



Master Plan

Parafield Airport

Volume 2: Ground Transport Plan

November 2012

www.parafieldairport.com.au

TABLE OF CONTENTS

8.0	GROUND TRANSPORT PLAN	95
8.1	INTRODUCTION	95
8.2	PARAFIELD AIRPORT SURROUNDING TRANSPORT NETWORK	95
8.2.1	Locality	95
8.2.2	Road Network	95
8.2.3	Railway Services	95
8.2.4	Bicycle Access/Pedestrian Pathways	95
8.2.5	Public Transport	98
8.3	EXISTING INTERNAL AIRPORT ROADWAYS AND EXTENSIONS	100
8.4	AIRPORT LINKAGES TO THE SURROUNDING ROAD AND RAIL NETWORKS	100
8.5	TRAFFIC INTERSECTION MODELLING	100
8.6	AIRPORT PRECINCT TRAFFIC ARRANGEMENTS	102
8.7	ARRANGEMENTS WITH STATE/LOCAL GOVERNMENTS	104

LIST OF FIGURES

- Figure 8.1 Road Traffic Volumes - Local
- Figure 8.2 Road Traffic Volumes - Regional
- Figure 8.3 Transport Corridor Plan
- Figure 8.4 Public Transport Plan
- Figure 8.5 Airport Road Access Plan
- Figure 8.6 Traffic Network Modelling Plan

8 GROUND TRANSPORT PLAN

8.1 INTRODUCTION

Parafield Airport is well served by adjacent road and rail networks. It is surrounded by an arterial road network that is accessible to B-Doubles, and sits alongside a rail corridor catering for the metropolitan passenger line and the freight line connecting Adelaide with Darwin and Perth.

This Ground Transport Plan for Parafield Airport conforms with Sections 71 (2) (ga) and 71 (3) (ga) of the *Airports Act 1996* and details the following:

- the road network external to the airport, encompassing highways, arterial roads, freight routes, railway services and bicycle pathways;
- existing internal airport roadways and possible extensions in accordance with future airport developments;
- the access point linkages between the airport roadways and surrounding road network, including possible railroad interaction;
- individual airport precinct traffic arrangements; and
- arrangements with State and Local Government.

Any future ground transport developments that PAL undertakes will be designed and operated with reference to relevant disability access standards.

8.2 PARAFIELD AIRPORT SURROUNDING TRANSPORT NETWORK

8.2.1 Locality

Parafield Airport is bordered by Kings Road to the north, the University of South Australia and Elder Smith Road to the south, Main North Road "Highway One" to the east and the main northern "Adelaide to Darwin" and metropolitan railway lines to the west. The airport is surrounded by residential land to the west and industrial development to the north and east, and the University of South Australia "Mawson Campus" and Mawson Lakes to the south.

8.2.2 Road Network

Of the surrounding road network, all are major State controlled roads and prescribed freight corridors, being included as gazetted B-Double routes by the State Government. The road traffic volumes for each of the surrounding roads and linkages throughout the northern Adelaide metropolitan area are shown for the local layout (Figure 8.1) and regional layout (Figure 8.2). B-Double routes surrounding the airport are shown on the Transport Corridors Plan (Figure 8.3).

8.2.3 Railway Services

Immediately to the west of the Kings Precinct along Kings Road lies the Parafield railway station, being a major metropolitan line linking Gawler to the Adelaide CBD. The railway station is situated around 500 m from the Central Precinct and adjoins the Kings Precinct.

Along the same railway corridor is the major Adelaide to Darwin freight line operated by Australian Rail Track Corporation Ltd. The location of the rail lines and Parafield railway station are included on both the Regional Traffic Layout/Volumes Plan (Figure 8.2) and the Transport Corridor Plan (Figure 8.3).

8.2.4 Bicycle Access/Pedestrian Pathways

At present, bicycle and pedestrian pathways are located along the full western boundary of Parafield Airport within the railway corridor verges, and also extending along Kings Road past the Kings Precinct to the Dakota Drive/Kings Road intersection. The existing grid of roads within the Central Precinct allows suitable cycling and pedestrian walkways. However, future allowance is given for the cycling pathway to be extended through Parafield land in the Central Precinct (bordering Kings Road) to the signalised intersection at Horrie Miller Way (Commercial Estate Precinct) should this be desirable in future for State or Local Government authorities.



