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Ground Transport Plan

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9.1 Introduction

Parafield Airport continues to utilise its land to grow and modify the activities occurring on the airport. It is important that careful consideration be given to the transportation needs that these changes require and their impacts are understood.

Parafield Airport's transportation needs are currently well served by the adjacent road and rail networks. The airport is surrounded by an arterial road network that is conveniently accessible to B-Doubles, and a rail corridor catering for the northern metropolitan passenger line to Gawler along with the separate freight line connecting Adelaide with Darwin and Perth.

The principles of development control for the Airport (Parafield) Zone as it relates to ground transport are;

1. Development should provide for appropriate vehicular and pedestrian linkages, with particular attention to the accessibility between commercial and retail developments fronting Main North Road.
2. On-site parking should be provided to meet the anticipated demand of development, with flexibility for further increases and taking into account linkages to public transport.
3. Development should be provided with safe and convenient access which:
 - avoids unreasonable interference with the flow of traffic on adjoining roads;
 - accommodates the type and volume of traffic likely to be generated by the development or land use; and
 - is sited and designed to minimise any adverse impacts on the occupants of and visitors to neighbouring properties.
4. Development should make sufficient provision on each individual site for the loading, unloading and turning of all traffic likely to be generated.
5. Vehicle parking areas should be sited and designed in a manner that will:
 - not inhibit safe and convenient traffic circulation;
 - result in minimal conflict between customer, employee and service vehicles;
 - where reasonably possible, provide the opportunity for shared use of car parking and integration of car parking areas with adjoining development to reduce the total extent of vehicle parking areas; and
 - enable landscaping that will provide shade and enhance the appearance of such areas.
6. Bike and pedestrian paths should:
 - be designed to facilitate efficient links to neighbouring paths and facilities; and
 - be designed and provided in accordance with relevant provisions of the Australian Standards and AustRoads Guide to Traffic Engineering Practice.

9.2 Existing Ground Transport Infrastructure

9.2.1 Locality

Parafield Airport is located approximately 18 km north of Adelaide CBD (estimated 35 minutes travel time via the arterial road network) approximately midway between the Adelaide CBD and the northern extent of the metropolitan Adelaide area.

The airport is located in the northern suburb of Parafield and surrounded by the suburbs of Salisbury South, Salisbury East, Ingle Farm, Mawson Lakes, Parafield Gardens and Para Hills.

The airport is bordered by Kings Road to the north, the University of South Australia and Elder Smith Road to the south, Main North Road to the east and the main northern Adelaide to Darwin and metropolitan Gawler railway line to the west. Salisbury Highway, while not immediately bordering the airport, plays a significant role in providing strategic connections for the airport to the wider transport network.

The airport is surrounded by residential land to the west and industrial development to the north and east, and the University of South Australia's Mawson campus and the suburb of Mawson Lakes to the south. The airport is midway between the foothills of the Mt Lofty Ranges to the east and the low-lying Port River/Torrens island areas to the west. This section describes the transport network associated with the airport (Figure 9.1).

9.2.2 Kings Road

The main entrance to the airport is located on Kings Road at the signalised intersection with Dakota Drive, approximately half way between Main North Road and the rail corridor. Access to the airport is also provided along Kings Road at the intersection with Anderson Drive. Kings Road also provides several access points to the Commercial Precinct located in the northwest corner of the airport land.

Kings Road is an arterial road under the care and control of the South Australian Government and is designated as a Freight Route in *A Functional Hierarchy for South Australia's Land Transport Network* catering for between 26,100 and 27,800 vehicles per day (based on the annual average daily traffic provided by DPTI) approximately 4.5% of which are commercial vehicles.

Kings Road is classified as a Performance-based Standard (PBS) Level 2A route allowing up to 26 m B-Double vehicles and 25 m vehicle carriers.

9.2.3 Main North Road

Parafield Airport is adjacent to three major signalised intersections along Main North Road: the intersections with Kings Road/McIntyre Road, Kesters Road and

Maxwell Road. Access into the Commercial Precinct of the airport is also provided by a left in, left out entry (Freda Thomson Place) that connects with Lawrence Hargrave Way.

Main North Road is an arterial road under the care and control of the South Australian Government and is designated in *A Functional Hierarchy for South Australia's Land Transport Network* (DTPI 2013) as:

- a major cycling route (metro);
- a major traffic route; and
- a freight route.

The road caters for between 52,100 and 56,300 vehicles per day (based on the annual average daily traffic provided by DPTI) and up to 5.0% of which are commercial vehicles.

Main North Road is classified as a PBS Level 2A route allowing up to 26 m B-Double vehicles and 25 m vehicle carriers. The road is a duplicated carriageway with wide median and currently provides two lanes in each direction with dedicated cycling lanes and wide unsealed and uncurbed shoulders that provide areas for a number of bus stops. Previously the speed limit along this section of Main North Road was 100 km/hr however in recent years this has been reduced to 80 km/hr.

The Kesters Road intersection with Main North Road has recently undergone modification to provide signalised access into the Commercial Precinct.

9.2.4 Elder Smith Road

Elder Smith Road that connects from Maxwell Road/ Main North Road through to Salisbury Highway crossing over the rail corridor via an overpass adjacent to the Mawson Lakes station nominally borders the southern extent of the airport. The road provides a key access point to Mawson Lakes, University of South Australia and the Mawson Lakes passenger rail and bus interchange via a signalised intersection with Main Road. Elder Smith Road is a predominantly divided carriageway with one lane in each direction (with the provision to go to two lanes in each direction in the future) and has dedicated cycle lanes. The road also provides access to a smaller residential development in Mawson Lakes at the same intersection via The Drive. Future access points (three) to the Parafield Airport land have been identified and part constructed



Figure 9.1 Locality Plan

on the northern side of Elder Smith Road to accommodate entry to the airport for future land uses.

