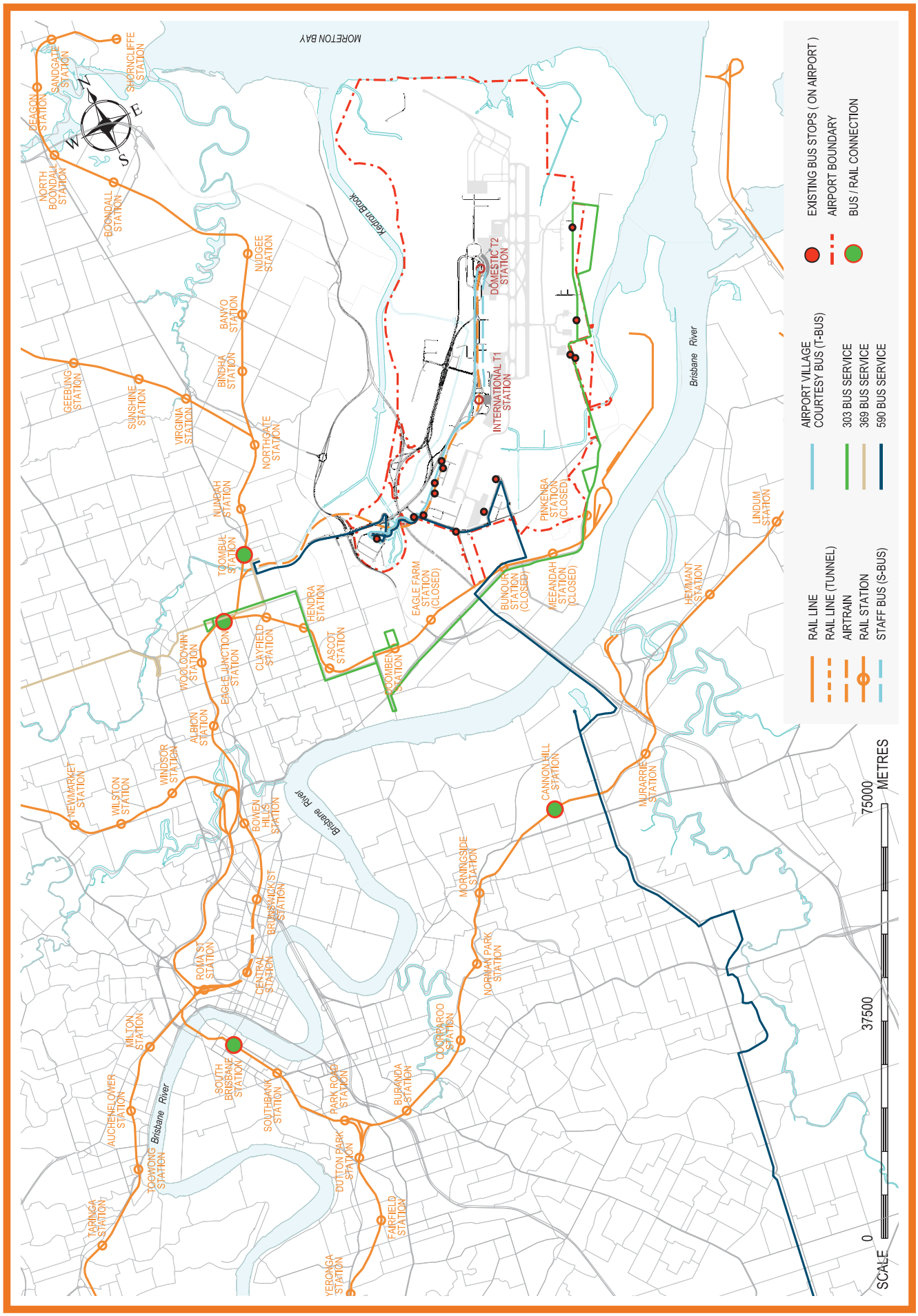


TABLE 12.5: TRANSLINK BUS ROUTES

Route	Monday – Friday		Interchange	Frequency (mins)		Saturday		Sunday	
	Operating hours	Daily Services	Public transport transfer	Peak	Off-peak	Operating hours	Freq. (mins)	Operating hours	Freq. (mins)
303/302 Pinkenba, Eagle Farm, Airport (Pandanus Avenue), Doomben, Portside, Eagle Junction	5am–8:30pm 2:15–6pm	3 or 4 in each direction	303 Eagle Junction and Doomben Railway Stations 302 Pinkenba bus Terminus	20	None	None	None	None	None
307 Toombul, Northgate, Banyo, Australian Catholic College	8am–4pm	10	Toombul Interchange connection to 590 to Airport	60	60	9am – 3pm	90	None	None
369 Mitchelton to and Toombul	5:45am–7:10pm	34	Toombul Interchange connection to 590 to Airport	15	30	7:50am–7:20pm	24	7:50am–7:20pm	24
590, Toombul, Airport (Skygate, DFO, Boronia Road and Lomandra Drive), Cannon Hill, Carindale, Garden City	6:30–7:20pm	36	Toombul Interchange	15	30	8am–7:30pm	24	8am–7:30pm	24
598 Brookside, Indooroopilly, Garden City, Cannon Hill, Chermside (Counterclockwise at Toombul Interchange)	6:15am–7pm	25	Toombul Interchange connection to 590 to Airport	30	30	7am–7pm	60	None	None
599 Cannon Hill, Garden City, Indooroopilly, Brookside, Chermside (Clockwise at Toombul Interchange)	6:20am–6:45pm	25	Toombul Interchange connection to 590 to Airport	30	30	7am–7pm	60	None	None

Passengers travelling to or from areas of Brisbane other than Eagle Farm, Pinkenba, Toombul, Northgate, Wavell Heights, Chermside, Mitchelton, Mt Gravatt or Carindale must transfer to another bus or train service to reach Brisbane Airport.

Figure 12.8 defines the TransLink Network Zones across Brisbane, the Gold Coast and the Sunshine Coast with Brisbane Airport located in Zone 3.

On-Airport Bus Services

BAC operates its own T-Bus shuttle service, which provides transfers between the International and Domestic Terminals, and also services Airport Central Skygate. The T-Bus operates between 5am and 11pm with a 20-minute frequency.

AIRPORT BUS

The T-Bus operates between terminals and Skygate.

FIGURE 12.8: TRANSLINK NETWORK ZONES

Transfers between the Internatiional T1 and Domestic T2 are a fee-based service for a one-way adult trip or free for some airline passengers with valid connecting tickets. The bus also runs from the Domestic T2 and International T1 to Skygate. This enables connections to and from the TransLink bus services at Skygate.

A courtesy, BAC operated employee bus service (S-Bus) transfers staff between the employee car park, adjacent to the International T1, and the Domestic T2. The S-Bus operates 24 hours a day with a maximum 10-minute frequency.

Coach and Shuttle Operations

Table 12.6 outlines privately operated coach and shuttle services that operate between the terminals and other areas within and outside Brisbane.

Taxis

Taxis make a major contribution to the carriage of airline passengers to and from the Domestic T2 and International T1 to off-airport locations.

At the Domestic T2, pick-up is via a taxi lane outside the arrival halls. Drop-off is also via a dedicated adjacent taxi lane.

At the International T1, taxi pick-up is via a dedicated facility outside the arrival hall on Level 2. Passenger drop-off is outside the departure hall on Level 4, which is shared with private vehicle drop-off for departing passengers.

There are intermediate taxi storage areas at both terminals to manage taxi supply and passenger demands. A holding area for up to 500 taxis at the CPA provides for overall taxi management to service both terminals.

Active Transport

Figure 12.9 shows the existing active transport network at Brisbane Airport.

There are wide shared paths around the Domestic T2, International T1, Airport East and Airport Central Skygate. Footpaths are also provided in the Airport South Export Park, Da Vinci and Airport East precincts.

Off-road cycle paths exist along Charlie Earp Bridge, Lakeside Drive, Viola Place and The Circuit. Many of these shared paths and cycle paths currently do not connect to form a complete network.

Cycle infrastructure surrounding Brisbane Airport comprises:

- Off-road cycle paths including the Kedron Brook Bikeway along Schultz Canal
- The Moreton Bay bikeway connecting Kedron Brook to Gateway through Airport
- The Jim Soorley Bikeway connecting the Kedron Brook Bikeway to the Moreton Bay Bikeway, and the Gateway Bridge Cycleway
- On-road cycle lanes along Kingsford Smith Drive between Theodore Street and the Gateway Motorway, Eagle Farm.

Parts of the cycling network are vulnerable to flooding, including the Kedron Brook Bikeway. Therefore, on-road cycle lanes are important to complement the off-road cycle paths.

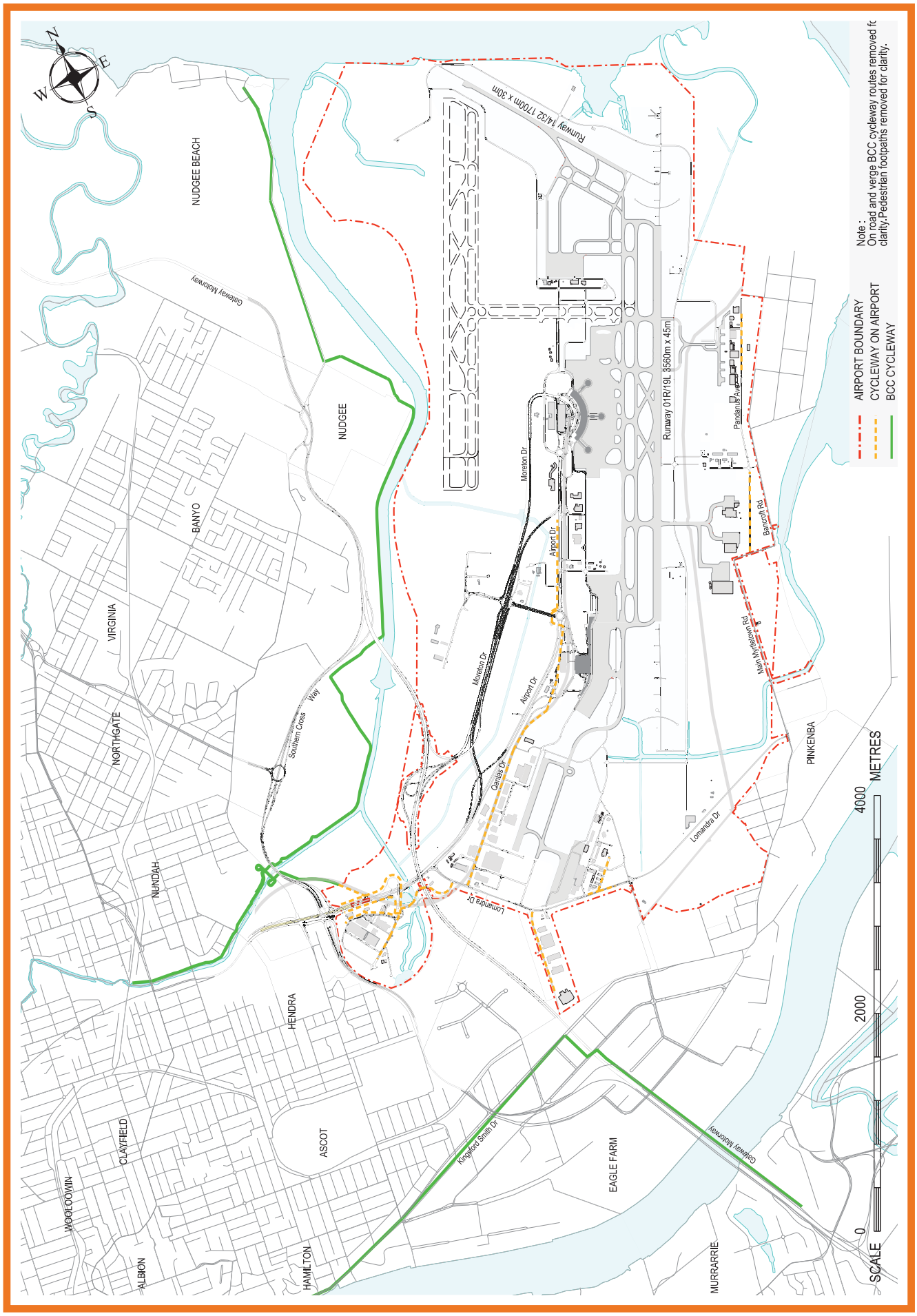
The existing off-road cycle network also has the following physical gaps:

- Some minor disconnected sections of existing pathway along The Circuit in Skygate
- Missing connection between Viola Place and the Gateway Bridge Cycleway.

TABLE 12.6: DETAILS OF COACH AND SHUTTLE BUSES AS AT MARCH 2014

Operator	Origin / Destination	Frequency
Sun-Air	Sunshine Coast	17 daily services
Con-X-ion	Sunshine Coast	10 daily services
	Brisbane CBD Hotels	21 daily services from 3am to 11pm
	Gold Coast	16 daily services from 5am to 9pm
Airport Flyer	Toowoomba	7 daily services (Monday to Thursday)
	Warwick	3 daily services (Friday)
		6 daily services (Sunday)
Byron Bay Shuttle	Byron Bay & northern NSW	4 daily services (Monday to Saturday) and 1 service (Sunday)
RedAir	Redcliffe Peninsula and surrounding suburbs	Pre-book shuttle services only
Hervey Bay Shuttle	Hervey Bay	2 daily services

FIGURE 12.9: BRISBANE AIRPORT ACTIVE TRANSPORT MAP



12.13 On-Airport Transport Demand

This section describes the number of people moving in and around Brisbane Airport now and in the future. The GTP aims to understand the human dynamics of the airport transport network leading to the definition of programs and initiatives designed to meet overall transport demand, while enhancing the range of options available to them.

AIRCRAFT MOVEMENTS

Figure 12.10 shows the number of scheduled domestic and international flight departures and arrivals on a typical weekday that occurred at Brisbane Airport in 2013.

In 2013, arrivals and departures numbered 35 aircraft movements per hour between 6am and 8pm. However, between 8am and 9am, at a peak, there are likely to be up to 54 scheduled aircraft movements.

A typical aircraft operating between Brisbane and Sydney carries approximately 180 passengers, while larger widebody aircraft can carry up to 340 passengers.