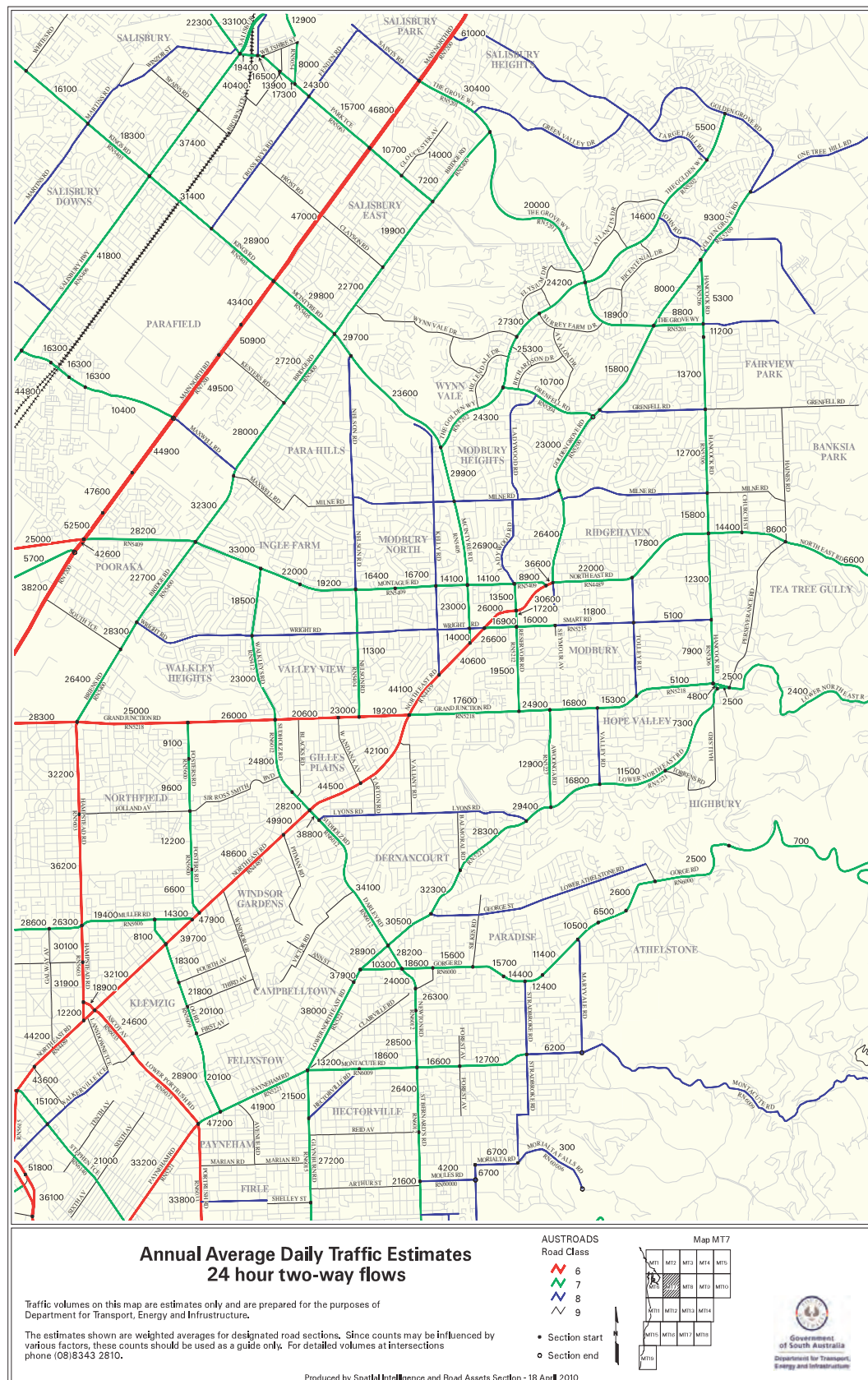


Figure 8.2 Road Traffic Volumes - Regional

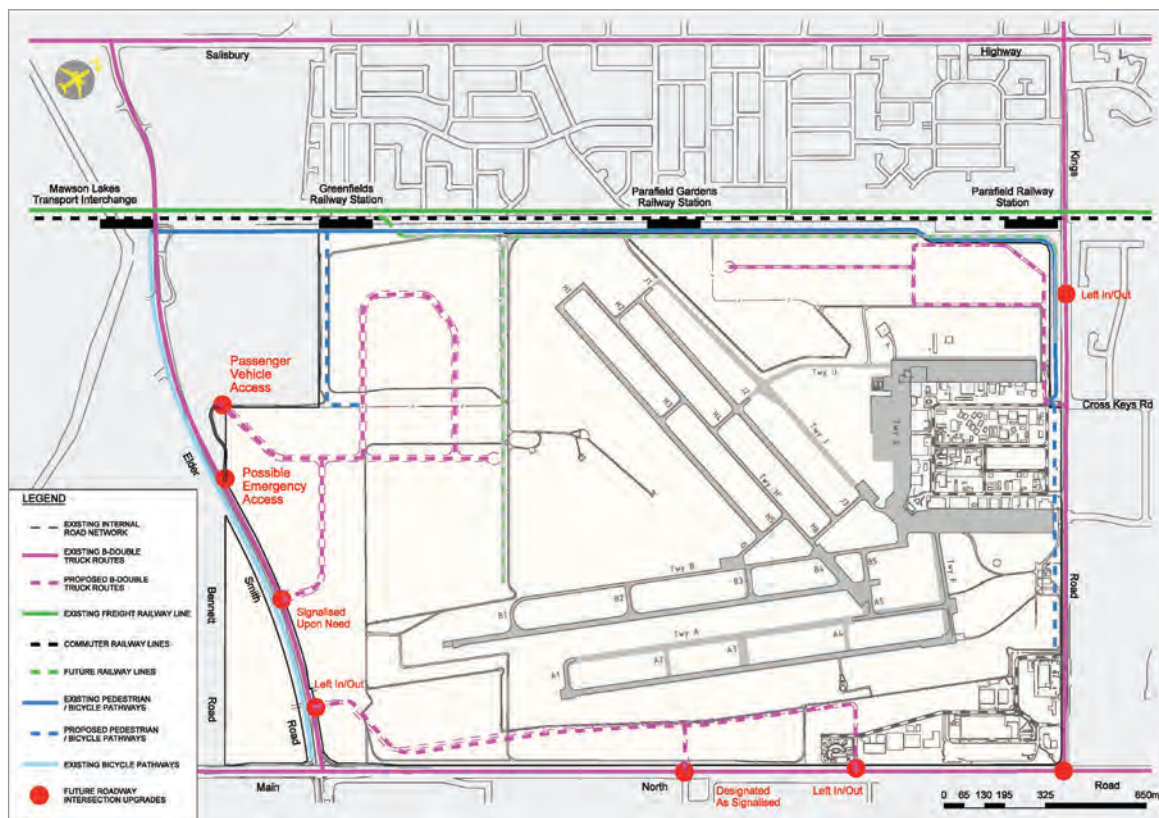


Figure 8.3 Transport Corridors Plan

Pedestrian access is possible to the Central Precinct from the Parafield railway station for students using the flight training facilities, a distance of around 500 m.

Along Elder Smith Road, dedicated bicycle lanes have been provided in both directions, which will enable cyclists in the developing Cross Keys Estate to access the internal roadways from the new primary access point, or in time, the accepted secondary access through St Kitts Place.

The existing and possible configuration of the bicycle pathways is included on the Transport Corridors Plan (Figure 8.3).

8.2.5 Public Transport

Public transport is provided via commuter rail services and bus services. The commuter rail service runs along the western Airport boundary, while the bus service (route 225) passes along the southern and eastern boundaries via Elder Smith Road and Main North Road, and bus service (route 228) passes along the eastern boundary via Main North Road.

From Monday to Friday the Gawler to Central Station commuter rail corridor is currently scheduled to run every 15 minutes during normal peak periods and every half hour during non-peak periods. There is also an hourly service on weekends.

From Monday to Friday the Smithfield Interchange to City bus service (route 228) which runs along Main North Road past the Airport's eastern boundary is currently scheduled every 15 minutes during peak periods and hourly during non-peak periods. This service is also scheduled on an hourly basis on weekends.

From Monday to Friday the Salisbury Interchange to Mawson Interchange, Gepps Cross and City bus service (route 225) which runs along Elder Smith Road and Main North Road, is currently scheduled every half hour during peak periods and hourly during non-peak periods. This service is also scheduled on an hourly basis on weekends.