Elder Smith Road is an arterial road under the care and control of the South Australian government and is designated in *A Functional Hierarchy for South Australia's Land Transport Network* as:

- a public transport corridor- Standard Frequency Go Zone (Mawson Lakes Station to Salisbury Highway only);
- a major traffic route; and
- a freight route.

The road caters for between 21,800 and 28,100 vehicles per day (based on the annual average daily traffic provided by DPTI) up to 6.0% of which are freight vehicles.

Elder Smith Road is classified as a PBS Level 2A route allowing up to 26 m B-Double vehicles and 25 m vehicle carriers.

The intersection of Elder Smith Road and Salisbury Highway currently exhibits poor performance with significant queuing occurring during peak hours for both Salisbury Highway and Elder Smith Road approaches. Improvements to this queuing with its associated safety concerns, are being undertaken in 2017 with modifications to the turning lanes at the intersection. These include:

- installation of an additional left turn lane on Elder Smith Road into Salisbury Highway;
- extension of the left turn lanes on Elder Smith Road into Salisbury Highway;
- a new controlled signalised left turn movement from Elder Smith Road to Salisbury Highway; and
- widening of Elder Smith Road to extend the second lane for motorists heading east.

The intersection of Elder Smith Road with Main North Road is also currently operating at or just under capacity during peak periods for some turning movements.

9.2.5 Salisbury Highway

While Parafield Airport is not immediately adjacent to Salisbury Highway, the road does play a key role in providing access to the airport from the broader network via the signalised intersections with Kings Road and Elder Smith Drive.

Salisbury Highway is an arterial road under the care and control of the South Australian Government and is designated in *A Functional Hierarchy for South Australia's Land Transport Network* as:

- a major traffic route (Elder Smith Road to South Road);
- a freight route (Elder Smith Road to South Road);
- a public transport corridor- Standard Frequency Go Zone (Elder Smith Road to Ryans Road only); and
- a peak hour route.

The road caters for approximately 39,100 vehicles per day (based on the annual average daily traffic provided by DPTI) up to 7.5% of which are freight vehicles.

Salisbury Highway is classified as a PBS Level 2A route allowing up to 26 m B-Double vehicles and 25 m vehicle carriers. Salisbury Highway is a divided carriageway with typically two lanes in each direction and has dedicated cycle lanes.

9.2.6 Wider External Road Network

The road traffic volumes for each of the surrounding roads and linkages throughout the northern Adelaide metropolitan area are shown in Figure 9.2.

Key road connections for Parafield Airport are Main North Road through to the Sturt Highway (link to Sydney), Salisbury Highway through to South Road, Port Wakefield Road (to Perth and Darwin) and the Northern Expressway (also to Sydney).

9.2.7 External Rail Network

The rail corridor that forms the western boundary for the airport provides for the Adelaide to Port Augusta freight line operated by Australian Rail Track Corporation Ltd. This line then connects to both Darwin and Perth with a number of rail freight operators using the line. Re-routing of this freight activity to a new rail corridor to the west is currently under planning consideration.

The rail corridor also provides for the passenger rail service from Adelaide Station to Gawler Central Station. There are four rail stations on this line in the vicinity of the airport. The major station is at Mawson Lakes, which provides a key interchange between rail, bus and car travel. Greenfields station, Parafield Gardens station and Parafield station are smaller



Figure 9.2 External arterial road network (source: DPTI 2016)

stations at which express services do not currently stop. Parafield Station has a park and ride facility that is planned for expansion.

The location of the rail lines and stations are included in Figure 9.3

9.2.8 Internal Road Network

The existing internal public roadway network at Parafield is limited to the Airport Business Precinct and the Commercial Precinct, with these existing roadways identified on the various precinct and structure plans in Chapter 7, along with possible roadway extensions proposed to occur coinciding with progressive airport development. Figure 9.4 identifies all the current and proposed access points between internal airport roads and those external to the airport.

The following sections detail the road networks within each of the defined precincts.

Airport Business Precinct

The Airport Business Precinct encompasses the main terminal and aviation engineering facilities, aviation training facilities, aviation museum activities and associated infrastructure, along with the land to the east of the Parafield Railway Station.

The Airport Business Precinct is accessed via the signalised intersection of Dakota Drive with Kings Road. Dakota Drive is currently a single carriageway allowing for one lane in each direction. The current internal road reserve for this section of road allows for a future dual carriageway, separated by a median, to be provided when required. An alternative un-