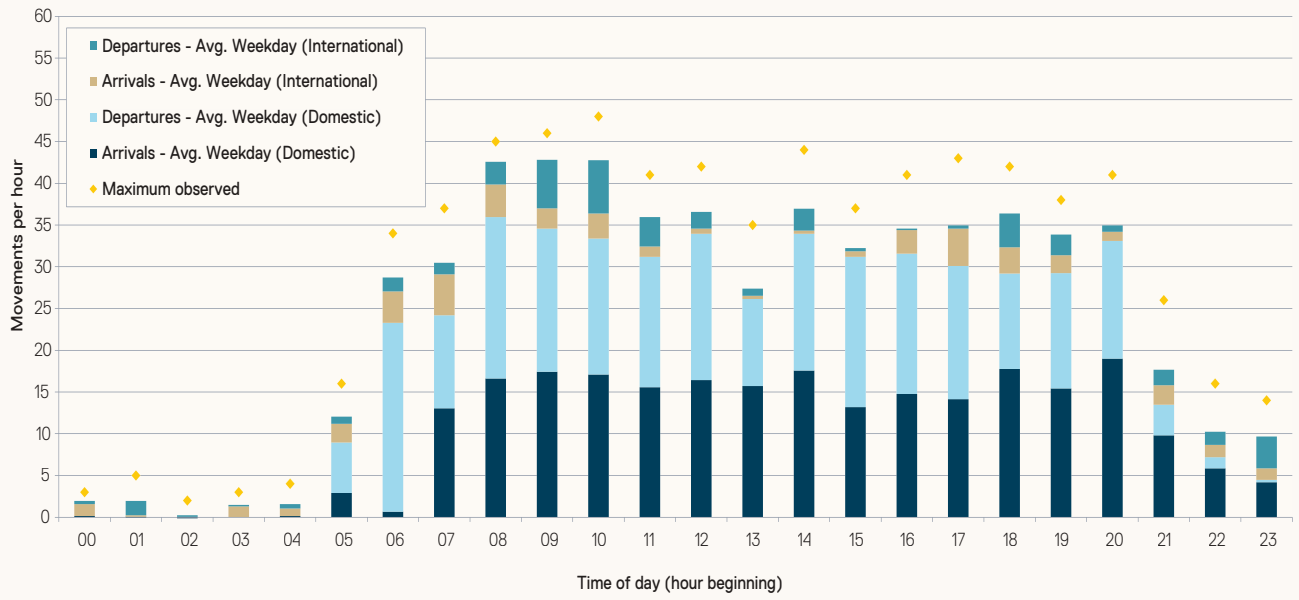
AIRLINE PASSENGER AND EMPLOYEE DEMANDS

Current passenger statistics, additional employment statistics, and growth forecasts are shown in Figure 12.11.

In 2013, there were 45,000 passengers using the Domestic T2 and 12,000 passengers using the International T1 on a daily basis. Passenger numbers are forecast to increase by 50% in 2019 to reach 67,000 and 20,000 daily passengers using the Domestic T2 and International T1 respectively.

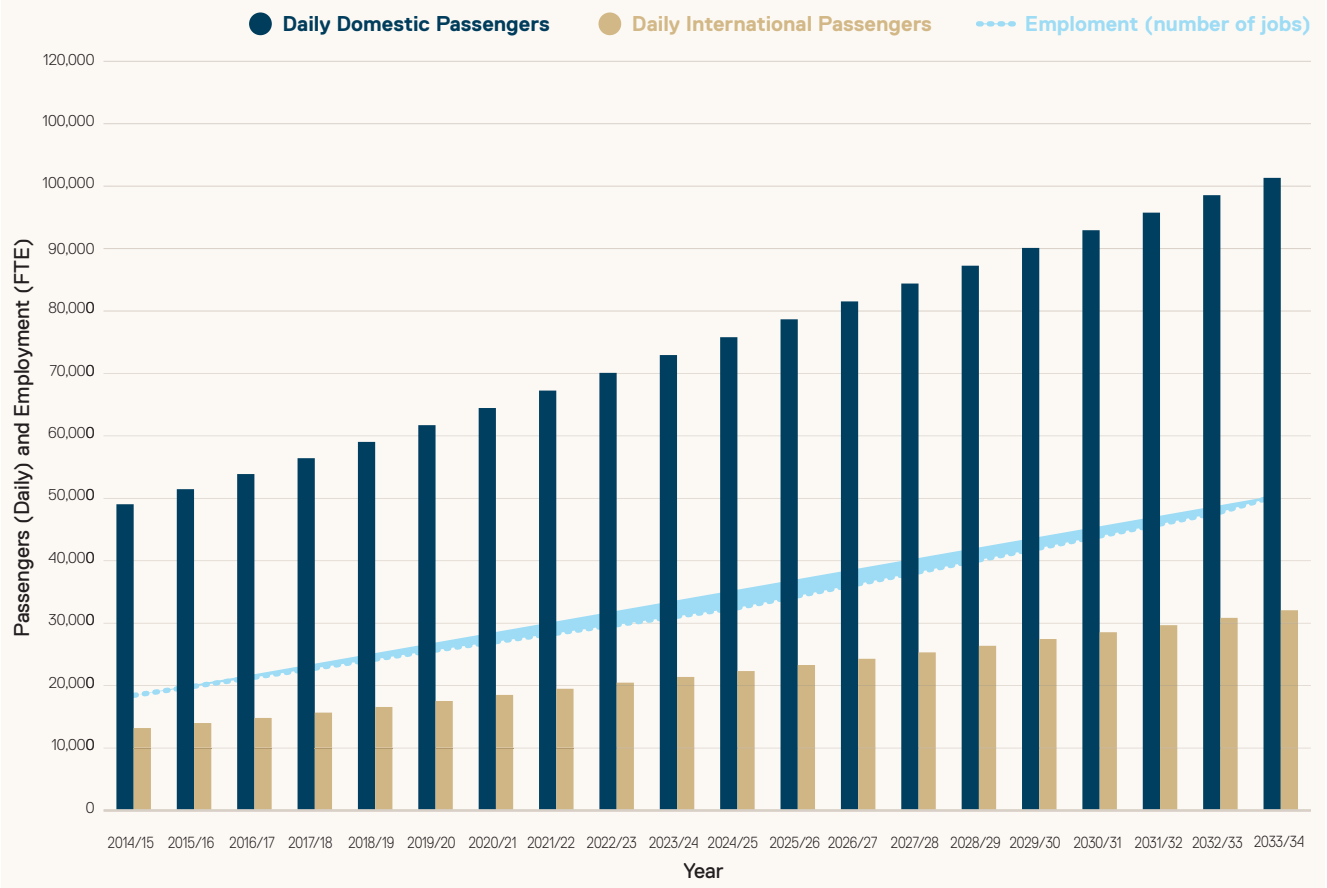
In 2013, there were about 21,000 full-time equivalent employees at Brisbane Airport. Based on development projections, employee numbers are also forecast to increase to 29,450 employees by 2019.

FIGURE 12.10: SCHEDULED DOMESTIC AND INTERNATIONAL AIRCRAFT AVERAGE WEEKDAY DEPARTURES AND ARRIVALS



Source: BAC website. www.bne.com.au

FIGURE 12.11: BRISBANE AIRPORT PASSENGER AND EMPLOYMENT FORECASTS



Sources: BAC Passenger forecasts, 2014 Master Plan forecasts

Brisbane City Council buses service the Skygate precinct

TRANSPORT CHOICES

Table 12.7 defines the use of various transport options (otherwise known as modes) around Brisbane Airport in 2013, and outlines mode share targets proposed for this Master Plan.

These mode shares are for all precincts within Brisbane Airport. Mode shares for the 2013 estimates were determined from passenger and employee surveys, occupancy surveys and Go-Card ticketing and Airtrain information.

Between 2009 and 2013, the use of private vehicles decreased by 2%. During the same period, the use of Airtrain decreased by approximately 0.5%, but this was offset by an increase in the use of buses and other modes such as shuttle buses.

The surveys collated for modes are reasonably representative of the current state of transport use, however, some results will be affected by the changing markets.

As part of the DTU, data collection devices have been installed, which will enable ongoing monitoring of passenger transport choices at the Domestic T2.

Figure 12.12 shows the observed average daily 2013 mode share for the International T1 and Domestic T2.

The averaged total use of public transport recorded from surveys at the terminals was approximately 8%.

A further 7% to 11% of total mode share is attributed to mini-buses for off-airport car parks, rental car operators and hotel transfers. Variances in public transport mode share often occur due to factors such as day of the week, seasonal influences and weather conditions.

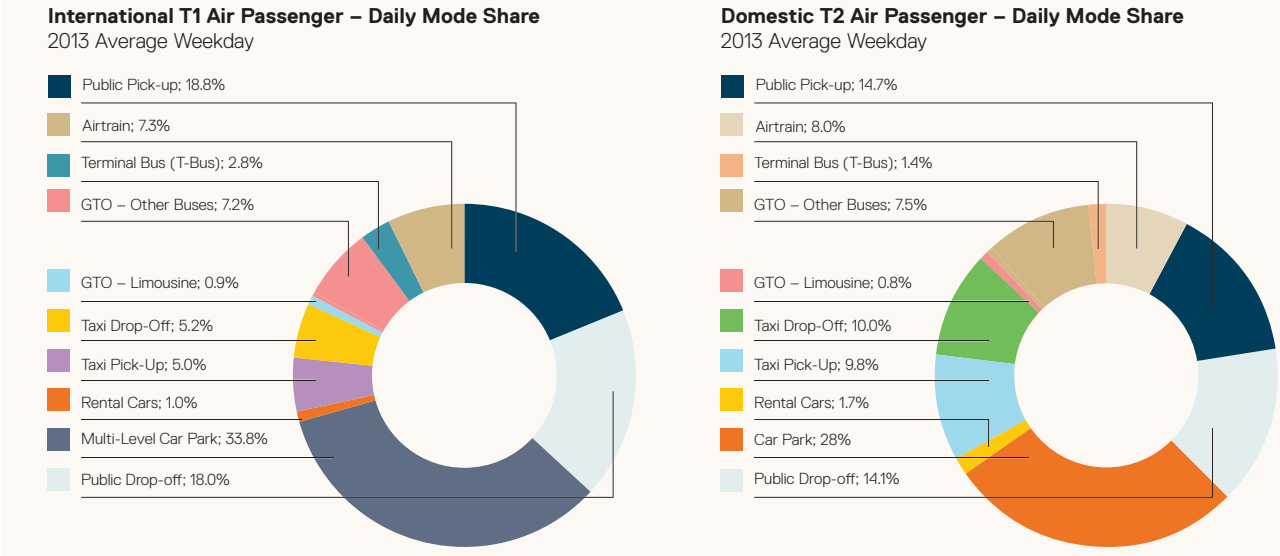
Private vehicle use includes passenger drop-offs and pick-ups, short and long-term private vehicle parking, and rental cars. These movements comprise 72% and 59% of the mode share at the International T1 and Domestic T2 respectively. The differences are due to the extent of taxi operations, the type of traveller and the average length of time for a domestic versus international journey.

TABLE 12.7: MODE SHARE OBSERVATIONS AND TARGETS

Mode	2009 Master Plan	2013 Mode share[1]	Status (As Compared to 2009)
Private vehicle	83.0%	81.1%	On target
Bus	Less than 1.0%	1.2%	Ahead of target
Airtrain	5%	4.2%	Behind target
Active transport	Less than 1%	Less than 1%	On target
'Others' (Taxis, Mini-bus & Coaches)	11.7%	13.0%	On target

1 *Figures represented as all of airport share based on 2013 surveys*

FIGURE 12.12: 2013 MODE SHARE AT THE INTERNATIONAL T1 AND DOMESTIC T2



Passenger drop-offs and pick-ups account for approximately two-thirds of private vehicle movements. The remaining third comprises primarily short and long-term car parking, with a small contribution made by rental car operations.

The use of taxis at the Domestic T2 accounted for 20% of total passenger ground transport demands.

Figure 12.13 shows the observed 2013 mode share for Airport Central Skygate and Airport South Da Vinci precincts, which are the two non-terminal precincts with a reasonable level of public transport use.

Public transport mode share at Airport Central Skygate and the Airport South Da Vinci precincts are both 4%. This is consistent with other suburban locations in Brisbane, highlighting the similarities for public transport usage at Brisbane Airport with the wider population. For other airport precincts, such as Airport South Export Park, it is estimated that public transport is used for less than 1% of movements.

PUBLIC TRANSPORT AND TAXI DEMANDS

Approximately 5,100 passengers use Airtrain every day, while TransLink bus services attract approximately 500 passengers.

The T-Bus and S-Bus services attract 1,600 and 3,500 passengers per day respectively. The patronage for other coach and shuttle operations is estimated at 6,300 passengers per day on a typical weekday.

Taxi patronage is approximately 11,100 passengers per day on a typical weekday.

VEHICLE DEMANDS

Figure 12.14 shows how many vehicles, on average, travel into or out of various precincts across Brisbane Airport on a daily basis, including individual profiles for the Domestic T2, International T1, and Skygate. All other precincts are grouped together.

There are significant daily variations, with a Monday morning peak hour at the Domestic T2 typically 1.2 to 1.3 times busier than an average morning peak hour.

There are also significant seasonal variations with October, December and January being the busiest times of the year due to holiday periods.

This vehicle generation results in approximately 115,000 vehicles per day travelling to and from Brisbane Airport. There are also approximately 15,000 vehicles per day travelling between different precincts within Brisbane Airport.

Therefore, total vehicle movements associated with Brisbane Airport can be up to 130,000 vehicle trips per day.

The Domestic T2 contributes approximately 50% of all vehicle movements. The International T1 contributes approximately 22% and Airport Central Skygate contributes approximately 12%.

While Brisbane Airport operates 24 hours a day, vehicle generation is typically between 4am and midnight, with the busiest period at both International T1 and Domestic T2 occurring between 5am and 8am. This corresponds with morning peak aircraft movements.