The current public transport types and routes are detailed in the Public Transport plan (Figure 8.4)

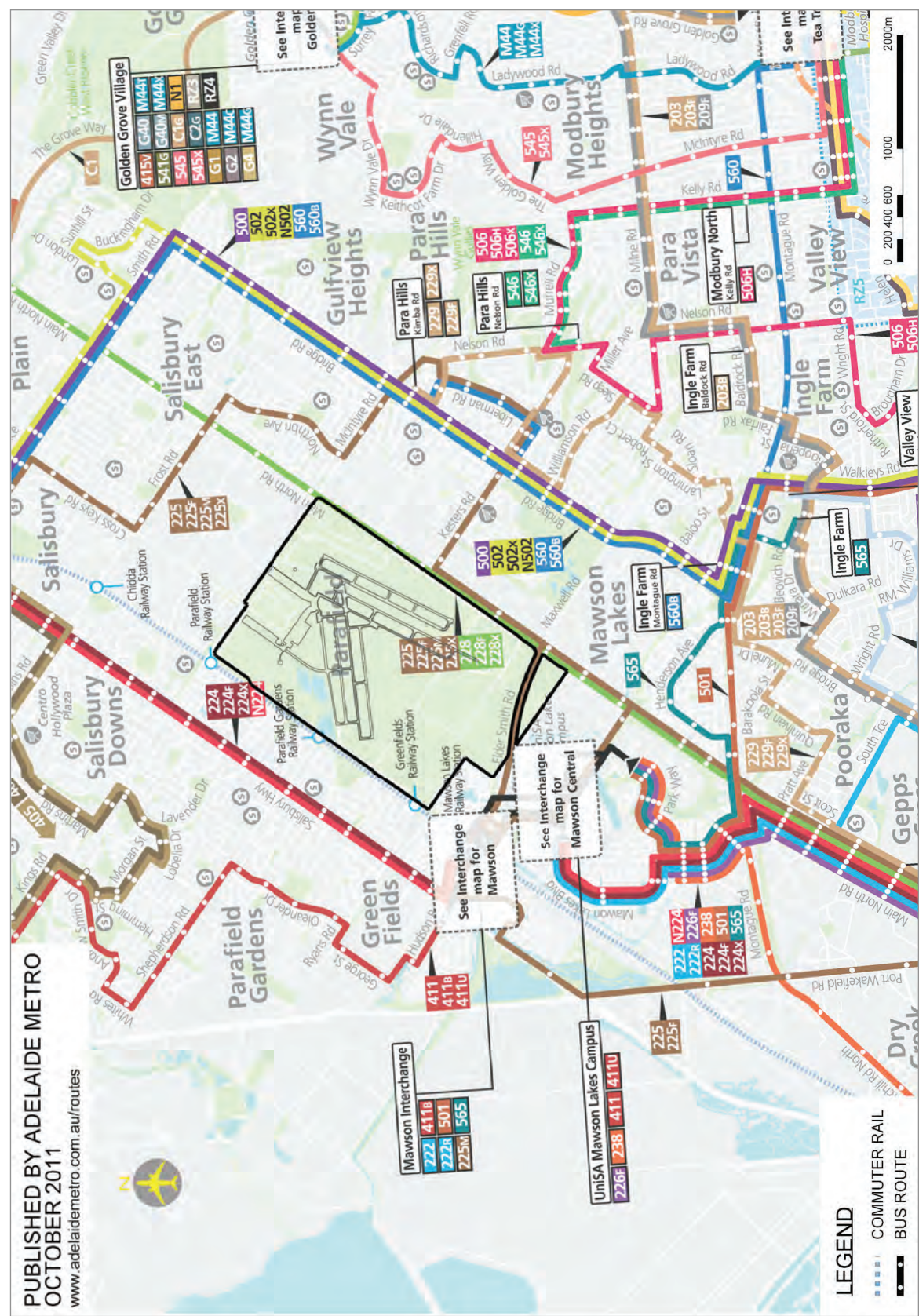


Figure 8.4 Public Transport Plan

8.3 EXISTING INTERNAL AIRPORT ROADWAYS AND EXTENSIONS

The existing internal public roadway network at Parafield is limited to both the Central Precinct and the Commercial Estate Precinct, with these existing roadways identified on the various Precinct and Structure Plans in Chapter 6, along with possible roadway extensions foreseen to occur coinciding with progressive airport development.

More detailed discussion on the roadway extensions are included in the traffic arrangements for each individual airport precinct in Section 8.5.