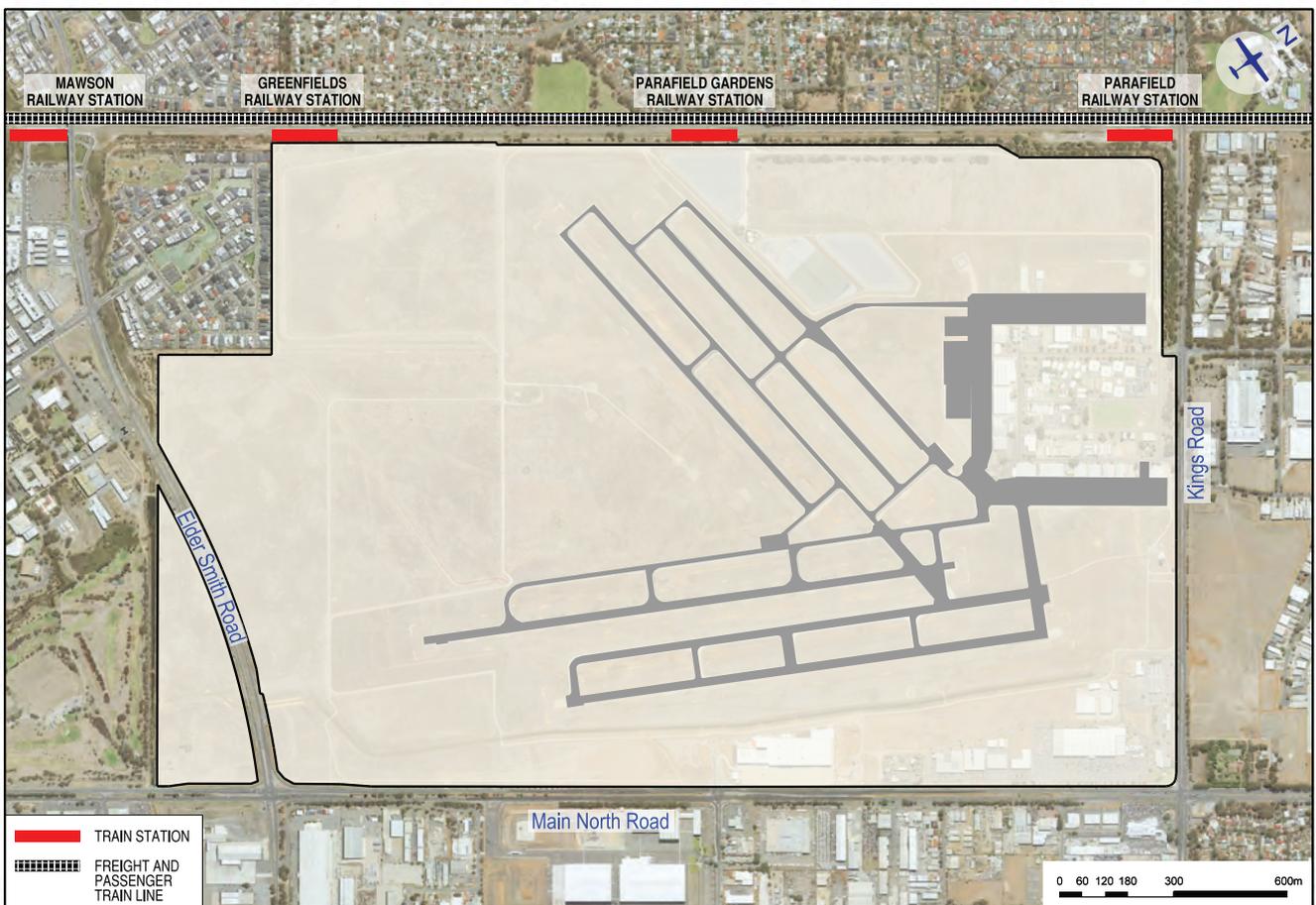


Figure 9.3 Location of rail lines and stations

signalised access is also currently provided at the junction of Anderson Drive and Kings Road. These access points are 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 providing appropriate access for airport operations.

Anderson Drive and Dakota Drive are linked by Kitty Hawk Lane. These three roads provide the main internal road network to access the various sites on the precinct. Kitty Hawk Lane experiences a high degree of on-street parking. Mollison Road, Tiger Moth Lane and Butler Avenue are minor road connections providing access to various buildings and sites and are designed appropriately for the low volumes of traffic using these roads.

The western section of the precinct provides a logical area for expansion of aviation-related industry, along with an opportunity to possibly establish an expanded park and ride car park associated with the Parafield Railway Station.

Commercial Precinct

The Commercial Precinct extends from the northeast corner of the airport to the southeastern corner with frontage to Main North Road, Kings Road and Elder Smith Road. Access to the precinct is from various entrances/exits along Main North Road and Kings Road via both signalised and un-signalised intersections and entrances.