FIGURE 12.13: 2013 MODE SHARE AT AIRPORT CENTRAL SKYGATE AND AIRPORT SOUTH DA VINCI PRECINCTS

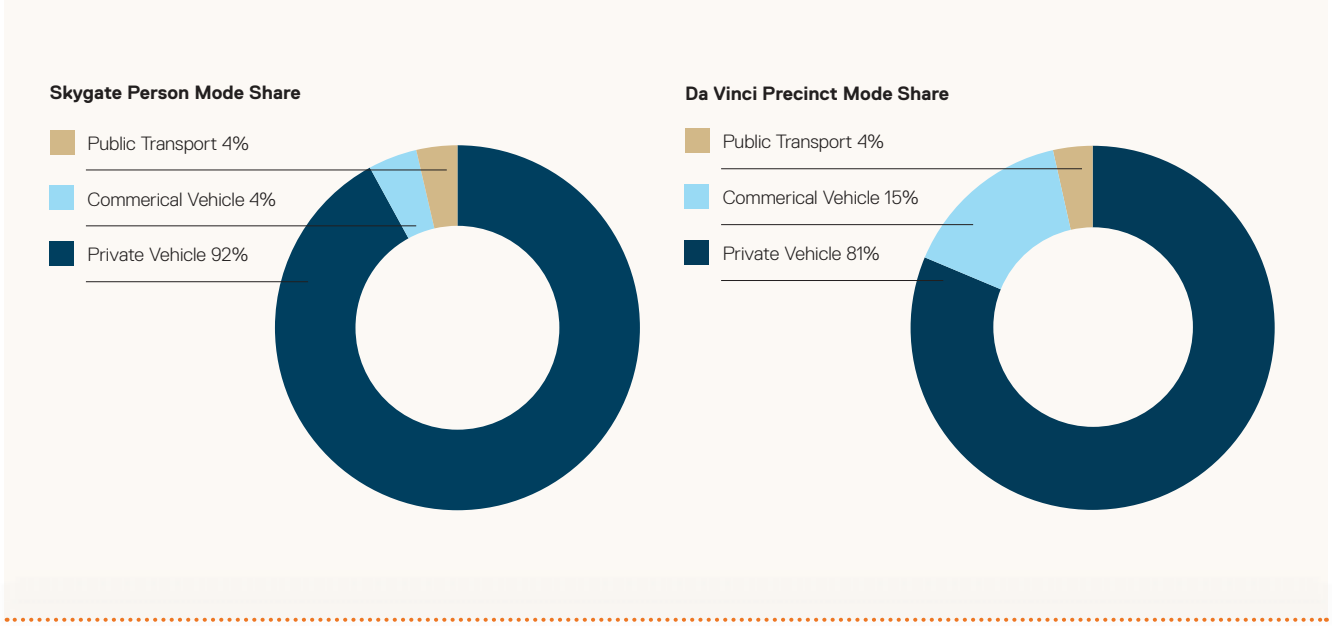
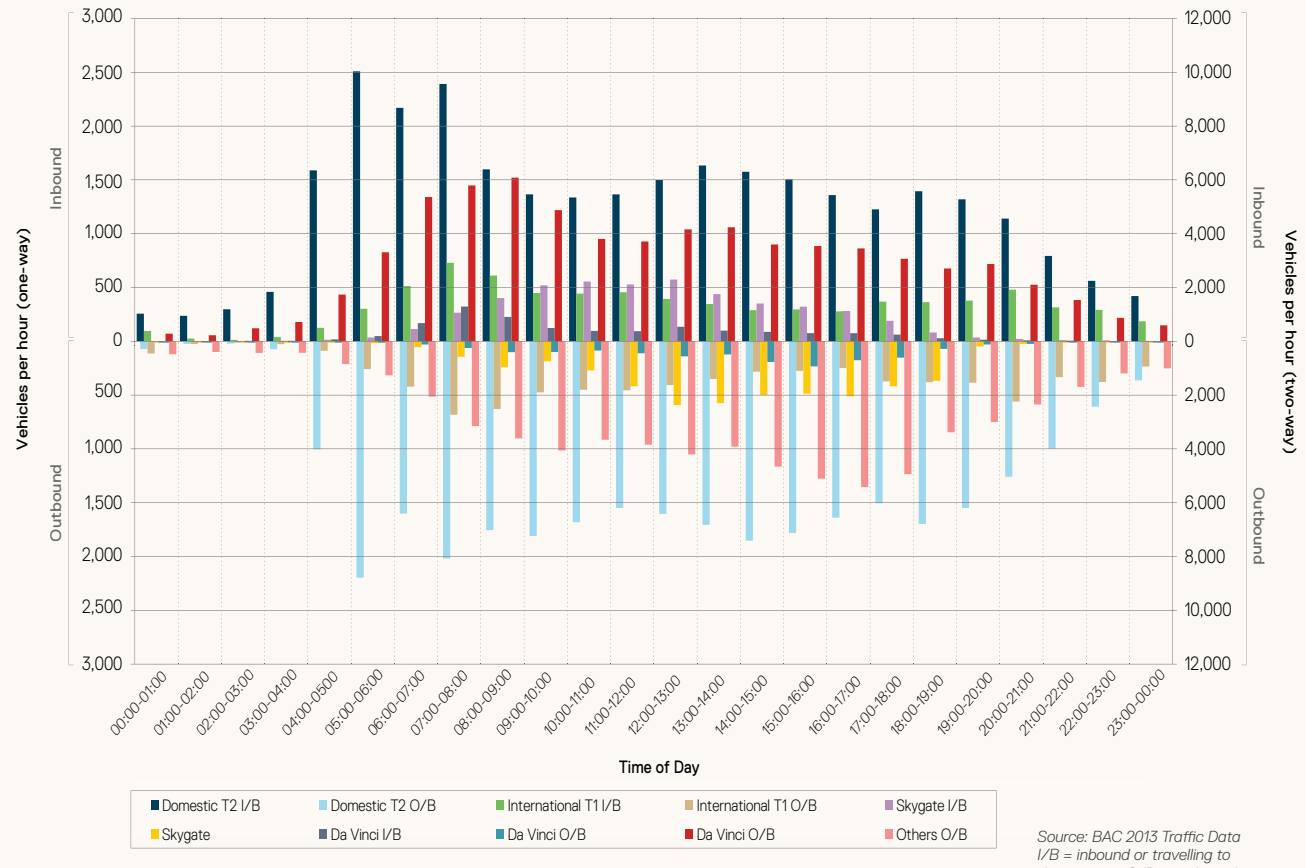


FIGURE 12.14: VEHICLE MOVEMENTS AT KEY LOCATIONS



Source: BAC 2013 Traffic Data
I/B = inbound or travelling to the precinct. O/B = outbound or travelling from the precinct.

At Airport Central Skygate, there is a build-up of vehicle arrivals between 7am and midday, with the bulk of departures occurring between midday and 6pm. The operating times of DFO are between 10am and 6pm daily which is outside the normal AM peak period.

For the other precincts there are two peak periods, between 6am and 8am for arriving trips, and between 3pm and 5pm for departing trips.

Heavy vehicle movements are largely concentrated around the industrial and maintenance areas of the airport. Typically these precincts have a 10% heavy vehicle component.

Overall, Brisbane Airport generates approximately 3,000 heavy vehicle trips per day.

DISTRIBUTION OF DEMANDS

Air passengers are often required to travel significant distances to or from Brisbane Airport. Interviews of departing passengers at both the International T1 and Domestic T2 during 2011 and 2013 showed passengers starting their journey from locations as distant as Beenleigh, Bundaberg, Byron Bay, Biloela, Charleville, Chinchilla, Coolum, Emerald, Gatton, Gladstone, Gold Coast, Ipswich, Lismore, Noosa and Toowoomba.

A detailed breakdown was produced by dividing Brisbane into 15 sectors, comprising Brisbane Airport, neighbouring suburbs, the CBD and three sectors for each of the north, south, east and west regions.

Distances travelled between home and Brisbane Airport is typically shorter for employees. Over half of airport employees live[4] within the northern catchments of Brisbane and 15% live in the eastern catchments. This shows that employees typically live reasonably close to Brisbane Airport.

Figure 12.15 shows the origins and destinations of all trips to and from Brisbane Airport[5].

Figure 12.16 shows the origins and destinations of employee trips to and from Brisbane Airport.

4 *Based on employee vehicle registration database analysis.*
5 *Based on transport modelling and Go-Card ticketing data.*

FIGURE 12.15: BRISBANE AIRPORT TRIP ORIGINS

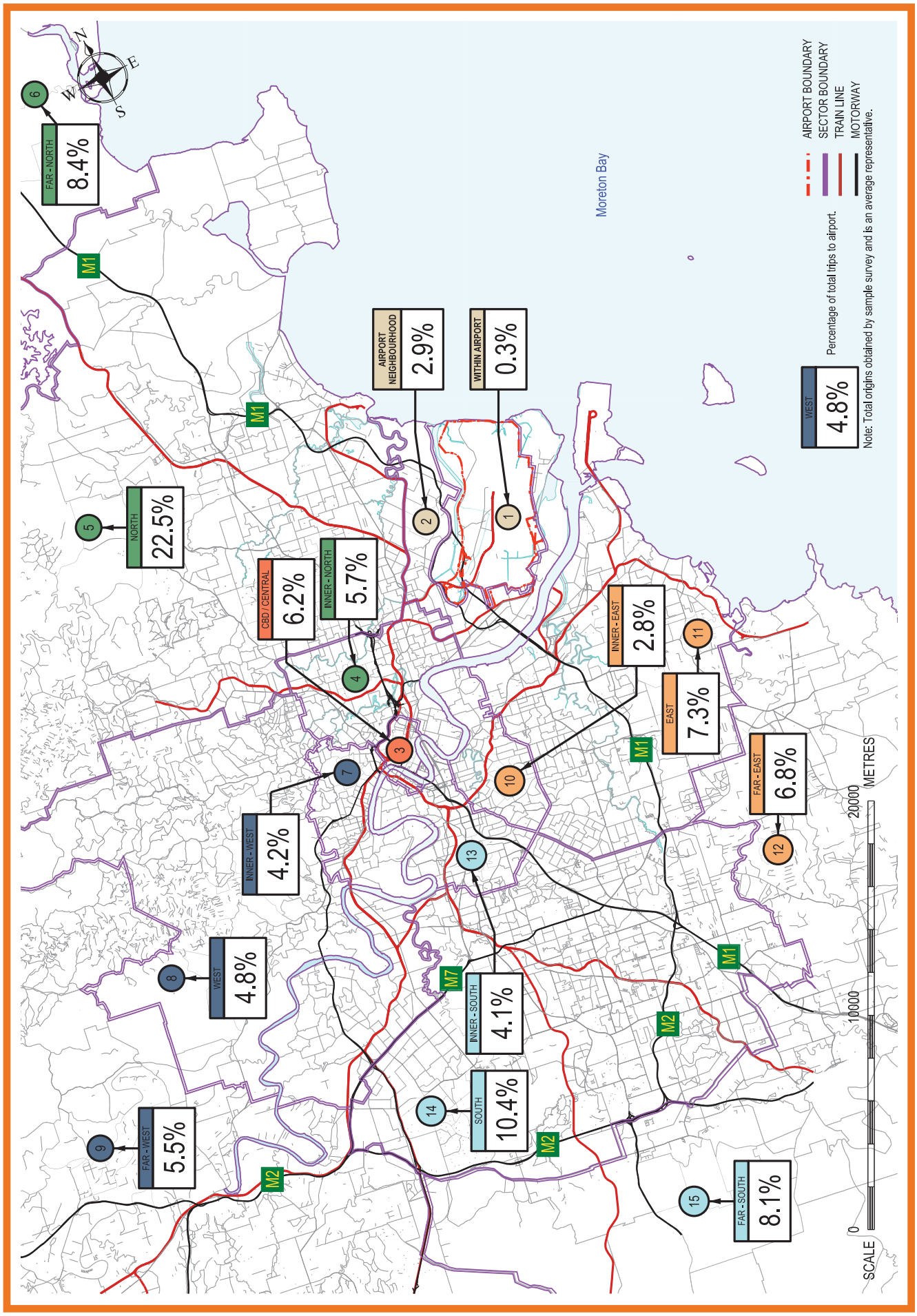
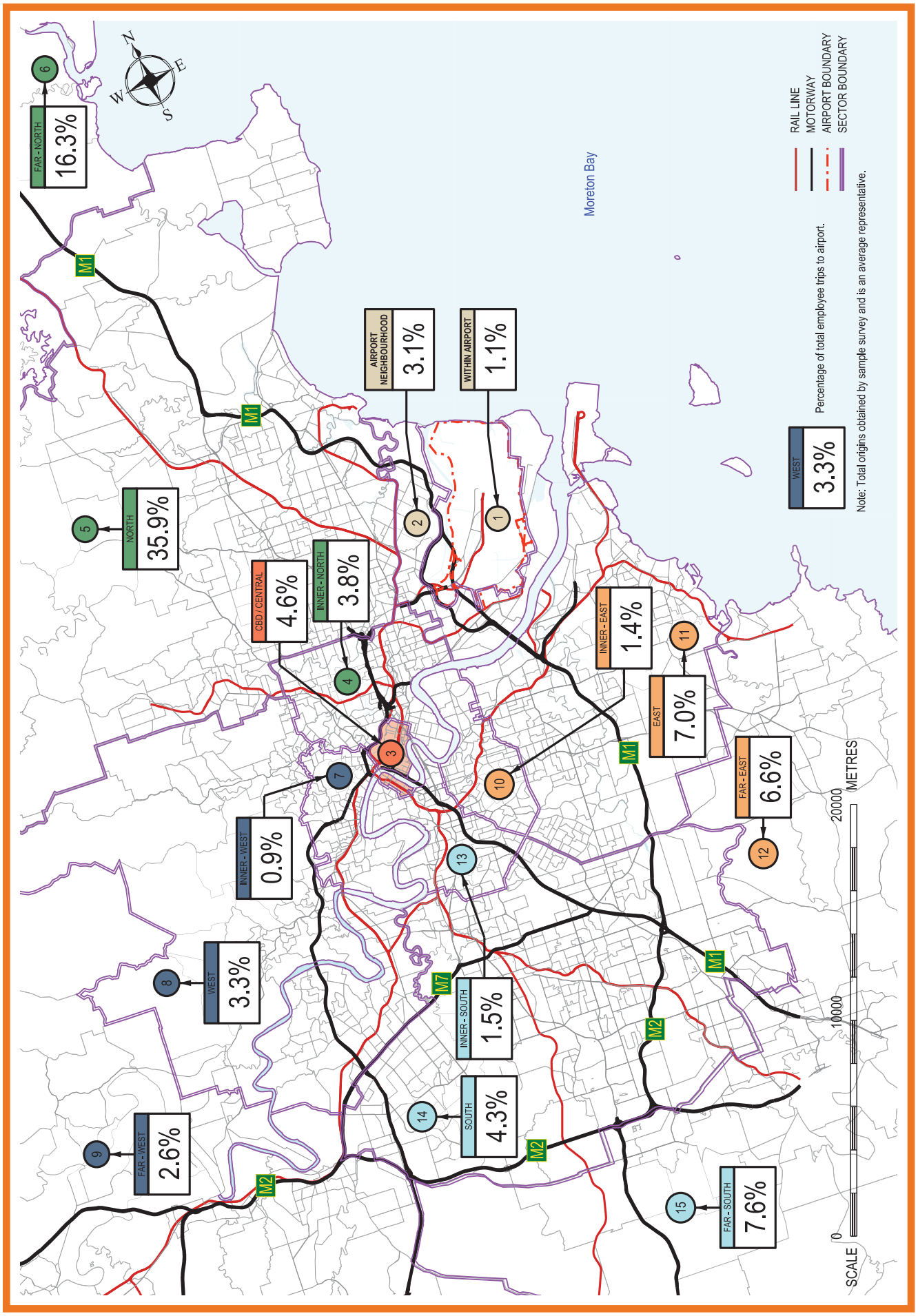


FIGURE 12.16: BRISBANE AIRPORT EMPLOYEE TRIP ORIGINS



Over a third of all trips to and from the airport are from the northern catchment, which comprises 37% of all trips. Trips from the southern catchment account for 20% of all trips, which includes trips between Brisbane Airport and the Gold Coast.