8.4 AIRPORT LINKAGES TO THE SURROUNDING ROAD AND RAIL NETWORKS

Included as Figure 8.5 is a detailed plan (Airport Road Access Plan) which identifies all the current and proposed access points between internal airport roads and those off airport. These arrangements have been settled, in prior agreement with the State and Local Governments.

Consistent with the Cross Keys Precinct Major Development Plan (2004) and included in the Parafield Airport Master Plan (2004) railroad access might be obtained by spur lines to both the Cross Keys and Kings Precincts from the bordering freight line and across the passenger train railway line on the western boundary of the airport depending upon demand. This opportunity offers the potential to decrease the demand on road transport for freight movements.

The Airport Transport Corridors Plan for Parafield, Figure 8.3, shows the accepted conceptual railway access points, with both Trans Adelaide and the Australian Rail Track Corporation Ltd providing consent to this arrangement on 16 and 17 November 2004 respectively. (Refer Appendix B.)

8.5 TRAFFIC INTERSECTION MODELLING

In determining the impact of future Parafield Airport developments and the surrounding road network, traffic modelling has been undertaken progressively to ensure optimum efficiency.

All access from Elder Smith Road onto the Cross Keys, Levels and Bennett Precincts has been subject to detailed analysis by the Department of Planning, Transport and Infrastructure (DPTI) as part of the

creation of this road, and design parameters included in the constructed works for future Parafield Airport developments and envisaged land use activity.

Future development demand on Kings Road from the Central Precinct and Kings Precinct is considered to be of low intensity, with existing signalised intersection or new access points readily accommodated. It would be expected any new access point into the Kings Precinct would be suitably developed for a 'Park and Ride' by the Public Transport Services Division of DPTI.

Future development of retail activity in the Commercial Estate Precinct has been the subject of intense modelling by Murray F Young and Associates using the Aimsun network computer simulation modelling programme, along with data validation from the 'Sydney Coordinated Adaptive Traffic Systems' (SCATS) output, SIDRA intersection analysis and on-site observations. This overall package identifies the anticipated operation of the road network following an increase in traffic volumes associated with extended development in the Commercial Estate Precinct further to the internal roads already in existence. The volumes are based on the expanded development site identified in this zone for a bulky goods retailing style development, utilising a traffic volume generation rate of 2.5 trips per 100 m² during the afternoon commuter period. This period represents the peak combined traffic period on the adjacent road network.

The extent of this traffic modelling incorporates the major road network to the east of Parafield Airport, including Main North Road, McIntyre Road, Kesters Road, Maxwell Road, Elder Smith Road and Bridge Road, Pooraka. It incorporates a number of major intersections as shown on the Traffic Network Modelling Plan (Figure 8.6).

The outcome of the Aimsun traffic analysis not only identifies the operation of the major intersections following potential development in the Commercial Estate Precinct, but predicts the preferred travel route for drivers and the resultant network impact between intersections. It also predicts any changes in delays on the network for drivers.

The results from this traffic modelling suggest that development of a new signalised intersection into the Commercial Estate Precinct aligned with Kesters Road/Main North Road will provide a solution which will minimise upgrade requirements to the existing road network, not only for airport retail development, but on all modelled intersections, and