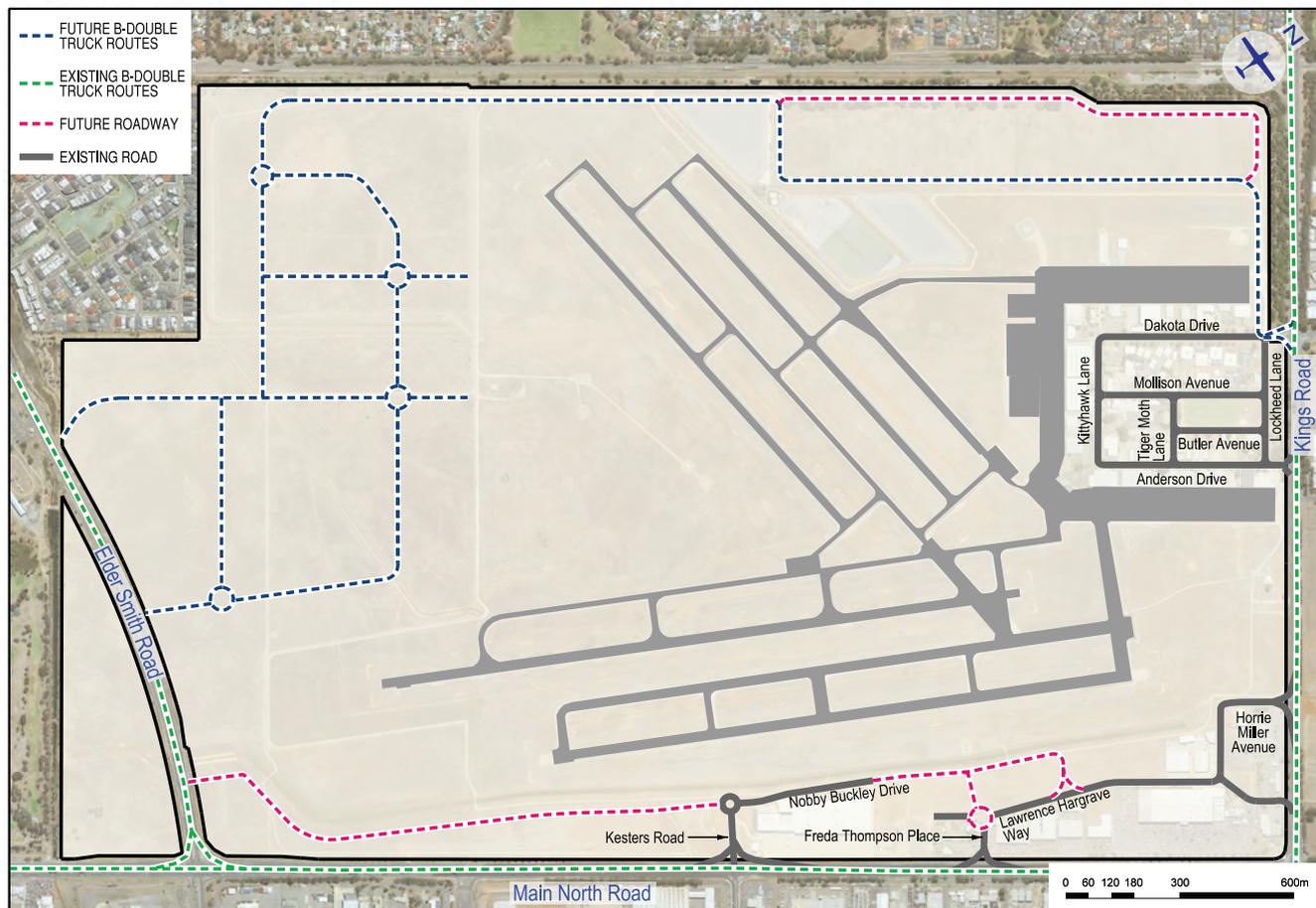


Figure 9.4 Internal Road Network Plan

As the precinct provides a range of commercial, service, trade and large scale retailing facilities, with supporting shops and services, traffic volumes accessing this precinct are significant and therefore internal road layout and parking are important and have been designed to suit the future retail and commercial developments with linkage to the three arterial roads.

Access to the Commercial Precinct has recently been improved by modification of the signalised intersection on Main North Road at Kesters Road (funded by Parafield Airport). This existing intersection was modified from a T-intersection to become a four-leg intersection providing access into the Commercial Precinct with the addition of the forth leg of the intersection. There is also an intersection providing access to this precinct on Kings Road via a signalised T-junction at Kings Road and Horrie Miller Way. Other access points to this precinct are via a left in left out access from Main North Road into Freda Thomson Place and another left in entrance from Kings Road just west of Main North Road. There are also direct access points into and out of a petrol station and directly into the Roulettes Tavern from Kings Road.

Internal road network for this precinct is well developed. Lawrence Hargrave Way provides a connecting road along the length of the precinct and is designed to a high standard appropriate to the traffic volumes accessing this precinct.

Horrie Miller Drive provides a connecting road from Kings Road to the northern section of the precinct and connects to Lawrence Hargrave Way. Freda Thomson Place provides a short access link from Main North Road (left in and left out) to Lawrence Hargrave Way.

Significant parking areas are provided along the length of the precinct and access to these areas is appropriate for the volumes of traffic accessing the precinct.

Enterprise Precinct

The Enterprise Precinct is located on the southern side of the airport with its only current access from Elder Smith Road. It is proposed that a range of commercial, industrial, warehousing and possible aviation-related support industries be established in the precinct. A future railway spur link may be considered for the precinct to provide additional

opportunities for the movement of freight and products into, or out of, the precinct. However, as the freight rail line is located to the west of the high frequency passenger rail line planned for electrification, any rail spur will need to be considered carefully so as not to cause excessive delays or introduce collision risks to both rail freight and commuter rail lines. Relocation of the freight line to a new rail corridor to the east of the passenger line is likely to remove this problem.

Vehicle access to the site has been positioned along Elder Smith Road at the time of construction of the arterial road. The development of the Enterprise Precinct will likely generate significant volumes of traffic once completed and therefore intersection design and internal road layout will need to be designed to accommodate both forecast volumes of general access vehicles and commercial vehicles up to 26 m B-Doubles. A secondary left in, left out access point to the development located west of the main entrance will assist in distributing private vehicle traffic within the precinct and provide an emergency entry and exit for heavy articulated vehicles.

Traffic generated from the Enterprise Precinct will need to access the arterial and national networks quickly and efficiently. Currently these access routes are via Main North Road and Salisbury Highway. Both these intersections with Elder Smith Road currently experience periods of delays to traffic during peak hours. Additional traffic travelling through these intersections from the Enterprise Precinct (during peak hours) could increase the levels of delay experienced at these intersections. However, staging of such industrial development over 15 years will lessen the impact at these intersections in comparison to the forecast growth in general traffic on Elder Smith Road during that period.

Runways Precinct

The major portion of the airport consists of the Runways Precinct, which is bounded by the remaining precincts and is protected for the operation and movement of aircraft and associated activities. Access to the Runways Precinct is strictly controlled and the area is suitably secure from adjacent precincts with appropriate security perimeter fencing incorporating access control measures and surveillance monitoring. Vehicle access is primarily for the purpose of airport operations including fuel delivery.

Bennett Precinct

The Bennett Precinct is located at the southern end of the airport to the south of Elder Smith Road and provides conservation and rehabilitation opportunities for vernal pool communities and several sites of aboriginal significance. Vehicular access is limited to that required in association with such low intensity activities. Service access is currently from Elder Smith Road via an informal left in and left out only on the southern carriageway. Informal access is also available from the northbound carriageway on Main North Road.

Parking

Formalised car parking is currently provided in the Airport Business Precinct and the Commercial Precinct. Parking within the Airport Business Precinct is provided on most individual business sites however kerbside parking does occur along Andersen Drive and Kitty Hawk Lane and therefore additional and re-configured car parking is proposed to better cater for the extent of aviation employees and trainees. The Commercial Precinct requires a high degree of

formalised parking and this is currently provided for existing retail and commercial developments within the precinct.

9.3 Public Transport

Public transport to the airport is primarily provided by passenger rail services along the Gawler rail line (western airport boundary) and various bus services passing the airport along their routes. 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.

The Gawler rail service operates on a half hourly service and fifteen-minute service in peak periods during weekdays. Bus services provide connectivity to the rail line from Salisbury Interchange, Smithfield Interchange and Elizabeth Interchange to the airport.

Parafield station located at the northwestern boundary of the airport currently has a small park and ride facility that has the potential for expansion.