There is a direct correlation between public transport trips to and from Brisbane Airport and the availability of services. As a representation of all transport movements between Brisbane Airport and the Brisbane CBD, around 20% of these trips are via Airtrain.

Excluding terminal transfers, approximately 45% of total Airtrain trips are to and from the Brisbane CBD. A further 24% of Airtrain trips are from the far-south of Brisbane and the Gold Coast, which reflects the direct Airtrain service to the Gold Coast.

The remaining southern catchments, also offering direct Airtrain services, make up 10% of Airtrain trips. The northern and western catchments each contribute 10% of Airtrain trips. The eastern catchments combined are lower, accounting for less than 2%.

Table 12.8 summarises the public transport mode share relative to vehicle demands by catchment.

For the majority of regions where there are indirect public transport services, there is a 3% or lower mode share. There is a very low public transport usage between Brisbane Airport and eastern catchments where the majority of public transport users rely on the bus services.

Overall, the use of TransLink buses and Airtrain represents 4% of all trips at Brisbane Airport. The various catchments with higher public transport mode shares include locations served directly by Airtrain, which indicates a low desire for public transport journeys using bus or more than one mode. Spatially, this is represented as Figure 12.17 showing the average daily journeys and the number of different public transport modes chosen to access the airport.

Comparisons Between Public Transport and Private Vehicle

Passengers travelling between their homes and Brisbane Airport face significant impediments to using public transport compared to private vehicles.

Passengers travel an average 30 km distance between their home and Brisbane Airport. The average public transport journey time for this trip is one hour, compared to 30 minutes by private vehicle. However, there are significant differences between catchments.

The journey time between the Brisbane CBD and Brisbane Airport by Airtrain is comparable to a trip taken by private vehicle. In peak periods the Airtrain can be faster than private vehicle and taxi, showing that Airtrain is a viable and attractive alternative for many passengers between this catchment and the airport.

Although the largest numbers of Brisbane Airport employees live in the northern catchment, the catchment is poorly served by public transport, often requiring multiple changes. In particular the rail connection from the northern catchments require an interchange at Eagle Junction station, potentially time penalising passengers which in turn limits opportunities for rail which is otherwise realised with a direct connecting service. Locations such as Chermside and Albany Creek have a public transport journey time to the Domestic T2 of 1 hour, compared to approximately 30 minutes by private vehicle.

Public transport to and from the eastern catchment is particularly poor. For example, it takes as long to travel the 30 km between Cleveland and Brisbane Airport by train as it does for the 80 km journey by train between Nerang, close to the Gold Coast, and Brisbane Airport. The comparable private vehicle journey time from Cleveland is 40 minutes.

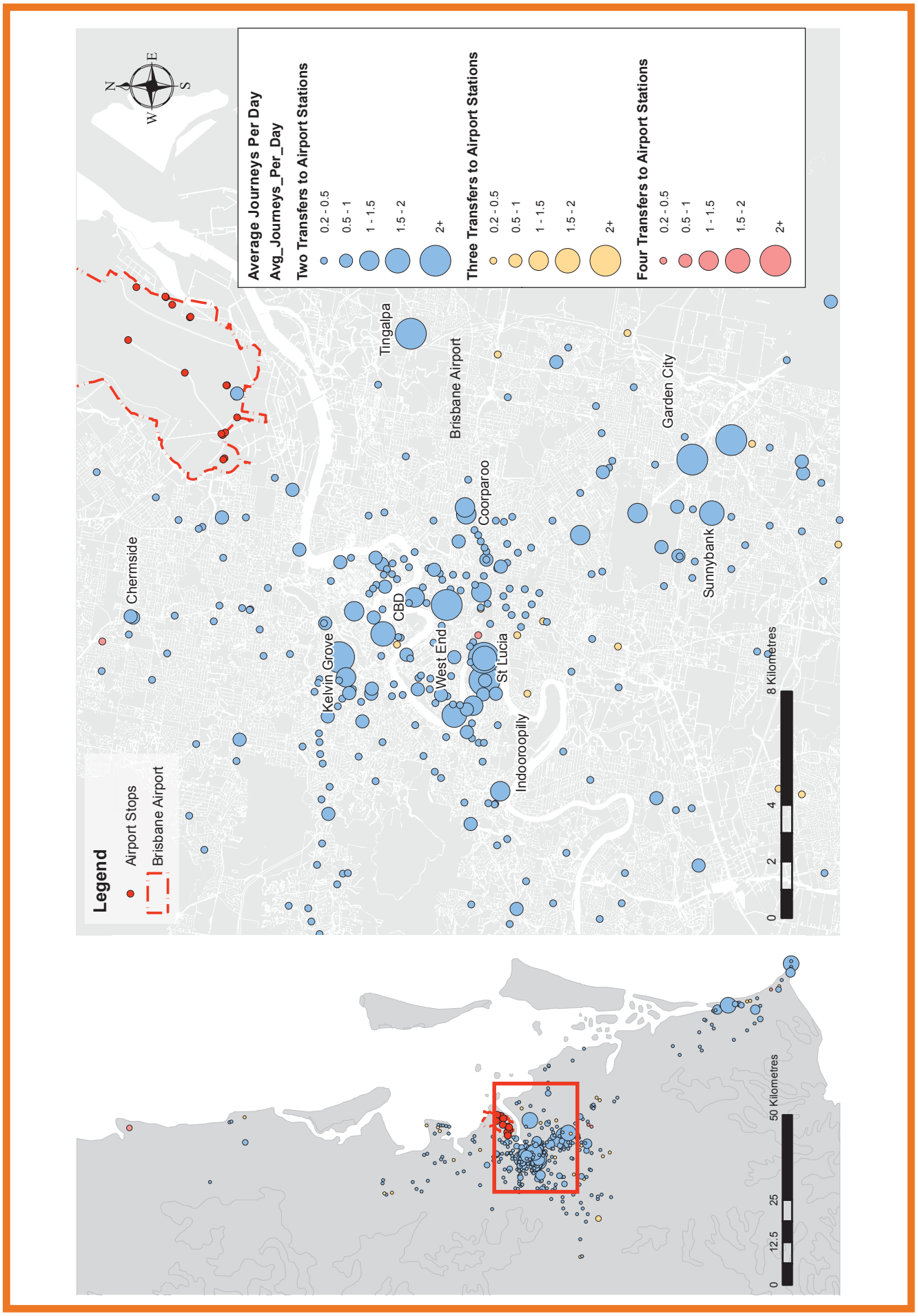
Closer to the Brisbane CBD, Bulimba is only 16 km from Brisbane Airport, but it takes approximately 1.5 hours to travel to the Domestic T2 using bus services, including at least two service changes. The comparable private vehicle journey time is 25 minutes for the 16 km distance.

Outer destinations, such as the Gold Coast, Sunshine Coast and Toowoomba, are usually catered for via shuttle services. The majority of these services operate on a fixed timetable with journey times typically between 15 to 30 minutes longer via coach than private vehicle.

TABLE 12.8: PUBLIC TRANSPORT MODE SHARE BY CATCHMENT

Location	Inner Catchment	Middle Catchment	Outer Catchment
North	2%	1%	2%
East	1%	1%	0%
South	6%	2%	12%
West	2%	3%	1%
	Within Airport	Airport Neighbourhood	CBD/Central
Public Transport (PT)	7%	2%	26%

FIGURE 12.17: PUBLIC TRANSPORT TRIP ORIGIN DISTRIBUTION



12.14 Transport Performance

CARRYING CAPACITY AND DEMAND

Brisbane Airport connects to the wider road network at Moreton Drive, Airport Drive, Sugarmill Road, Lomandra Drive and Pandanus Avenue, which cater for vehicles, taxis, buses and coaches travelling to and from the airport. These points of access are referred to collectively as the 'Brisbane Airport screen line'.

Table 12.9 summarises the daily two-way person carrying capacity and demand at the airport screen line assuming a 1,800 vehicle per hour capacity and an occupancy rate of 1.2 people per private vehicle.

People have the choice of using public transport to travel to and from Brisbane Airport between 5am and 10pm. During this time, the private vehicle capacity of the road access caters for 91.5% of the total transport capacity. The remaining 8.5% comprises Airtrain, and bus and coach services.

Total demands to and from Brisbane Airport only use up 16% of the total road network and train capacity. Even between 5am and 10pm, the demand only uses up 21% of the available person carrying capacity.

Therefore, the current overall capacity is adequate for existing demand.

Ninety percent of all vehicles and taxis use the primary access corridors of Moreton Drive and Airport Drive.

Demands for bus, coach and rail services only use up 11% of available capacity, making them underutilised compared to private vehicles and taxis, which use up 21% of available capacity during periods of public transport operations.

Passengers account for approximately 60% of all movements to and from Brisbane Airport. Passengers also contribute 85% of the total public transport demand, which equates to a 7% mode share during 5am and 10pm. Only approximately 2% of employees use public transport, emphasising their underutilisation of public transport.

ROAD NETWORK PERFORMANCE

In 2013, there were 115,000 total daily vehicles trips to and from Brisbane Airport and up to 130,000 total vehicle trips on all roads within Brisbane Airport. This is forecast to increase to 150,000 daily vehicle trips to and from Brisbane Airport in 2019 and 180,000 total vehicle trips on all roads.

Table 12.10 summarises forecast daily volumes on key roads within and surrounding the Brisbane Airport.

Table 12.11 summarises the peak volume to capacity ratios for the key roads within and surrounding Brisbane Airport, during either the morning or afternoon/evening peak periods. The volume to capacity ratio means how much of the available capacity on each road is used by the vehicle trips or demands identified in Table 12.10.

Roads with volume to capacity ratios of less than 75% are regarded as operating satisfactorily, as this allows for variances within the transport models. All roads at locations shown in Table 12.11 have volume to capacity ratios of less than 75% during 2013 peak periods, which is a significant improvement from the situation prior to completing Moreton Drive, the Gateway Upgrade Project and Airport Roundabout Upgrade.

Kingsford Smith Drive west of Nudgee Road and Sandgate Road north of East-West Arterial Road have 2013 volume to capacity ratios greater than 75% during the busy peak periods.

TABLE 12.9: AIRPORT SCREEN LINE DAILY TWO-WAY PERSON CARRYING CAPACITY AND DEMAND

Capacity and Demand Item	5am – 10pm (with public transport options)			10pm – 5am Vehicles & Taxis
	Vehicles & Taxis	Buses & Coaches	Train	
Person Carrying Capacity	612,000	14,100	43,000	242,000
Passenger Demands	75,200	990	4,590	6,410
% of Passenger Total	86%	1%	6%	7%
Employee Demands[1]	50,900	500	510	5,050
% of Employee Total	89%	1%	1%	9%
Total Person Demands	**126,100**	**1,490**	**5,100**	**11,460**

1 *Employees inclusive of terminal employees and visitors.*

TABLE 12.10: FORECAST DAILY VOLUMES ON KEY ROADS

Key Road	Location	Daily Vehicle Demands			
		2014	2019	2029	2034
Moreton Drive	West of Nancy Bird Way	66,000	71,000	94,000	94,000
Airport Drive	East of Lomandra Drive	53,000	63,000	90,000	93,000
Lomandra Drive	Between Qantas Drive and Airport Drive	13,000	13,000	17,000	17,000
Gateway Motorway	Brisbane River	124,500	164,000	198,000	206,000
Gateway Motorway	North of Southern Cross Way	71,000	93,000	95,000	96,000
Southern Cross Way	South of Airport Drive Interchange	51,000	61,000	77,000	74,000
Kingsford Smith Drive	West of Southern Cross Way	38,000	48,000	55,000	58,000
East-West Arterial	West of Airport Roundabout Flyover	90,000	100,000	114,000	125,000

Source: Brisbane Strategic Transport Model (BSTM) version 6.

TABLE 12.11: PEAK VOLUME TO CAPACITY RATIOS ON KEY ROADS

Key Road	Location	Peak Volume / Capacity Ratio			
		2014	2019	2029	2034
Moreton Drive	West of Nancy Bird Way	49%	55%	67%	65%
Airport Drive	East of Lomandra Drive	37%	45%	62%	62%
Lomandra Drive	Between Qantas Drive and Airport Drive	36%	51%	62%	68%
Gateway Motorway	Brisbane River	59%	74%	**88%**	**93%**
Gateway Motorway	North of Southern Cross Way	**77%**	**85%**	**121%**	**123%**
Southern Cross Way	South of Airport Drive Interchange	**94%**	**89%**	71%	**76%**
Kingsford Smith Drive	West of Southern Cross Way	71%	**86%**	**94%**	**100%**
East-West Arterial	West of Airport Roundabout Flyover	57%	**77%**	**86%**	**89%**

Source: Brisbane Strategic Transport Model (BSTM) version 6.

Localised road congestion, where volume to capacity ratios often exceed 75%, does exist at locations such as key intersections, terminal face roads, merges and diverges during peak periods highlighted in Table 12.11.

ROAD SAFETY

Roads within Brisbane Airport comply with local, state and Commonwealth legislation and standards, relying on the TMR guidelines.

Crashes occur on the Brisbane Airport road network as happens in all other road networks around the world. Additional factors contributing to crashes such as tiredness, lack of familiarity of roads and local laws, and signage clarity, are often accentuated at airports. Crashes have an accompanying social impact for those involved and also affect the reliability of the road network and overall airport operations.

BAC recorded 15 crashes on roads within Brisbane Airport between December 2012 and December 2013, equating to an average of one crash every 24 days.

With approximately 130,000 daily vehicle trips within the airport boundary, this equates to approximately one crash for every two million vehicle trips. Just over half of these crashes were on the primary network, with three crashes on Moreton Drive and three crashes on Airport Drive. The majority of these crashes resulted in minor personal injuries.

These recorded crashes do not account for crashes that occur on roads immediately outside the Brisbane Airport. Likewise, they do not account for crashes on roads outside of Brisbane Airport involving individuals travelling to and from Brisbane Airport.

Compared to the Queensland road average of 0.05 fatalities per 100 million vehicle kilometres travelled, the equivalent ratio on airport roads is significantly less, estimated as less than 0.00001.

12.15 The Transport Strategy

The key drivers and issues for Brisbane Airport's transport strategy, which informed the development of the 10 initiatives and 56 associated programs contained within the GTP, are summarised as follows.

LAND DEVELOPMENT AND AIRPORT OPERATIONS

The land development and airport operations issues, drivers and opportunities are as follows:

- **Development and growth:** Brisbane Airport and the wider area are developing as major industry and employment hubs. Projected growth will have significant impacts on the transport network
- **Airport operations:** Brisbane Airport is curfew-free and operates 24 hours, seven days a week
- **Brisbane Airport precincts:** There are defined development precincts, extending over the whole airport site
- **Airport development:** Alignment with the adjoining land uses outside Brisbane Airport will ensure integration with like activities and associated traffic generation
- **Land use integration:** Opportunities to integrate with off and on airport transport nodes with frequent quality public transport connectors need to be explored.