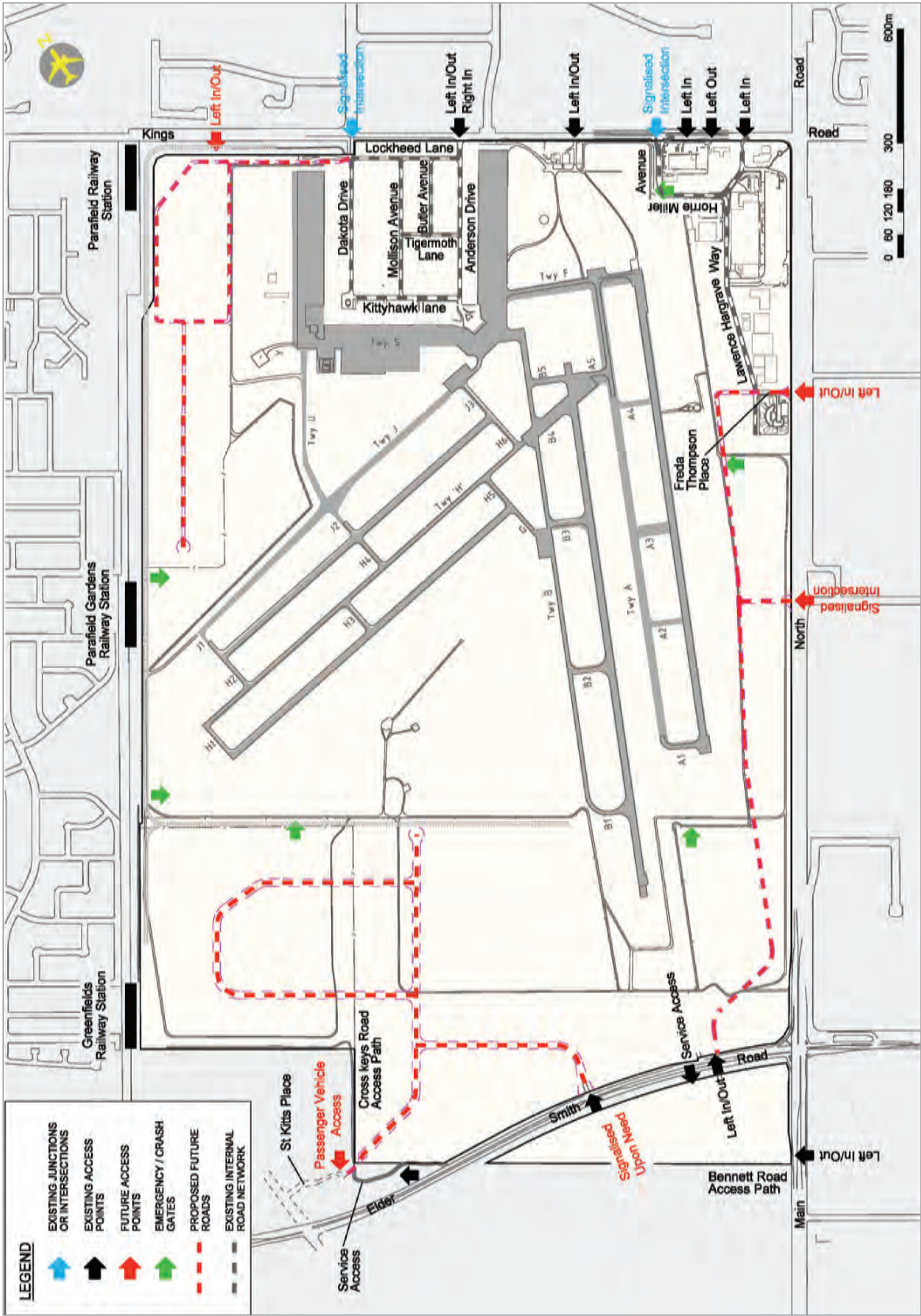


Figure 8.5 Airport Road Access Plan

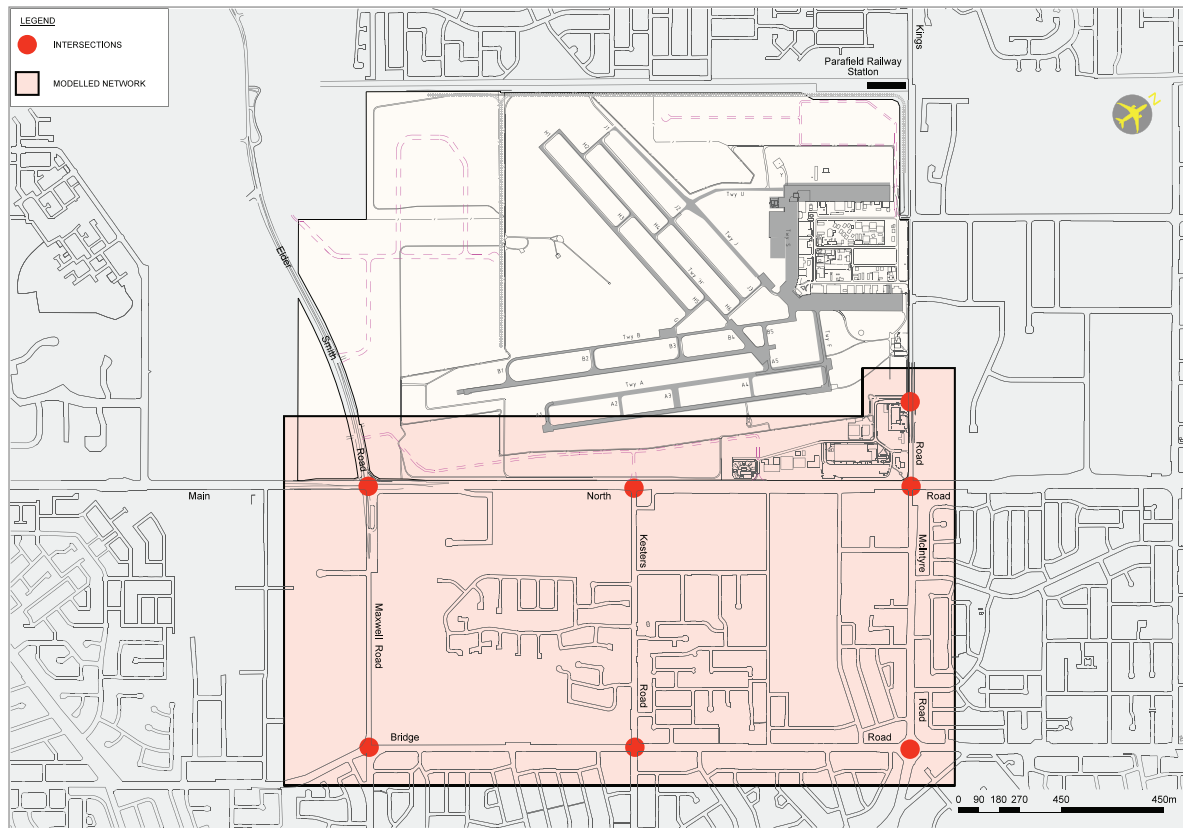


Figure 8.6 Traffic Network Modelling Plan

in particular the Main North Road/Kings Road intersection which is currently at capacity. On this basis, this option of a signalised intersection at Kesters Road/Main North Road would be the preferred alternative over proceeding with the previously agreed new left-in, left-out access point at this location. Some minor alterations to the Main North Road/Kings Road intersection may be required. DPTI are currently reviewing this traffic impact scenario modelling.

8.6 AIRPORT PRECINCT TRAFFIC ARRANGEMENTS

Central Precinct

The main airport entrance to the aviation-focused Central Precinct is via the signal-controlled intersection of Dakota Drive with Kings Road. The current internal road reserve along this section allows for a future dual carriageway, separated by a median, to be provided upon need. Alternate non-signalised access is also available at the junction of Anderson Drive and Kings Road. These access points are expected to be suited to existing and future traffic loads from development activity within the precinct. The existing central building area is well serviced by a rectangular

grid pattern of roads, and car parking is provided onto individual business sites. Additional and re-configured car parking is proposed along Andersen Drive and Kitty Hawk Lane to better cater for the extent of aviation employees and trainees.

Commercial Estate Precinct

Access to the Commercial Estate Precinct is via an 'in only' left turn lane off Main North Road into Freda Thomson Place and also another from Kings Road just west of Main North Road. There are also direct access points into and out of a petrol filling station and directly into the Roulettes Tavern from Kings Road, and a signalised T-intersection access point at Kings Road and Horrie Miller Way which all service this precinct.