Table 9.1 Bus services

| Service No. | Description | Service description |
|-------------|--------------------------------------|--|
| 225 (225X) | Salisbury Interchange to Gepps Cross | Route via Mawson Interchange. Service operates 7 days. (Stop 37, 38 & 39 are in the vicinity of Parafield Airport on Main North Road and Kesters Road) |
| 228 | Smithfield Interchange to City | Service operates express from Mawson Interchange to stop 29 Main North Road then express to stop 4 O'Connell Street. Operates Monday-Friday. (Stops 36, 37, 38, 39, 40, 41 & 43 are in the vicinity of Parafield Airport on Main North Road) |
| T228 | Smithfield Interchange to City | Route via Main North Road. Limited service operates Monday-Friday. (Stops 36, 37, 38, 39, 40, 41 & 43 are in the vicinity of Parafield Airport on Main North Road) |
| 500 | Elizabeth Interchange to City | Route via Salisbury Interchange, Bridge Road and O-Bahn. Limited stop service. Operates Monday-Friday (No stops in close proximity to Parafield Airport – interchange at Mawson Lakes) |
| 502 | Salisbury Interchange to City | Route via Bridge Road and O-Bahn. Limited stop service. Operates 7 days. (No stops in close proximity to Parafield Airport – interchange at Mawson Lakes) |
| N502 | Salisbury Interchange to City | Route via Bridge Road and O-Bahn. Service operates after midnight Saturday PM - Sunday AM (No stops in close proximity to Parafield Airport – interchange at Mawson Lakes) |

The public transport service to the airport provided by buses is listed in Table 9.1.

Bus stops are located only on Main North Road. No bus stops for the above services are located along Kings Road or Elder Smith Road. Service routes are shown in Figure 9.5.

9.4 Walking and Cycling

9.4.1 Existing Walking and Cycling Networks

The primary pedestrian network servicing Parafield Airport is focussed around the Airport Business Precinct and Commercial Precincts. Existing footpaths are provided on both sides of Kings Road, which provide connectivity between the site and the broader network, including the Parafield Railway

Station (approximately 500 m from the Airport Business Precinct). Formalised crossing opportunities for pedestrians are provided on Kings Road at its signalised intersections with Cross Keys Road/ Dakota Drive, Horrie Miller Drive and Main North Road/McIntyre Road. An internal footpath network is provided within the Airport Business Precinct on Dakota Drive, Kittyhawk Lane and Anderson Drive and within the Commercial Precinct on Lawrence Hargrave Way and Horrie Miller Drive. However, the connectivity of the internal network to the Kings Road footpaths is relatively light with indirect connections and ‘missing links’ on Horrie Miller Drive and Anderson Drive.

A footpath is provided on the eastern side of Main North Road, between McIntyre Road and Kesters Road, however has limited connectivity to Parafield