ROAD NETWORK

The road network issues, drivers and opportunities are as follows:

- **Private vehicle dominance:** Car-based transport is the dominant choice of transport. Private vehicle mode share is 72% at the International T1 and 59% at the Domestic T2.

  For the other precincts, the private vehicle mode share is typically 98% to 99% with the exception of Airport Central Skygate and Airport South Da Vinci precincts. Many employees working in the industrial precincts work shift hours and rely on private vehicles for travel to work
- **Safety:** Road safety on the Brisbane Airport road network is a key issue for BAC. Illegal parking, unfamiliar drivers, high speed environments along major roads contribute to vehicle crashes
- **Signage:** The road network on and off the airport is used by many different markets of passengers and employees. Legibility is crucial, particularly for visitors unfamiliar with the road network
- **Connectivity:** Brisbane Airport is well connected by a road network that supports its operations, and AirportlinkM7 including the extension through to Legacy Way (as the last component). The Legacy Way will connect the Western Freeway at Toowong to the Inner City Bypass at Kelvin Grove. However, there are missing long-term links, such as the Toombul Road extension and the Western connection from Airport West to the Gateway Motorway or Southern Cross Way. Future land development is planned to the north of the terminals, and road access to these areas needs to be addressed

Artwork facade on new multi-level car park at Domestic T2

- **Airport operations and peak periods:** The morning peak period at Brisbane Airport is between 5am and 7am, corresponding with employees and passengers arriving for the first departing flights of the day
- **Controls:** The road network in the wider Brisbane Airport area is controlled and planned by BAC, TMR, and BCC. This may create challenges for achieving planning consistency and integration
- **External capacity issues:** Kingsford Smith Drive and Sandgate Road and Toombul Road operate under congested conditions during peak periods
- **Internal capacity issues:** Some intersections experience congestion during peak periods. Intersections such as Main Myrtletown Road and Lomandra Drive are in need of improvements to address safety and intersection capacity
- **Terminal Precincts:** There has been considerable growth in domestic and international passenger numbers. Increased activity has placed additional pressure on traffic circulation at the pick-up and taxi areas of the Domestic T2
- **Road Freight:** The Gateway Motorway is a Priority 1 Freight Route. Airport Drive and the Kingsford Smith Drive-Eagle Farm Road-Main Myrtletown Road corridor are routes for freight movements.

PUBLIC TRANSPORT

The public transport issues, drivers and opportunities are as follows:

- **Rail mode share:** The total rail mode share for Brisbane Airport is low, but with plenty of system capacity
- **Bus mode share:** The total bus mode share inclusive of mini-buses across airport is low, but can be increased if supported by new Translink and private operator services
- **Airtrain services:** Airport operations are 24 hours, with the last domestic flights leaving at 11pm. Many employees are shift workers and arrive early in the morning or late at night for scheduled flights. The Airtrain services commence after or finish before Brisbane Airport shift workers and passengers arrive or depart for early and late flights. Service frequencies are also low at off-peak times
- **Brisbane Airport Rail Link Contract:** The BARL contract runs until 2036 and restricts public transport service improvements. The contract needs clarification to ensure public transport proposals do not violate the contract
- **Public bus network coverage:** There are no public buses currently serving the terminals. Only Airport South Da Vinci, Export Park, and Airport Central Skygate are served by TransLink services by direct stop access or walk up catchment. This results in a low mode share, which cannot be increased without providing more attractive services
- **Bus Timetables:** Bus service operating hours may not meet the needs of employees and passengers, particularly shift workers starting work early or finishing late. Schedules also reveal low service frequencies and very low weekend services. Several routes do not operate on Sundays
- **Taxi services:** On-going effective kerbside management to minimise dwell times for taxis and maximise occupancy will still be required
- **Connections to wider Brisbane:** Catchments such as the north and east, where the majority of airport employees reside, have poor public transport connections
- **Information:** Real-time information for Airtrain departures needs to be displayed at key decision points in the terminals to promote the service.

1 Road and rail are two major forms of accessiblity at Brisbane Airport.

2 Airtrain arrives at Brisbane Airport station.

1

2

Bridge to the East West Arterial

TRANSPORT SERVICES FOR AIRPORT EMPLOYEES

The employee transport services issues, drivers and opportunities are as follows:

- **Public transport mode share:** The Airport Central Skygate public transport mode share is 4% and the Airport South Da Vinci precinct public transport mode share is 4%. For other precincts the public transport mode share is less than 1%
- **Transport options:** Typically employees choose private vehicles to travel to the airport, with this mode representing up to 99% of all trips made. Employees, especially shift workers, have limited transport options other than private vehicle
- **Employee parking:** The employee car park is located at the International T1 with the S-Bus running services every 10 minutes between the car park and the Domestic T2. The existing fleet size restricts the ability to increase frequency.

ACTIVE TRANSPORT NETWORK

The active transport issues, drivers and opportunities are as follows:

- **Mode share:** Walking and cycling represent less that 1% of all movements at Brisbane Airport. There are opportunities to make cycling more attractive for employees
- **Missing links:** There are gaps in the walking and cycling network. The internal network needs to be completed and connected to the external network
- **Infrastructure:** The number of heavy vehicles using the Brisbane Airport road network and the distances between precincts on the airport may discourage active transport users. This can be countered by providing active transport infrastructure with high quality surfaces and lighting for personal security
- **End-of-trip facilities:** Cyclists require secure cycle parking, showers and lockers at key locations to encourage cycling as a mode for commuting to work
- **Pedestrian facilities:** Providing good internal pedestrian linkages between key public transport interchanges, employment areas and activity nodes can encourage walking for short intra-precinct trips
- **Cycle/public transport integration:** There may be opportunities to improve integration between cycling and public transport by providing cycle parking facilities at transport interchanges.

TRANSPORT AND LAND USE FIVE YEAR INTEGRATION STRATEGY

In the next five years responding to an expanding workforce and passenger numbers, BAC will employ additional measures to supplement the current opportunities to integrate land use and transport or introduce new services and products that promote alternative choices of transport in airport journeys. These initiatives include:

- Continuation of the pedestrian and cycle network linked to activity centres and development nodes
- Investigation to expand the on airport bus services (T-Bus and S-Bus) to connect with rail interchange points and extending across airport to development areas
- Investigate opportunities with the state and BCC to extend bus services to the terminals and increase services across airport key development nodes Airport Central (Skygate)
- Consolidation of parking sites in precincts, connected by walking and cycling paths through to developments
- Development of sites which contain end of trip facilities either communal or integrated into the building design

- Planning of a Mass Transit System (MTS) connecting terminals and central parking sites, then extending beyond to include Skygate which would encourage communal parking principles
- Conceptual development and integration design for a third rail station at Skygate linking pedestrian paths and bus transfer stops
- Land reservations for additional bus and rail interchange, plus corridors to benefit future road connections.

Post-2019 Integration Strategy

In the next 20 years and supplementary to the five-year strategy, developments will continue to introduce new opportunities for how the transport network can respond to meet the forecast employment and passenger numbers. Accordingly the strategy adopted post-2019 will be extended to complement those in play at the time.

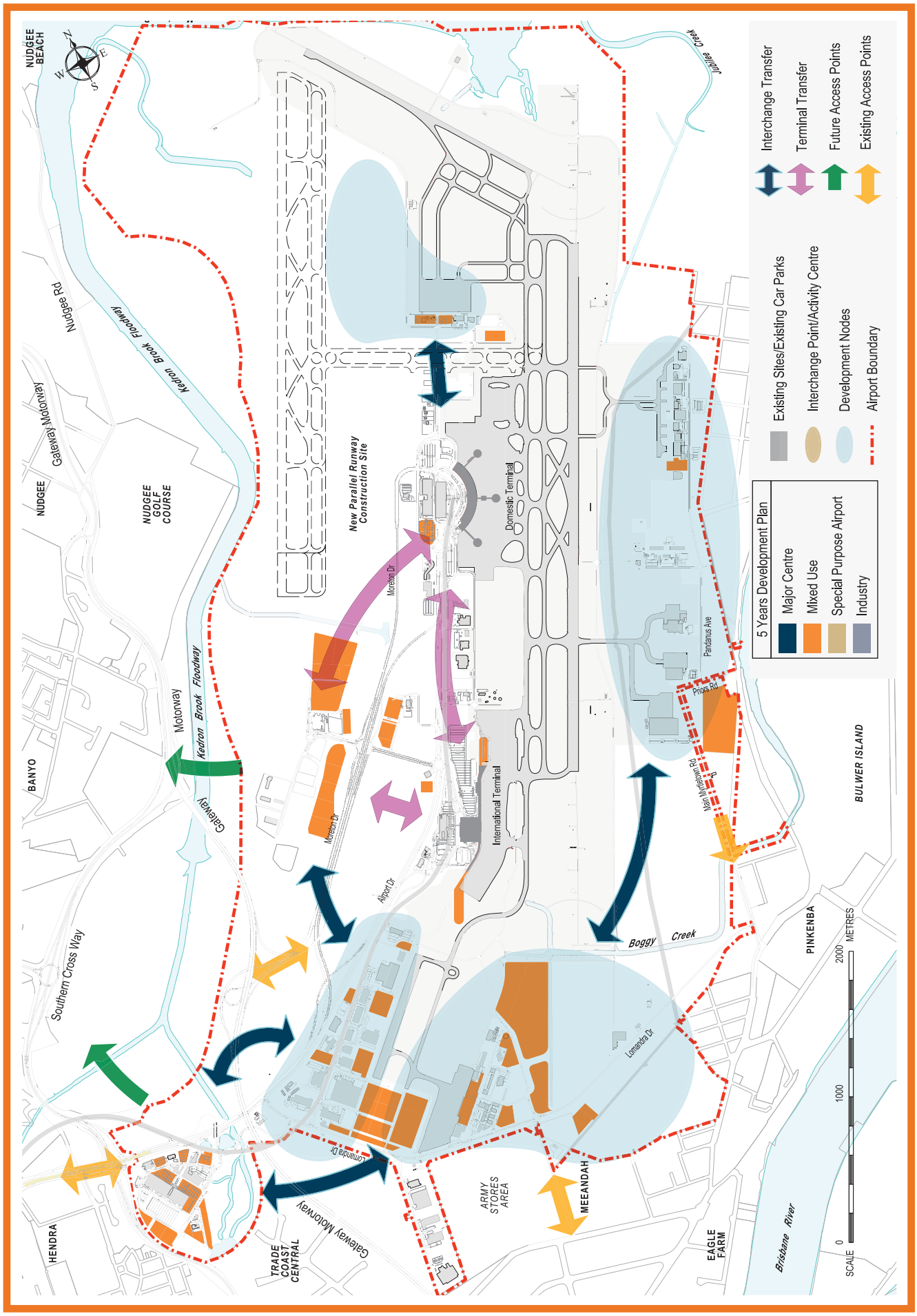
Expected initiatives that can be planned and are likely to be considered include:

- A high frequency and quality MTS which will connect terminals with Airport Central and Airport West with a spur line connecting through to Skygate
- Interconnecting bus services from the MTS or rail stations which provide frequent services taking passengers and employees to non-rail or MTS-serviced precincts such as Airport East, Airport South and Airport North
- Consolidated parking sites at activity nodes which link to bus and rail services reducing car dependency on the airports key arterial roads
- An extensive cycle and pedestrian network connecting to off airport paths and connect to end of trip facilities located in buildings and precincts on airport
- A cycle use scheme that allows employees and travellers to use the on airport cycle path network and journey between precincts rather than rely on car dependency. This would be extended to include connections between place of parking to place of employment
- Development controls which compliment a shift in public transport uptake whilst reducing parking arrangements at for example commercial office developments
- A transport interchange located centrally on airport that supports the International T1 and Domestic T2. The interchange would reduce vehicle dependency at the Domestic T2 and will be connected by a high frequency MTS
- Land reservations for additional bus and rail interchange, plus corridors to benefit future road connections.

Figure 12.18 represents the transport network integration plan.

Taxi holding area at Central Parking Area

FIGURE 12.18: TRANSPORT LAND USE INTEGRATION STRATEGY



MASS TRANSIT SYSTEM (MTS)

Increasing ground transport demand will require smart, functional future solutions. With private vehicle use continuing as the preferred mode based on convenience and accessibility, managing demands to terminal areas will be challenging.

Several investigations of local and international people mover systems were completed for this Master Plan which included heavy gauge rail, light rail, monorail, guided and pneumatic tyre track options.

Of the options considered, those including guided and pneumatic tyre track systems were determined to be the most favoured based on their ability to address a suite of design variables, including person carrying capacity and constructability. Whilst these have been identified as the most favourable, future investigations will inform the optimal solution, with all other systems considered based on suitability and technology changes at the time.

Conceptual System Design

Options for transporting persons between terminals and major parking facilities such as the CPA considered criteria such as the ability to carry a large number of passengers, automated operations, passenger comfort at both stations and during the journey, and frequency including journey times between stations.

An MTS addresses many of the above criteria with confirmation that it is capable of moving mass, has the flexibility to interface existing and new infrastructure at stations, can accommodate a variety of vehicle and track types and meets the operational and maintenance requirements that will enable the system to operate relatively unconstrained. In general, the track alignment is a closed loop design.

1

2

1, 2 Artist's impressions of an MTS, which is being considered for Brisbane Airport.

As a staged delivery and operational system, the MTS would address the key passenger transfer points in a first delivery stage, with the ability to expand to other parts of the airport without disrupting established operations. During the MTS investigation phase, forecast demand data identified that the first stage would likely connect the International T1 and Domestic T2 terminals with the centralised parking facilities and the CPA or the transport interchange.

The MTS would consist of a single or dual track, circulating between the International T1, Domestic T2, and CPA, with stations at those sites and expansion opportunities for additional stations based on future demand requirements. Due to existing site constraints, the track design would be predominately elevated.

Subject to the vehicle selected, the system could be capable of handling up to 3,200 passengers per hour per direction with headways of less than five minutes. This would address the estimated terminal to precinct transfer demands beyond 2034.

Station design would be integrated with the terminals and would include safety design measures such as automated vehicle and platform doors, cameras and access provisions for mobility impaired passengers.

At sites away from the terminals, the station design criteria would be similar in function with localised design modifications to meet the passenger needs for the site.

The system design would include a maintenance and storage facility and an operations room located nominally in the CPA, however with the flexibility to enable those activities in other areas within close proximity to the track.

Subject to terminal development, the system will have the ability to split into an airside only line with the intent of connecting the International T1 with remote piers.