In-principle agreement has been reached with DPTI in development of the approved Brand Outlet Centre and Bulky Goods retailing proposals that Freda Thomson Place can be modified to allow for left-in, left-out access now that the speed limit of the Main North Road section fronting Parafield Airport has been lowered from 100 km/h to 80 km/h, (thereby ensuring enough weaving distance for vehicles to cross lanes and effect a right turn into Kings Road, in an easterly direction).

A new (possibly signalised) intersection into the Commercial Estate from Main North Road aligned with Kesters Road has been modelled to ascertain its impact on the adjacent road network and is currently under review by DPTI. This would be on the basis that such construction works would be funded by PAL and to occur in conjunction with the approved development of a Brand Outlet Centre and further Bulky Goods retailing, and as modelled by Murray F Young and Associates.

Appropriate car parking allocations are in place for existing retail developments, and the necessary quota of parking spaces will be supplied for further Brand Direct retailing, Bulky Goods and shops based upon State Government Parking provisions for selected land uses.

Levels Precinct

Access into the Levels Precinct can be gained internally through feeder roads from the new Intersection at Kesters Road/Main North Road and also an entrance and exit from Elder Smith Road. The Main North Road access would be located approximately 700 m from the Elder Smith Road intersection, into the Commercial Estate Precinct.