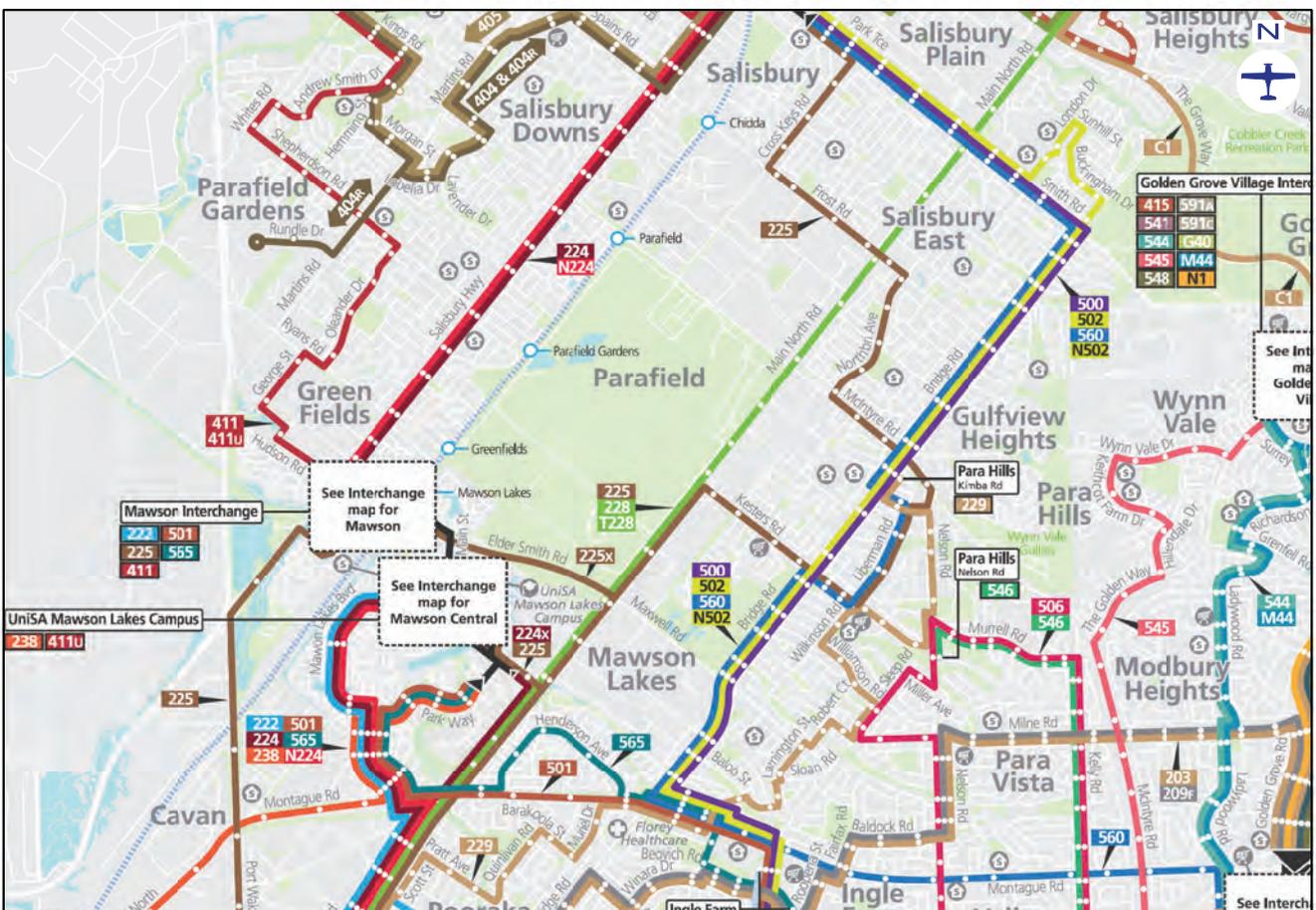


Figure 9.5 Bus services in vicinity of Parafield Airport

Airport (i.e. only at the signalised intersections at each end). No footpath is provided along the western side of Main North Road, albeit a connection is provided between the Commercial Precinct and Bus Stop 41 (western side). No formal footpath connections are provided for other bus stops on the western side of Main North Road. A direct pedestrian connection between the Commercial Precinct and Main North Road is provided at the signalised intersection with Kesters Road.

A shared (cyclist and pedestrian) path is provided along the western side of Parafield Airport. The path connects to shared paths within Mawson Lakes to the south and a shared path on the western side of Cross Keys Road to the north, via Kings Road. The section of shared path on the southern side of Kings Road (between the site's western boundary and Cross Keys Road) connects to the Central Precinct via Dakota Drive. Connections between the shared path and adjacent residential areas to the west (i.e. Parafield Gardens) are restricted by the adjacent rail corridor.

There are no formal external pedestrian facilities servicing the southern section of Parafield Airport (other than allowance for future connections at the Elder Smith Road/Main North Road/Maxwell Road intersection).

In addition to the shared path on the western side of the site, formalised cycling facilities are provided in the form of on-road bicycle lanes on Main North Road and Elder Smith Drive. No formal cyclist facilities are provided within Parafield Airport (other than on the immediate approach to/departure from the Kesters Road signalised intersection). However, cyclists are also permitted to utilise footpaths, which provides a further level of connectivity to, from and within the site.

9.4.2 Future Opportunities

The DPTI and City of Salisbury have advised that there are no specific plans for upgrades to walking and cycling facilities within the vicinity of the site. However, a number of opportunities exist within State and Local Government road reserves that could be explored further with these authorities, including:

- connection of the Airport Business Precinct internal footpath network to Kings Road, extension of the existing shared path adjacent the

site's north-western boundary further to the east (for instance, connecting to Horrie Miller Drive or even Main North Road/McIntyre Road);

- connection of the western shared path to residential areas to the west (Parafield Gardens) via pedestrian/cyclist crossings on the rail line; and
- connection of bus stops of Main North Road to the Commercial Precinct internal pedestrian paths.

It should be noted that additional cycling and walking facilities are currently being provided to improve connections to Mawson Lakes transport interchange from west to east.

Consideration could also be given to future provision of a shared use path within the Commercial Precinct (along the escarpment of the airport drain close to Horrie Miller Drive and Lawrence Hargrave Way) connecting between Kings Road and Elder Smith Road. This drain is an easement to the City of Salisbury. Such a facility would service staff and patrons of the Commercial Precinct who access the site via cycling (and walking) as well as provide a recreational facility for the broader community. This could also link to future development in the Enterprise Precinct and, ultimately, connect to the existing shared path to complete an external loop primarily around the site.

Further opportunities within the airport will also be presented as new internal roads are developed within the site, particularly within the Enterprise Precinct and the southern portion of the Commercial Precinct. Consideration can be given to provision of footpaths, shared paths and/or on-road bicycle lanes within these areas as they are developed.

Future developments within the site could include consideration of appropriate end-of-trip facilities, such as secure bicycle parking, change rooms and lockers. Such facilities will assist in supporting walking and cycling as viable modes for people accessing Parafield Airport.

Figure 9.6 illustrates the existing and possible future active transport networks servicing Parafield Airport.

9.5 Future Ground Transport Infrastructure and Demands

9.5.1 Transport infrastructure

The *Integrated Transport and Land Use Plan (ITLUP)* released in 2012 and updated in 2015 describes the initiatives that the State Government envisages for Adelaide. Those relevant to the Parafield Airport Ground Transport Plan are listed in Table 9.2.

9.5.2 Future Traffic Analysis

In determining the impact of future Parafield Airport developments and the surrounding road network, traffic analysis has been undertaken to ensure that proposed changes and their impacts are identified.

Data provided by DPTI from the Metropolitan Adelaide Strategic Transport Evaluation Model (MASTEM) indicate that the predicted growth in traffic volumes on the surrounding network out to the year 2036 varies depending on the location and timing of planned, committed and funded infrastructure in the vicinity of the airport.

MASTEM provides forecast traffic volumes for the year 2021, 2026, 2031 and 2036 and provides the main input data to traffic signal analysis of performance in future years. MASTEM is based on an approved land use framework (including details provided in previous Parafield Airport Master Plans).