Providing an interface point with a transport interchange will allow the flexibility of supporting the early bag store facility by optioning the system to run either a stand-alone bag only vehicle or converting one carriage within the vehicle as a bag priority carriage.

As an option, the MTS could be expanded to connect the Airport Central precinct catering for the demands from terminals and remote parking facilities to the retail, entertainment and commercial centres of airport.

Benchmarked against other international airports, has suggested that airports facilitating passenger movements of around 37 to 50 million per annum have an MTS connecting terminals and other supporting developments such as remote parking and transport interchanges.

PARKING STRATEGY

Since the 2009 Master Plan, BAC has delivered several parking products that have improved terminal access and provided greater capacity including:

- CPA car rental facility sites
- CPA taxi and Ground Transport Operator (GTO) staging area
- Domestic T2 multi-level car park
- Delivery of car parks as part of property developments
- Re-marking of the International T1 open air car park to gain extra bays
- Re-allocating the open air car parks at the Qantas end of the Domestic T2 for staff and contractor parking
- Delivered lots in the CPA to permit re-location of car rental operators from Dryandra Road.

The popularity of airport parking has allowed BAC to offer a variety of additional services for passengers including valet, premium, guaranteed bays, long- and short-term and car washing. These offerings also benefit car park operations by enabling pro-active management of expected demands.

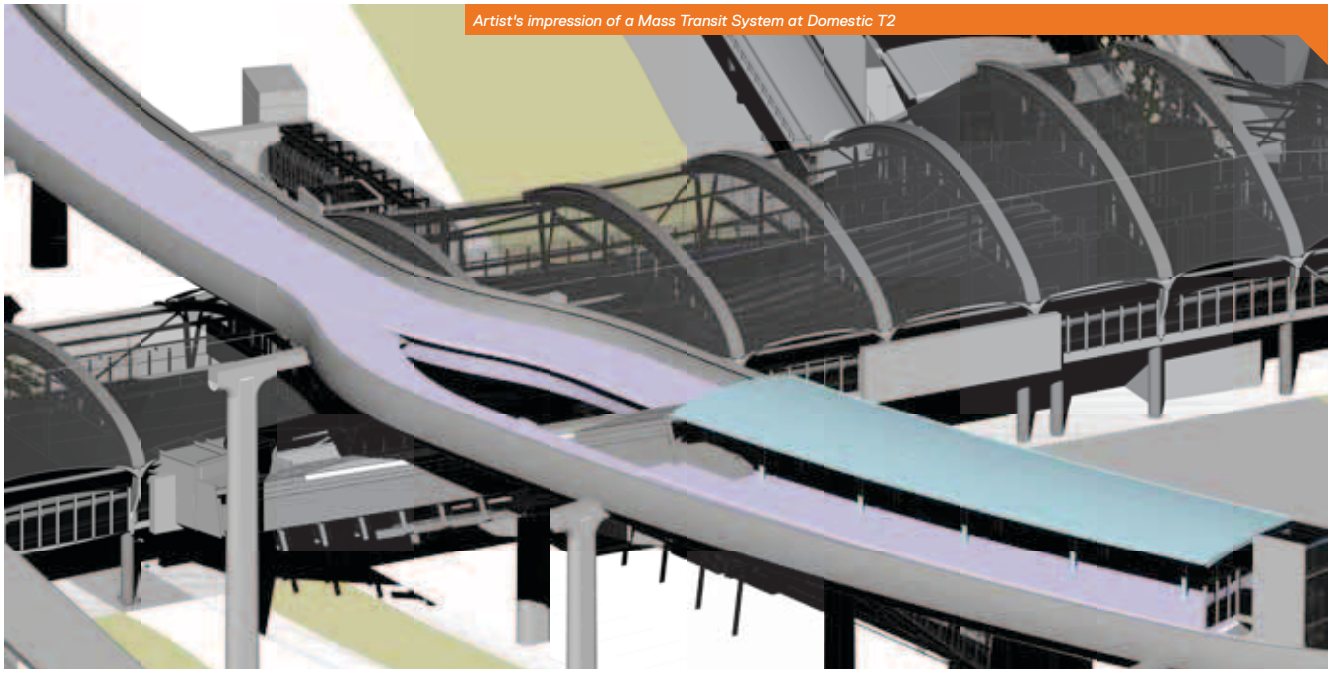
In 2012, BAC completed construction of the P1 multi-level Domestic T2 car park, coupled with a significant change to the terminal face roads which introduced greater kerbside and lane capacity for GTO's, public pick up and drop off, limousines, taxis and scheduled bus services.

To maximise the kerbside length for public drop off and therefore increasing overall road capacity, changes at the terminal roads included re-locating free public pick up to an area south of the P2 multi-level car park off Dryandra Road. This dedicated facility, which is a standard product offering at international airports, provided a 20-minute free dwell period in a secure 225 bay car park.

Surveys conducted during the initial operating period indicated the product was not well supported by the public, and free public pick up has since been offered in both this public pick up waiting area and kerbside at the Domestic T2 roads.

Five-Year Parking Strategy

The 2013 transport mode share survey completed for the Master Plan provided valuable information, guiding the structure of the five-year parking strategy. Aligned with the GTP, property development plan and the terminal development strategy, the parking plan adopts initiatives that encourage an education in private vehicle dependency but maintaining a focus on the growth in shareholder value that the parking business brings.



Artist's impression of a Mass Transit System at Domestic T2

In developing the parking strategy, transport, land use and terminal development considers how parking as a mode, would grow and integrate with airport operations. Accordingly, the parking strategy considers how the transport network can align with parking facilities, passenger and staff transport options. Figure 12.19 presents key features of the five year parking strategy at Brisbane Airport.

In the period 2014 to 2019, BAC will continue to grow the parking business and will require new developments to maintain on-site parking in accordance with the ratios adopted by BAC's Development Control Document (DCD). Projects or developments that will evolve in the period from 2014 to 2019 include:

- Construction of a remote staff parking facility in Airport West CPA, connected by high frequency bus services between International T1 and Domestic T2
- Construction of a remote public parking facility in Airport West – CPA as an alternative to the terminal parking products which is connected by high frequency bus services between International T1 and Domestic T2
- Re-configuration of the International T1 staff parking area as a result of apron expansion
- Introduction of a bus shuttle service connecting Domestic T2, CPA and the Charter Terminal located in Airport North through consolidating parking for that facility at Domestic T2 and CPA
- Relocation of the over height vehicles to west of P2 multi-level car park as a result of lost area of the over-height vehicle area by hotel developments
- Initiatives such as travel smart plans offering employees direct access to information which would inform an alternate method of travel to work
- On gradual uptake of active, public transport or other mode share initiatives, reduction of the parking ratios in mass development areas to reduce private vehicle dependency
- Construction of a multi-level parking facility in Skygate to support retail and commercial developments
- Construction of staff car parks to support developments in Airport Central and Airport East
- Introducing a valet service at International T1 car park
- Expansion of taxi and GTO staging facilities in CPA and taxi and GTO intermediate storage areas at International T1 and Domestic T2
- Development of a centralised valet facility within the CPA.

Parking Strategy Post-2019

After 2019, it is expected that the parking options will continue to grow in alignment with demands. It is anticipated that the offering provided to public and employees will include:

- Additional multi-level car parks located at International T1 and Domestic T2 with a range of products inclusive of valet, priority and publically accessible area to facilitate drop off and pick up
- A transport interchange located in Airport Central to facilitate short and long term parking, drop off and pick up areas and act as a central parking facility with supporting retail and commercial developments
- Reduced dependency on roads at the face of the terminals, facilitated by a combination of products within CPA, the transport interchange and the high frequency MTS link
- Extended use of the CPA in Airport West for staff parking, public remote parking, rental vehicle maintenance and operational facilities and ground transport holding sites
- Connecting terminals to the CPA via a high frequency MTS
- Concentration of parking sites in precincts by either at-grade or multi-level car parks to support a reduction of building site parking ratios
- Expansion of taxi and GTO staging facilities in CPA and taxi and GTO intermediate storage areas at International T1 and Domestic T2.

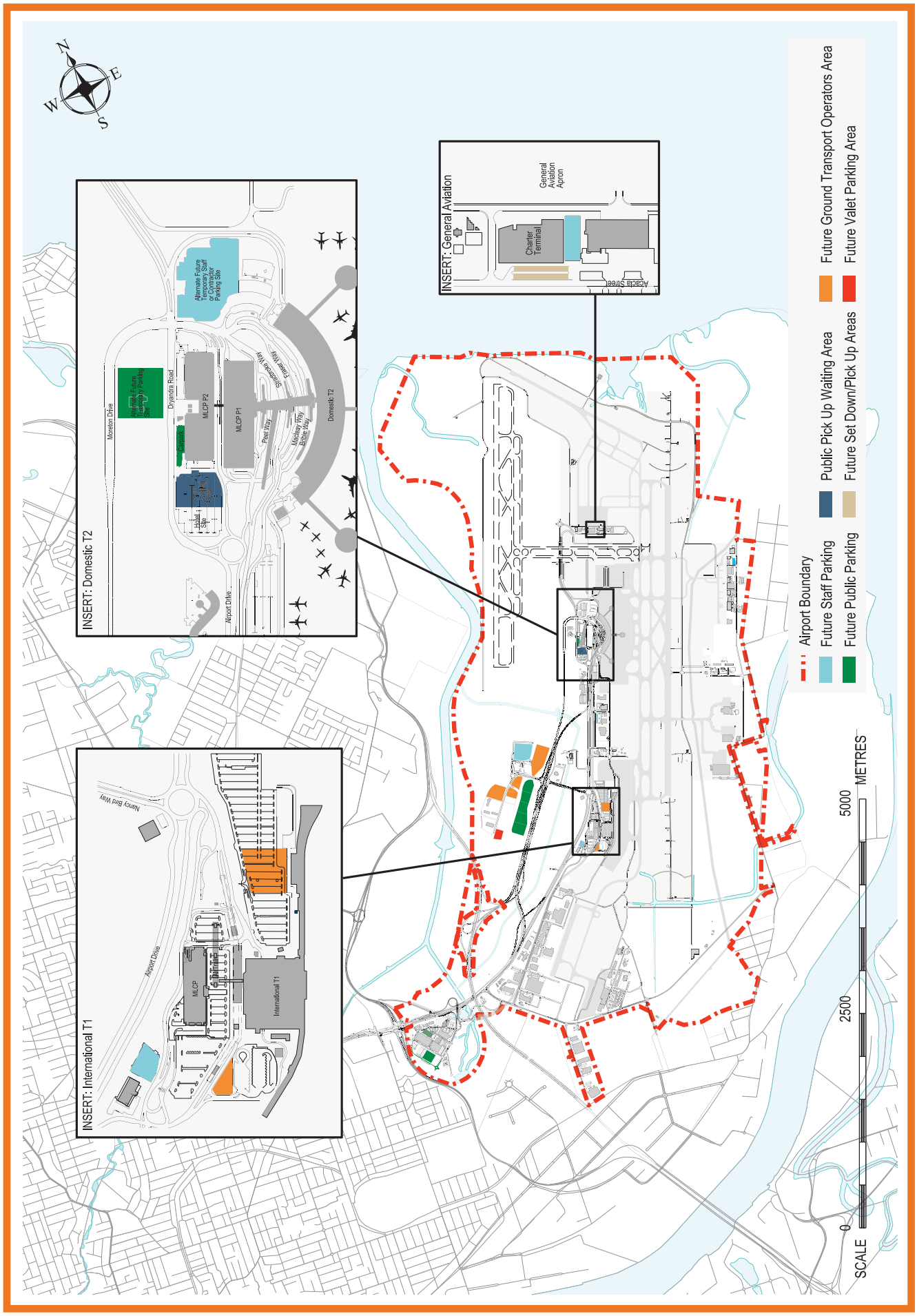
Public-Pick Up Strategy – Domestic T2

The next five to seven years will see a transition of the Public Pick Up (PPU) product toward a dedicated facility area. Initially the PPU product will continue to operate as a combination of offerings on the terminal roads and the PPU waiting area off Dryandra Road. Whilst the Dryandra Road facility is presently under-utilised, it does offer a facility for the public to leave their vehicle unattended to greet passengers.

Based on detailed analysis, it is expected the current arrangements at the terminal roads will continue to operate close to capacity in the peak hours, however ongoing kerbside management is integral to maintaining kerbside dwell times to an absolute minimum. In the next five years, the following transitionary changes are proposed:

- Maintain operations kerbside for PPU with the PPU waiting area remaining in operation
- Construction of a dedicated travelator from the Skywalk servicing the PPU waiting area and hotel development
- Commence introduction of pick up options within the car parks by time limitation rather than space allocation
- Maintain public drop off in both the PPU waiting area and kerbside on the dedicated public road.

FIGURE 12.19: FIVE-YEAR PARKING STRATEGY



At or around the five-year period, and subject to ongoing performance analysis, additional infrastructure build options may be considered to manage terminal face congestion, which include:

- Extend kerb length of the drop off and pick up road as a result of terminal expansion to increase capacity
- Construction of a new combined product facility off Dryandra Road with a dedicated, direct and high quality walkway through to the site
- Maintain public drop off in both the PPU waiting area and kerbside on the dedicated public road.

Public Pick-Up and Drop-Off Strategy – International T1

Over the next five years, the public pick up and drop off arrangements at International T1 will remain. An arrangement similar to that at the Domestic T2 for public waiting areas will be considered in the future.

Post 2019, kerbside drop-off and pick-up will benefit from the transport interchange where direct road access in front of International T1 will be relocated away to a dedicated road providing greater capacity.

12.16 About the Programs

Since the 2012 GTP, BAC has actively engaged with the agencies and delivered on several of the programs identified at that time. These programs from their respective initiatives are shown in Table 12.12.

TABLE 12.12: GTP PROGRAMS DELIVERED TO DATE

Initiative	Program	Descriptor	Comments
1	Ron 1	Undertake annual traffic counts on the BAC road network and yearly performance reporting in line with TMR standards	BAC has integrated with the SEQ Streams merge project initiated by TMR. BAC is now developing regular reporting, which is shared with the State.
1	Ron 4	Upgrade the Qantas Drive / Lomandra Drive intersection	This $7.6m intersection capacity improvement was completed in 2013 and has improved the flow of traffic from Airport Drive to Lomandra Drive and Qantas Drive.
1	Ron 5	Provide an off-ramp from Moreton Drive to Nancy Bird Way	This $3.6m ramp construction completed in 2014 provides direct access from Moreton Drive to Nancy Bird Way when travelling from the Domestic T2.
1	Ron 11	Review operations at the Domestic T2 to separate taxis and drop-off/pick-up traffic, and consolidate rental car operations	As part of the Domestic T2 projects, this was achieved through investment of up to $43m that included road works at the terminal segregating taxis, pedestrians, buses and drop off and pick up movements.
3	Pa1	Develop a parking strategy, including options for long-term remote parking	Included as part of this Master Plan.
4	Ra4	Investigate the initiatives required to deliver a new rail station at Skygate with a bus-rail interchange	Refer to comments on following pages.
5	Tb1	Provide real-time information at key airport bus stops	BAC has worked with BCC to deliver real time tracking information delivered at bus stops in Airport Central Skygate.
5	Tb4	Implement new bus services, new bus stops and undertake a review of existing bus routes	Refer to comments on following pages.
7	At2	Provide connections between the external active transport network and on airport facilities, such as to the Kedron Brook bikeway	Refer to comments on following pages.
8	Inf1	Undertake a review of road signs around the airport to ensure clear information to drivers	This program was completed in 2013 with an ongoing roll out of sign replacement and augmentation continuing.
10	Emp1	Develop a TravelSmart plan for airport employees to promote alternative, with viable means of access to work	Refer to comments on following pages.