DPTI has given in-principle approval to this new access point, as part of the Tripartite Deed dated 19 January 2007 between the Commonwealth, the State and PAL for the transfer of land for Elder Smith Road from the Commonwealth to the State. Onsite parking will be provided, based on criteria for individual development sites outlined in State Government Parking provisions for selected land uses.

Bennett Precinct

Service access into the Bennett Precinct will continue from Elder Smith Road. The previous Bennett Road, like the former Cross Keys Road adjacent to the Cross Keys Precinct, while not physically formed, is not to be closed by virtue of the Roads Opening and Closing Act in the foreseeable future, but remain open as a service corridor as confirmed by the City of Salisbury on 7 April, 2006. Traffic extent to the Bennett Precinct is expected to be minimal and not impact on the service levels of either Main North Road or Elder Smith Road. Any minor parking demand can be readily accommodated, without compromising the vernal pools located within this environmental zone, through suitable buffering.

Cross Keys Precinct

Access into the Cross Keys Precinct can be gained by a new junction provided by DPTI from Elder Smith Road, which will cater for heavy articulated vehicles including B-doubles, and will be signalised at DPTI cost, when traffic levels specify the need by independent assessments. This arrangement and undertaking is also covered in the formal Tripartite Deed between the Commonwealth, the State Government and PAL dated 19 January 2007 and detailed in DPTI correspondence dated 19 June 2006, a copy of which is included at Appendix B.

An alternate secondary access point is also to be gained through the former Cross Keys Road and St Kitts Place in Mawson Lakes so as to connect up to an intersection with Main Street and Elder Smith Road. This roadway will generally cater for small vehicles, but will have the capacity to accommodate larger vehicles in an emergency. This has been approved by the City of Salisbury against specified design criteria, directed mainly to the movement of passenger motor vehicles as contained in correspondence to PAL dated 19 September 2006. This correspondence and design parameters are included at Appendix B.

An alternate suggestion by the City of Salisbury for a direct link on to Elder Smith Road via a new left-in, left-out access way has the advantage of complete segregation from residential uses in Mawson Lakes, but this prospect has not previously been accepted by DPTI.

Vehicle parking and access on individual development lots will be based upon the State Government parking provisions for selected land uses.

Kings Precinct

In allowing for future development in the Kings Precinct, DPTI has also given acceptance toward a new direct access point from Kings Road. This access point could also suitably service a possible 'Park and Ride' car park for the Parafield railway station, previously discussed by the Public Transport Services Division and PAL reserving land for this possibility as shown in the Structure Plan at Chapter 6. In the interim, traffic access can be made available through the adjoining Central Precinct road network, including from the signalised intersection of Dakota Drive with Kings Road. Sufficient land is available for the provision of a Park and Ride facility to cater for around

200 vehicles in close proximity to the Parafield railway station and onsite parking for individual development sites that might be created in the future will cater for parking needs based upon State Government parking provisions for selected land uses.

8.7 ARRANGEMENTS WITH STATE/LOCAL GOVERNMENTS

Through the recent completion of a new connector road through Parafield Airport land in 2007 (Elder Smith Road), a tripartite agreement was reached between DPTI, PAL and the Commonwealth which also included suitable access points into a number of airport precincts bordering both this road and Main North Road for future airport developments. In particular, traffic modelling catered for full occupancy of the Cross Keys Precinct for industrial /commercial-related activity, including B-Double accessibility.

A Minor Variation to the 2004 Airport Master Plan was approved by the Federal Government for a Brand Outlet Centre within the Commercial Estate Precinct. Suitable access for this development is accepted in principle by DPTI, with the

exact configuration subject to DPTI review of comprehensive modelling undertaken by Murray F Young and Associates, based upon full retail development in the Commercial Estate Precinct.

Agreement was also reached with the City of Salisbury on 19 September 2006 on secondary access provision from the Cross Keys Precinct through St Kitts Place at Mawson Lakes, leading to Main Street and linked back to Elder Smith Road.

Consistent with arrangements in place between the State Department of Planning, Transport and Infrastructure (DPTI) and PAL, comprehensive liaison is held on any airport development and potential traffic impacts on those State Roads that border Parafield Airport, with the most recent being the commissioning of Murray F Young & associates (Traffic Consultant) to undertake detailed traffic network computer simulations in 2011.

The results are subject to full review by DPTI ahead of in-principle agreements for any necessary upgrading and suitable timelines. The progress and results are also fully discussed at the quarterly Airport Planning Co-ordination Forum meetings, represented by DPTI, the City of Salisbury and PAL.