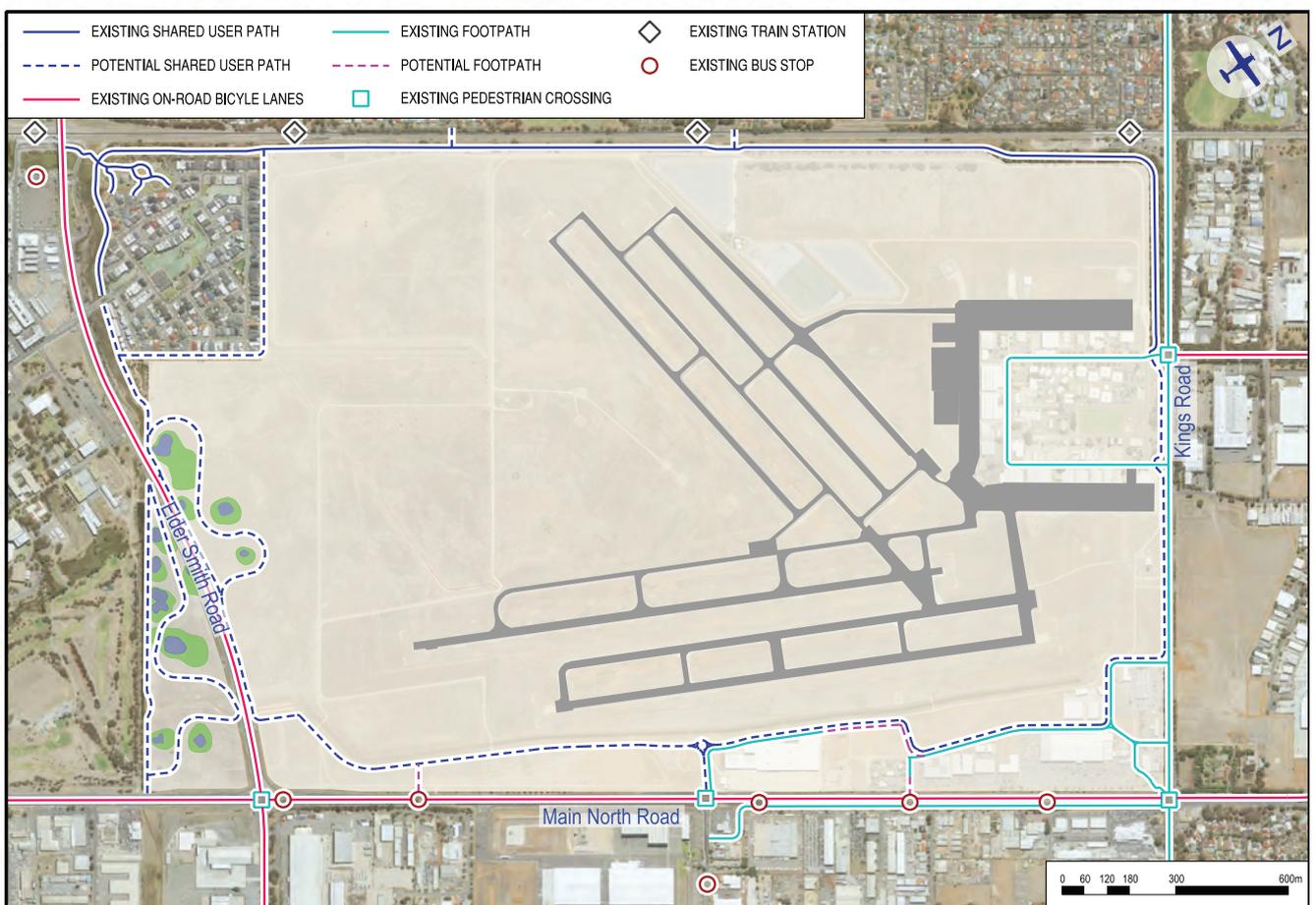


Figure 9.6 Walking and Cycling Connections

MASTEM also has built-in assumptions of how the transport network will develop into the future. In this case, Elder Smith Road is identified for conversion from a single lane carriageway to two lane carriageways between Main North Road and Salisbury Highway by 2021. In the model, Elder Smith Road is predicted to have the greatest growth rate of the bordering roads of up to 18% by 2036. This timing aligns with any proposed development within the

Enterprise Precinct as accessed via Elder Smith Road. This development impact is discussed further below.

Future development of the Airport Business Precinct is considered to be of low intensity and therefore any impact on the operation of the road will likely to be minimal in relation to the predicted growth by up to 10% in traffic volume along Kings Road by 2036. Volumes may increase slightly over this should the

Table 9.2 Integrated Transport and Land Use Plan Projects of Relevance to Parafield Airport

| Transport Initiative | Timeframe | | |
|---|----------------------|------------------------|---------------------|
| | Short (0–5 years) | Medium (5–15 years) | Long (15+ years) |
| Gawler Rail Line – complete electrification of the entire line, increase service frequency, staged upgrade of stations | ✓ | ✓ | |
| Supply of additional and expanded park and rides at key nodal points on the train, tram and bus networks | ✓ | ✓ | ✓ |
| Targeted upgrades to Main North Road, including 3 lanes each way between Montague Road and The Grove Way | | ✓ | ✓ |
| Elder Smith Road duplication and extension through to Port Wakefield Road | | ✓ | ✓ |
| Restructure bus services and improve bus service frequencies | ✓ | ✓ | ✓ |
| On-road bus priority measures on core routes | ✓ | ✓ | ✓ |
| Rationalise and improve protection for pedestrians at at-grade railway crossings. | ✓ | ✓ | |
| Progressively upgrade South Road as part of a strategy to develop the non-stop North-South Corridor, including grade separation with key east-west arterial routes and provision of at-grade service roads, any interim works and detour works during construction (includes Torrens Road to River Torrens, Northern Connector and remaining North South Corridor). | ✓ | ✓ | |
| Targeted upgrades of key intersections and sections of road to improve efficiency and safety performance | ✓ | ✓ | ✓ |
| Grade separate road crossings of the rail line at key locations | ✓ | ✓ | ✓ |
| Preserve and construct when necessary potential future road duplications | ✓ | ✓ | ✓ |
| Actively manage the operation and performance of the road network to give priority to movements along key freight and major traffic corridors | ✓ | ✓ | ✓ |
| Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets | ✓ | ✓ | ✓ |
| Continue to implement the Road Safety Strategy and address road safety blackspot and higher risk locations | ✓ | ✓ | ✓ |
| Parafield Airport industrial and commercial development (Main North Road/Kesters Road intersection (complete) and other arterial and local road upgrades | ✓ | ✓ | ✓ |
| Work with the Australian Government in reviews of master plans for Adelaide and Parafield Airports to provide effective access | ✓ | ✓ | ✓ |

Parafield Station Park and Ride be expanded more than currently expected.