Whilst the majority of programs listed in Table 12.12 have been addressed, several have commenced or have been delivered in part whilst others had not secured full agreement with relevant agencies.

Ra4: Several studies have been jointly progressed by the state, Airtrain and BAC, however all have determined that the investment in a third rail station is not yet viable. In partnership approach, BAC will continue to engage with Airtrain and the state on this project.

Tb4: In 2012 BAC and 2013 BAC invested in bus stops and infrastructure to support new services introduced to the airport. In 2013, BCC through its bus route review of its contracted area operated by Brisbane Transport, reduced services to Brisbane Airport. Negotiations are continuing with the agencies to seek alternative services to supplement the public transport offering shortfall across and adjacent to airport.

At2: BCC has delivered the Kedron Brook Floodway cycle bridge linking the Kedron Brook bikeway to airport. BAC has provided connections to this bikeway, however BCC is still negotiating for a second connection to the south of the airport with Trade Coast Central.

Emp1: As the state TravelSmart group no longer exists, BAC is currently initiating similar travel behavioural change programs through a state-initiated program supported by Queensland Health.

Reflective of progress since the 2012 version of the GTP and the outcomes of agency discussions, Table 12.13 sets out the programs that will be undertaken during the term of the GTP. The programs have been separated by the proposed timeline for implementation.

References to timeframes are:

- Short: 2014 – 2019
- Medium: 2019 – 2024
- Long: 2024 – 2029
- Ultimate: 2029 – 2034

TABLE 12.13: PROGRAMS TO BE UNDERTAKEN DURING THE TERM OF THE GTP

Initiative 1: Improve the on-airport road network (Ron)

Initiative 1 aims to improve the internal road network at Brisbane Airport by resolving issues relating to road capacity, safety, traffic circulation and connectivity. Programs include:

Program	Description	Timeframe
Ron1	Undertake annual traffic counts on the BAC road network and yearly performance reporting of the road network in line with TMR standards	Short
Ron2	Plan and preserve the Toombul Road connection from Skygate north	Ultimate
Ron3	Upgrade the intersection at Main Myrtletown Road and Eagle Farm Road	Long
Ron6	Develop a safety action plan to regularly review road safety, particularly at intersections	Short
Ron7	Upgrade Moreton Drive to provide additional lanes	Medium
Ron8	Upgrade Lomandra Drive, including widening, duplication and intersection improvements	Short/Medium
Ron9	Re-align Airport Drive	Medium
Ron10	Grade separate the Lomandra Drive / Airport Drive intersection	Medium
Ron12	Plan and preserve a corridor for Western connection from CPA to Gateway Motorway North or Southern Cross Way	Short
Ron13	Develop an incident reporting system and integrate with TMR system	Short
Ron14	Upgrade the Domestic T2 roundabout	Short
Ron15	Realignment of Dryandra Road to Airport North	Short/Medium

Implementation of the programs to support Initiative 1 will assist to:

- Increase road capacity
- Cater for future growth at Brisbane Airport
- Improve efficiency of the road network
- Provide alternative access routes, in the long-term offering greater redundancy in the road network
- Improve road safety
- Improve circulation and traffic operations
- Integrate with wider Brisbane incident response systems, reduce incident response times and improve coordination.

Initiative 2: Improve the off-airport road network (Rof)

Initiative 2 aims to address road capacity and connectivity issues on the external road network providing access between Brisbane Airport and neighbouring areas.

The table below identifies the programs to achieve the objectives of Initiative 2. Planning for some of these programs is currently underway, such as the Gateway Upgrade North Project and upgrades to Kingsford Smith Drive. However, many of these upgrades are longer term and are initial proposals that need to be further investigated.

Program	Description	Timeframe
Rof1	Upgrade Nudgee Road Intersections between Gerler Road and East-West Arterial Road	Long
Rof2	Upgrade Toombul Road / Nudgee Road intersection	Medium
Rof3	Extend Trade Coast Drive to connect with Lomandra Drive	Medium
Rof4	Upgrade Sugarmill Road	Medium
Rof5	Upgrade Eagle Farm Road and Main Myrtletown Road	Long
Rof6	Implement the Gateway Upgrade North Project north of Nudgee	Short
Rof7	Grade separation from Southern Cross Way to Airport Drive	Long
Rof8	Upgrade Kingsford Smith Drive to six lanes divided between Theodore Street and Riverview Terrace and between Riverview Terrace and Breakfast Creek Road	Short
Rof9	Realign Main Myrtletown Road to align with Pandanus Avenue	Medium
Rof10	Extend Trade Coast Drive to connect with the Doomben Interchange	Medium
Rof11	Upgrade Kingsford Smith Drive between Gateway and Eagle Farm Road	Long

Implementation of the programs to support Initiative 2 will assist to:

- Increase road capacity
- Cater for future growth off Brisbane Airport to support the surrounding developments
- Improve efficiency of the road network
- Provide alternative access routes, offering greater redundancy in the network
- Resolve identified safety issues.

TABLE 12.13: PROGRAMS TO BE UNDERTAKEN DURING THE TERM OF THE GTP (CONTINUED)

Initiative 3: Improve parking (Pa)

Initiative 3 aims to improve the efficiency and service quality of parking at Brisbane Airport. Programs to achieve the objectives of Initiative 3 include:

Program	Description	Timeframe
Pa2	Promote common user parking stations across Brisbane Airport to support land use development	Short
Pa3	Investigate the provision of green parking bays and initiatives to support uptake	Short
Pa4	Investigate new technologies, including real-time parking information	Short
Pa5	Introduce an International T1 Transport Interchange as a centralised parking site	Long

Implementation of the programs to support Initiative 3 will assist to:

- Maximise the efficiency of the existing parking facilities
- Promote short stay parking and sustainable vehicles
- Optimise Brisbane Airport land through rationalised parking facilities
- Reduce parking capacity requirements in new airport developments
- Provide real-time information and guidance for drivers.

Initiative 4: Improve the rail network and services (Ra)

Initiative 4 aims to make public transport a more attractive alternative to private vehicle travel by improving the rail network and Airtrain services. Public transport needs to be to be perceived as having comparable speed, convenience and overall cost to competing options. Programs to achieve Initiative 4 include:

Program	Description	Timeframe
Ra1	Investigate rail interchange services in key zones and markets, such as the eastern and northern catchments	Short
Ra2	Implement Airtrain early morning and late night services to align with airline services and future employment demands	Medium
Ra3	Investigate the viability of a MTS connecting terminals and development precincts	Medium
Ra4	Investigate the initiatives required to deliver a new rail station at Skygate with a bus-rail interchange	Short

Implementation of the programs to support Initiative 4 will assist to:

- Increase transport choice, particularly for those travelling early in the morning or late at night.
- Encourage mode shift to public transport.
- Improve integration with other modes.
- Improve access to and from Brisbane Airport.

Initiative 5: Improve taxi, bus, coach and shuttle services (Tb)

Initiative 5 aims to improve taxi, bus, coach and shuttle services, and complement Initiative 4 to enhance public transport as a viable alternative to the private vehicle. Programs to achieve the objectives of Initiative 5 include:

Program	Description	Timeframe
Tb2	Investigate new interchange locations, such as Eagle Farm	Medium
Tb3	Investigate introduction of cross city services linking airport	Short
Tb4	Implement new bus services, new bus stops and undertake a review of existing bus routes	Short
Tb5	Investigate extension of BAC bus services to connect off airport	Short
Tb6	Investigate Green Link from Trade Coast Drive to Lomandra Drive	Short

Implementation of the programs to support Initiative 5 will assist to:

- Encourage mode shift away from the private vehicle
- Improve customer satisfaction
- Address gaps in the network
- Make public transport service more attractive
- Improve access to areas across wider Brisbane.

Initiative 6: Support freight movements through the airport (Fr)

Initiative 6 aims to support freight movements through Brisbane Airport and the wider Australia TradeCoast region. Programs to achieve the objectives of Initiative 6 include:

Program	Description	Timeframe
Fr2	Support the protection of rail corridors servicing the Australia TradeCoast and investigate opportunities for rail freight access on the Pinkenba Rail Line	Medium
Fr3	Investigate opportunities for separating freight movements from general traffic within Brisbane Airport and the wider Australia TradeCoast	Ultimate
Fr4	Identify routes for efficient road freight vehicles and any necessary infrastructure improvements	Medium

Implementation of the programs to support Initiative 6 will assist to:

- Future proof the transport to allow for the use of rail corridors for freight
- Improve safety and capacity by separating vehicle types
- Identify an efficient and safe on-airport network and program any necessary infrastructure improvements.

TABLE 12.13: PROGRAMS TO BE UNDERTAKEN DURING THE TERM OF THE GTP (CONTINUED)

Initiative 7: Improve active transport facilities at the airport and link to the external network (At)

Initiative 7 targets opportunities to enhance walking and cycling and make it attractive for short trips. This can be done by linking employees and visitors with key destinations across Brisbane Airport and closing identified gaps in the existing network. Programs to achieve the objectives of Initiative 7 include:

Program	Description	Timeframe
At1	Expand the active transport network across the airport. Identify areas within the airport where active transport is desirable, but impeded	Short
At2	Provide connections between the external active transport network and on airport facilities, such as to the Kedron Brook bikeway	Short
At3	Investigate a cycle hire facility linking airport precincts	Short/Medium
At4	Support the provision of cycle lanes along Kingsford Smith Drive through Hamilton and Eagle Farm	Short
At5	Improve footpaths, aiming to improve pedestrian connectivity between key precincts	Short

Implementation of the programs to support Initiative 7 will assist to:

- Improve the active transport network and address existing gaps
- Encourage cycling transport for short on-airport trips and commuters
- Provide the potential for mode shift
- Improve the health of users
- Reduce the dependency on car based travel and road network capacity
- Encourages walking for short trips on-airport between key precincts.

Initiative 8: Improve information and signage for travel to, from and within the airport (Inf)

Initiative 8 centres on signage improvements at the airport. Providing up-to-date and clear information assists travellers with their choice of route, departure time and mode of transport. Programs to achieve the objectives of Initiative 8 include:

Program	Description	Timeframe
Inf2	Provide way-finding signage to key destinations on and off-airport	Short
Inf3	Investigate the application of intelligent information systems, including real-time travel time indicators, variable message signs and ramp metering	Short
Inf4	Investigate providing real-time transport information for travellers to and from Brisbane Airport	Short

Implementation of the programs to support Initiative 8 will assist to:

- Improve information for drivers
- Reduce confusion by defining clear routes
- Improve safety
- Improve driver information and response times
- Improve traffic flow and travel times
- Improve operations at interaction points with the Gateway Motorway through ramp metering
- Improve traveller information, including the potential for a higher uptake of more sustainable modes
- Reduce circulating vehicles, with drivers being able to better plan when dropping off or picking up passengers.

Initiative 9: Encourage passengers to use alternative modes (Pax)

Initiative 9 aims to encourage passengers to use alternative modes. Programs to achieve the objectives of Initiative 9 include:

Program	Description	Timeframe
Pax1	Provide an interactive system at the terminals, which provides travel information including timetables and ticketing costs	Short
Pax2	Promote the true cost of drop-off and pick-up to drivers, and provide information on sustainable alternatives such as rail and bus	Short
Pax3	Promote passenger initiated taxi-pooling, particularly to Brisbane CBD locations during busy periods	Short

Implementation of the programs to support Initiative 9 will assist to:

- Improve traveller information and reduce confusion
- Create the potential for higher uptake of more sustainable modes
- Provide higher vehicle occupancies for taxis with efficiency gains during peak times
- Increase customer satisfaction.

Initiative 10: Encourage employees to use alternative modes (Emp)

Initiative 10 aims to encourage airport employees to use sustainable transport modes. Programs to achieve the objectives of Initiative 10 include:

Program	Description	Timeframe
Emp1	Develop a TravelSmart plan for airport employees to promote alternative, with viable means of access to work	Short
Emp2	Investigate providing corporate Go-Cards for employees	Short
Emp3	Promote car-pooling initiatives with a developed incentive scheme	Short
Emp4	Investigate park-and-ride facilities with a direct service guarantee to the airport and Australia TradeCoast	Medium
Emp5	Develop an end-of-trip facility plan for Skygate	Medium

Implementation of the programs to support Initiative 10 will assist to:

- Increase average vehicle occupancies
- Reduce the number of cars on the road
- Reduce parking demands at employment destinations
- Influence travel choices by providing employees with travel information relevant to their needs
- Enable a mode shift to public transport, walking or cycling
- Improve traveller information and awareness
- Improve employee satisfaction
- Improve transport choice.

TABLE 12.14: HOW THE INITIATIVES SUPPORT THE GROUND TRANSPORT PLAN OBJECTIVES

Objective	Initiative									
	1 – Ron	2 – Rof	3 – Pa	4 – Ra	5 – Tb	6 – Fr	7 – At	8 – Inf	9 – Pax	10 – Emp
Maximise connectivity and accessibility		●		●	●		●	●	●	●
Facilitate safe and secure movement of people and freight	●	●				●		●		
Deliver innovative, efficient and continuous airport services			●				●		●	
Continue agency partnering which builds on an integrated transport connection plan		●		●	●	●	●	●		
Timely delivery of seamless transport system which provides new and improved capacity	●		●	●	●			●	●	●
Minimise adverse environmental impacts				●	●	●			●	●
Develop proactive response to climate change				●	●		●		●	●
Contribute to regional economic wealth and employment generation	●	●		●	●	●		●		
Ensure selective, profitable and timely commercial development	●		●	●	●	●	●			●
Delivers on BAC's vision of world best and preferred choice for passengers, airlines, business and the community	●	●	●	●	●	●	●	●	●	●

SUMMARY OF INITIATIVES

Table 12.14 shows how each of the 10 initiatives support the objectives outlined in the Ground Transport Policy Framework in Figure 12.1.

As shown in Table 12.14, each objective is addressed at least once by the initiatives. While individual programs will each address objectives in different ways, many programs aim to provide sustainable travel choices for travelling to and from Brisbane Airport.

While the initiatives have overarching objectives, the individual programs within each initiative are scheduled for delivery within different timeframes[6].

MODE SHARE PROJECTIONS

Adopting the initiatives as outlined earlier, BAC estimates that mode share will reflect a change toward an overall percentage increase in public transport and an overall percentage decrease in private vehicle use. The estimates as shown in Table 12.15 can only be achieved through a collaborative arrangement with the transport agencies as outlined in this GTP.

Table 12.14 highlights the approach of the GTP to address sustainable travel choices, safety, and proactive environmental initiatives as the priority. Additional infrastructure is largely not addressed in a significant form until the medium-term period. It is anticipated however that projects identified will begin planning tasks within the GTP timeframe.

Figure 12.20 maps the short-term programs on Brisbane Airport as the five-year transport plan.

12.17 Agency Requirements

Table 12.16 matches each initiative with the lead and support agencies, and the timeline for implementation.

Table 12.17 outlines the amount of collaboration required between the lead and support agencies to deliver the programs in the GTP.

6 *Based on technical assessment and feedback from stakeholder consultation.*

TABLE 12.15: MODE SHARE PROJECTIONS

Mode	2014	2019	2034
Private vehicle	81.0%	79.2%	73.4%
Bus	1.2%	1.5%	5.1%
Airtrain	4.2%	5.7%	8.2%
Active transport	Less than 1%	Less than 1%	1%
'Others' (Taxis, Mini-bus & Coaches)	13.0%	13.1%	12.3%

TABLE 12.16: SUMMARY OF STAKEHOLDER INITIATIVE INTERACTIONS

Lead Agency	Supporting Agency[1]		
	Brisbane Airport Corporation	Transport and Main Roads	Brisbane City Council
Brisbane Airport Corporation	30	14	5
Transport and Main Roads	7	11	4
Brisbane City Council	8	5	13
TOTAL	45	30	21

1 *Tasks with multiple supporting agencies have been recorded for each agency.*

Scheduled and tourist buses have a dedicated pick-up and drop-off area at Domestic T2

12 GROUND TRANSPORT PLAN

FIGURE 12:20: FIVE YEAR TRANSPORT PLAN

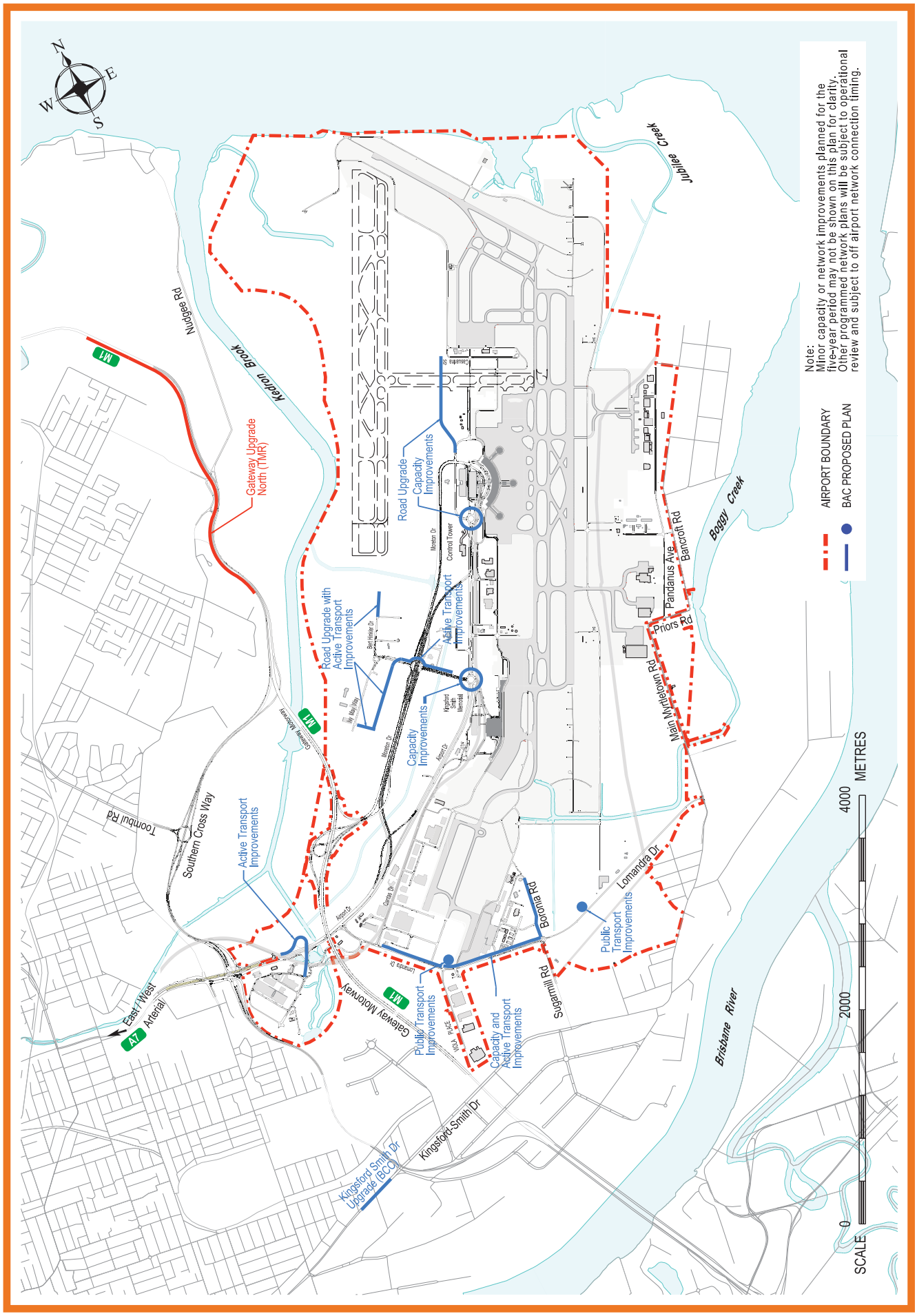


TABLE 12.17: SUMMARY OF GTP INITIATIVES, AGENCY RESPONSIBILITY AND IMPLEMENTATION TIMELINE

Item	Description	Lead Agency	Support Agency	Within GTP (Short-Term) 2014/15	2015/16	2016/17	2017/18	2018/19	Beyond GTP Timeframe Medium-Term	Long-Term	Ultimate
Initiative 1: On-Airport Road Improvements											
Ron1	Undertake annual traffic counts on the BAC road network and yearly performance reporting of the road network in line with TMR standards	BAC	TMR								
Ron2	Plan and preserve Toombul Road connection from Airport Village north	BAC	TMR								
Ron3	Upgrade the intersection at Main Myrtletown Road and Eagle Farm Road	BAC	BCC								
Ron6	Develop a safety action plan to regularly review road safety, particularly at intersections	BAC	TMR & BCC								
Ron7	Upgrade Moreton Drive to provide additional lanes	BAC	None								
Ron8	Upgrade Lomandra Drive, including widening, duplication and intersection improvements	BAC	None								
Ron9	Re-align Airport Drive	BAC	None								
Ron10	Grade separate the Lomandra Drive and Airport Drive Intersection	BAC	None								
Ron12	Plan and preserve a corridor for Western connection from Central Parking Area to Gateway Motorway North or Southern Cross Way	BAC	TMR								
Ron13	Develop an incident reporting system and integrate with TMR system	BAC	TMR								
Ron14	Upgrade the Domestic Terminal roundabout	BAC	None								
Ron15	Realignment of Dryandra Road to Airport North	BAC	None								
Initiative 2: Off-Airport Road Improvements											
Rof1	Upgrade Nudgee Road Intersections between Gerler Road and East-West Arterial Road	BCC	BAC								
Rof2	Upgrade Toombul Road/Nudgee Road intersection	BCC	BCC								
Rof3	Extend Trade Coast Drive to connect with Lomandra Drive	BCC	BAC & TMR								
Rof4	Upgrade Sugarmill Road	BCC	BAC								
Rof5	Upgrade Eagle Farm Road and Main Myrtletown Road	BCC	BAC								
Rof6	Implement the Gateway Upgrade North Project north of Nudgee	TMR	C'wealth Gov								
Rof7	Grade separation from Southern Cross Way to Airport Drive	TMR	BAC								
Rof8	Upgrade Kingsford Smith Drive to six lanes divided between Theodore Street to Riverview Terrace and between Riverview Terrace to Breakfast Creek Road	BCC	None								
Rof9	Re-align of Main Mytletown Road	BCC	BAC								
Rof10	Extend Trade Coast Drive to connect with Doomben Interchange	BCC	TMR & BAC								
Rof11	Upgrade Kingsford Smith Drive between Gateway and Eagle Farm Road	BCC	TMR								

BAC TMR BCC

TABLE 12.17: SUMMARY OF GTP INITIATIVES, AGENCY RESPONSIBILITY AND IMPLEMENTATION TIMELINE (CONTINUED)

Item	Description	Lead Agency	Support Agency	Within GTP (Short-Term)					Beyond GTP Timeframe		
				2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	Medium-Term	Long-Term	Ultimate
Initiative 3: Car Parking											
Pa2	Promote common user parking stations across Brisbane Airport to support land use development	BAC	None								
Pa3	Investigate provision of green parking bays and initiatives to support uptake	BAC	None								
Pa4	Investigate new technologies, including real time parking information	BAC	None								
Pa5	Introduce an International T1 Transport Interchange as a centralised parking site	BAC	None								
Initiative 4: Rail											
Ra1	Investigate rail interchange services in key zones/ markets such as the eastern and northern catchments	TMR	QR & Airtrain								
Ra2	Implement Airtain early morning and late night services to align with airline services and future employment demands	Airtrain	TMR								
Ra3	Investigate the viability of a mass transit system connecting terminals and development precincts	BAC	TMR								
Ra4	Investigate the initiatives required to deliver a new rail station at Skygate with a bus-rail interchange	TMR	BAC & AirTrain								
Initiative 5: Public Transport											
Tb2	Investigate new interchange locations, such as Eagle Farm	TMR	BCC								
Tb3	Investigate introduction of cross city services linking airport	TMR	BCC								
Tb4	Implement new bus services, new bus stops and undertake a review of existing bus routes	TMR	BCC & BAC								
Tb5	Investigate extension of BAC bus services to connect off airport	BAC	TMR								
Tb6	Investigate green link from Trade Coast Drive to Lomandra Drive	BCC	BAC & TMR								
Initiative 6: Freight											
Fr2	Support the protection of rail corridors servicing the Australia TradeCoast and investigate opportunities for rail access on the Doomben/Pinkenba line	TMR	BAC, BCC & QR								
Fr3	Investigate opportunities for separating freight movements within Brisbane Airport and the wider Australia TradeCoast	BAC	TMR								
Fr4	Identify routes for road freight efficient vehicles and any necessary infrastructure improvements	TMR	BAC								

BAC TMR BCC

Item	Description	Lead Agency	Support Agency	Within GTP (Short-Term) 2014/15	2015/16	2016/17	2017/18	2018/19	Beyond GTP Timeframe Medium-Term	Long-Term	Ultimate
Initiative 7: Active Transport											
At1	Expand the active transport network across the airport. Identify areas within the airport where active transport is desirable, but impeded	BAC	BCC								
At2	Provide connections between the external active transport network and on airport facilities, such as to Kedron Brook Cycleway	BCC	BAC & TMR								
At3	Investigate a cycle hire facility linking airport precincts	BAC	BCC								
At4	Support the provision of cycle lanes along Kingsford Smith Drive through Hamilton and Eagle Farm	BCC	None								
At5	Improve footpaths, aiming to improve pedestrian connectivity between key precincts	BAC	None								
Initiative 8: Information and Signage											
Inf2	Provide way finding signage to key destinations on and off airport	BAC	TMR & BCC								
Inf3	Investigate the application of intelligent information systems, including real-time travel time indicators, VMS and ramp metering	BAC	TMR								
Inf4	Investigate providing real-time transport information for travellers to Brisbane Airport	TMR	BAC								
Initiative 9: Passenger Focused Initiatives											
Pax1	Provide an interactive system at the terminals, which provides travel information including timetables and ticketing costs	TMR	BAC								
Pax2	Promote the true cost of drop off/pick up to drivers, and provide information on sustainable alternatives such as rail and bus	BAC	TMR								
Pax3	Promote passenger initiated taxi-pooling, particularly to CBD locations during busy periods	BAC	None								
Initiative 10: Employee Focused Initiatives											
Emp1	Develop a TravelSmart plan for airport employees to promote alternative, with viable means of access to work	BAC	TMR								
Emp2	Investigate providing corporate Go-Cards for employees	BAC	TMR & Airtrain								
Emp3	Promote car-pooling initiative with a developed incentive scheme	BAC	TMR								
Emp4	Investigate park-and-ride facilities with a direct service guarantee to the airport and Australia TradeCoast region	BAC	TMR								
Emp5	Develop an end of trip facility plan for Skygate	BAC	None								

BAC TMR BCC

12.18 Next Steps

Implementing the GTP programs will involve collaboration between BAC and other stakeholders, including local and state government agencies and public transport operators. BAC's role ranges from a supporting stakeholder to active implementation.

More complex programs will require further investigation and planning work before advancing to implementation.

Investigation work will be required to determine the feasibility, design, costs and benefits of programs such as a new rail station at Skygate, new bus routes and interchange points and an MTS.

It has been agreed between stakeholders that working groups will be established with all stakeholders to further address specific public transport programs in the GTP.

RELEVANCE TO AIRPORT ACT REQUIREMENTS

Table 12.18 contains references to the 2011 Airports Act, Section 71 (2) (ga) requirements and locations within this report where they have been addressed.

TABLE 12.18: SUMMARY OF REFERENCE FOR AIRPORTS ACT

	Airport Act Requirement	Reference within Report
(i)	A road network plan	Refer to Figure 12.3, Figure 12.4, Figure 12.20
(ii)	Facilities for moving people (including passengers, employees and other airport users) and freight at the airport (including the airport's road infrastructure, road connections, car parking facilities, public transport services and facilities for taxis and private coach or shuttle services)	Refer to all of this Chapter Refer to Table 12.17, Table 12.18
(iii)	Linkages between the road network and public transport system outside the airport	Refer to Section 12.10, Section 12.11, Section 12.12
(iv)	Arrangements for working with State and local authorities or other bodies responsible for the road network and ground transport system	Refer to Section 12.9, Section 12.15
(v)	The capacity of the ground transport system to support airport operations and other airport activities	Refer to Section 12.11
(vi)	The likely effect of the proposed developments set out in the master plan on the ground transport system and traffic flows surrounding the airport.	Refer to Section 12.11

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