Main North Road is predicted to experience an 8-9% growth in traffic volume while Salisbury Highway is predicted to initially experience a 3% growth to 2031 and then drop back to volumes similar to 2016 once the Northern Connector project (funded by State and Commonwealth governments) opens to traffic. Main North Road is planned to become three lanes in each direction between Montague Road and the The Grove Way in the medium (5 to 15 years) and long term (15+ years). This extensive portion of Main North Road is also adjacent to Parafield Airport from Elder Smith Road to Kings Road.

Enterprise Precinct

Development of this precinct would be staged over time, however is forecast to be occupied around 2036. Analysis of traffic generated suggests signalisation of the identified access point to Elder Smith Road will be likely by 2021. Such traffic could also impact Salisbury Highway and Main North Road intersections with Elder Smith Road depending on the dispersal of traffic between these intersections. Further analysis can occur again as greater detail on the proposed origin and destination and type of traffic that will access the Enterprise Precinct, and modelled against the projected general passing traffic occurring along these roads during the relevant periods.

Commercial Precinct

The continued development of the Commercial Precinct is suitably catered for by the recent construction of the modifications to the Main North Road/Kesters Road signalised intersection. This intersection provides a suitable access point to the

internal road network to access existing and future planned development of this precinct with a further left in only access point possible to the south to reduce traffic flows at the signalised intersection.

9.5.3 Short-Term Infrastructure Requirements

Table 9.3 indicates the short-term transport infrastructure improvements that have been identified for Parafield Airport over the next five years.

9.6 Arrangements with State and Local Government

Consistent with arrangements in place between DPTI and PAL, comprehensive liaison is held on any airport development and potential traffic impacts on those State roads that border Parafield Airport. This includes discussions held quarterly at Airport Planning Co-ordination Forum meetings, represented by DPTI, the City of Salisbury and PAL. Examples of the past and future collaboration include the following:

- signalisation of the T-Junction Intersection of Horrie Miller Way with Kings Road into the Commercial Precinct jointly funded by PAL and DPTI under Federal Black Spot Funding;
- construction of the left out access-way at Freda Thomson Place with Main North Road to complement the existing ingress point funded directly by PAL;
- re-construction of the Kesters Road T-Junction with Main North Road to a 4-leg signalised intersection directly funded by PAL; and
- construction of Elder Smith Road through the southern portion of Parafield Airport from the intersection of Main North Road and Maxwell Road into the Mawson Lakes Development under a Project Deed summarized below.

Table 9.3 Short-term Infrastructure Requirements

| Precinct | Infrastructure requirement | Timeframe |
|---------------------------|--|-----------|
| Airport Business Precinct | Improved on-site parking facilities to reduce kerbside parking on Kitty Hawk Lane | 0-5 years |
| Commercial Precinct | Left in access point from Main North Road south of Kesters Road | 0-5 years |
| Enterprise Precinct | State Government to construct (at its cost) a signalised intersection as new entrance to Enterprise Precinct on Elder Smith Road. Parafield Airport to construct access (left in and left out only) from Elder Smith Road to Enterprise Precinct to the west of the signalised intersection. | 0-5 years |
| Bennett Precinct | None | NA |
| Runways Precinct | None | NA |

Elder Smith Road

Elder Smith Road sweeps across the southern boundary of the Enterprise Precinct and was constructed as a single lane in each direction with the road reserve created wide enough to allow widening to two lanes in each direction when required in the future. As part of the initial construction of Elder Smith Road in 2007, an un-signalised intersection layout was built to provide a connection point for any future Parafield Airport internal road network needing access to Elder Smith Road. This was under a tripartite agreement (Project Deed) that was reached between State Government (DPTI), PAL and the Commonwealth Government on 19th June 2006 which allowed for traffic access into Mawson Lakes through Parafield Airport with the land transferred from Commonwealth Government ownership at no cost to the State Government. In return, the State Government (DPTI) assumed direct responsibility and the full cost for the care and control of Elder Smith Road and all its ancillary intersections including the future signalised access into the Cross Keys Precinct.

The agreement stated that in the construction of Elder Smith Road DPTI would provide a “single access point from Elder Smith Road to the [then] Cross Key Enterprise Precinct catering for vehicle movements in all directions and suitable for B-Double use. This junction is to be capable of being upgraded in the future to suit a duplicated carriageway and signalised in the manner...”

Annexure F of that Deed advises that “DTEI [DPTI] will install traffic signals at the [then] Cross Keys Precinct access once development has been sufficiently established, or sufficient development is approved, such that either the two hour or four hour warrants as outlined in Figure 3.1 of the *Code of Technical Requirements for Legal Use of Traffic Control Devices* (the Code) for the installation of traffic signals, are achieved or predicted to be achieved on an average day.”

An extract of the deed (and reconfirmed by letter from DPTI ref: 1999/02629 dated 19 June 2006) is contained in Appendix D.

This access point has been constructed near the south eastern boundary of the proposed development site. This intersection layout has been designed with the intention that it becomes a signalised intersection when the need arises against the State responsibility as outlined above. In addition, the intersection has been designed to accommodate B-Double movements to and from the Parafield Airport internal road network.

Alternate Access Point

An alternate left in/left out access point to the proposed development for general traffic is proposed to the west of the main entrance. The design of this entrance road is in accordance with Austroads *Part 4A: Un-signalised and Signalised Intersections*. This access point will provide an emergency entry and exit for B-Doubles from the site under controlled conditions.

The location of this access point is preferred over the previous proposal to access the site through St Kitts Place in Mawson Lakes as included in the 2012 Master Plan and based on the 2006 Agreement with the City of Salisbury. This new Elder Smith Road access point has the advantage of being segregated from nearby residential areas. The previously accepted access point directed traffic through St Kitts Place to the intersection of Main Street and Elder Smith Road.

The alignment of this access point was chosen such that it would not impact the nearby environmentally sensitive area containing vernal pools. The location of these vernal pools and catchments was determined from topographical survey in 2016.

This new access point will require the existing culverts under Elder Smith Road to be extended to accommodate the unsealed shoulder of the left turn approach lane.

