

3 The Airport

3.1 Airport Site

Parafield Airport is located in South Australia, 18 km north of the Adelaide CBD in the City's strategic northern growth sector. Parafield Airport enjoys the facilities that come with being one of the busiest general aviation airports in Australia. The airport is bordered by Kings Road to the north, Main North Road to the east, Bennett Road Drain to the south and the main northern rail line to the west (Figure 3.1).

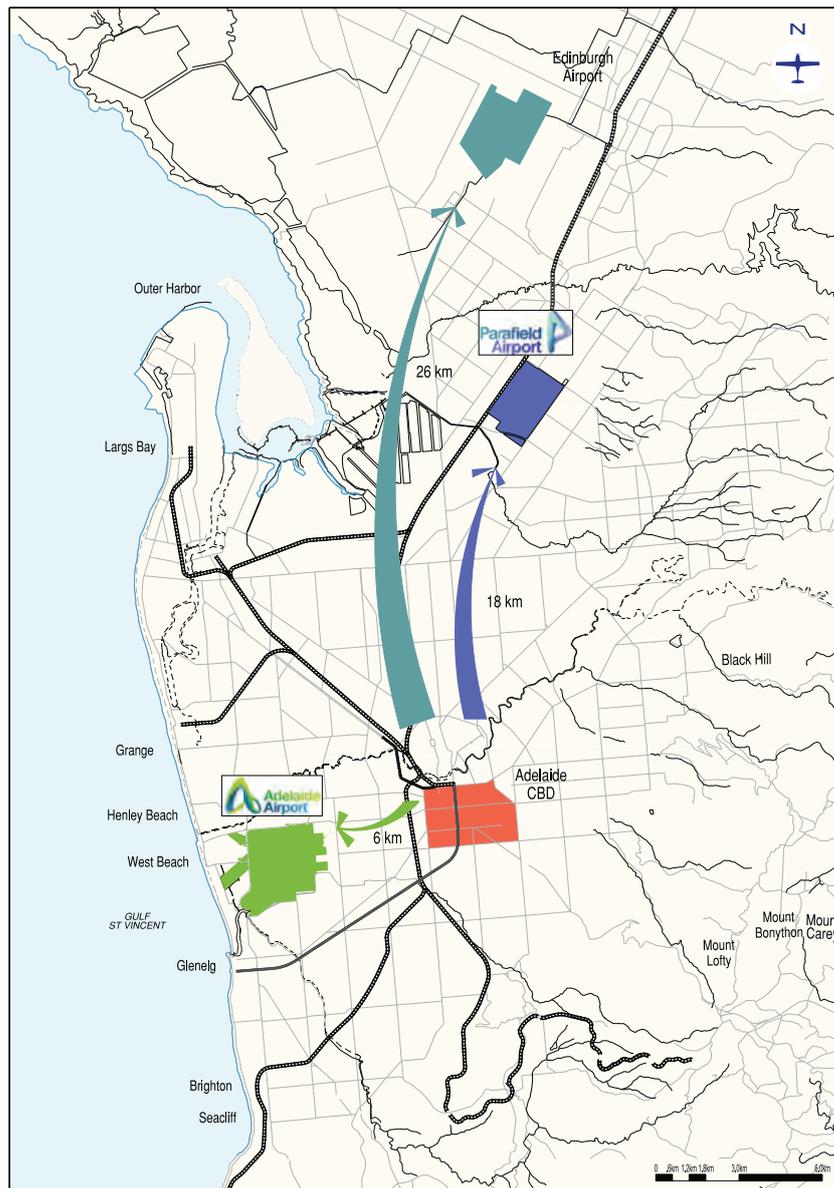


Figure 3.1 Location of Parafield Airport

3.2 Airport History

3.2.1 Aviation History of Parafield Airport

In April 1927, the Civil Aviation Branch purchased 320 acres of open farmland at Parafield to establish a large, permanent airport for Adelaide. The first aircraft operation to Parafield Airport was on 1 October 1927.

The Royal Aeroclub of South Australia built a clubhouse at Parafield. The Civil Aviation Branch built a red brick manager's residence adjacent to the airfield entrance and began leasing sites to commercial operators in 1927. Parafield was officially declared open in August 1929 and in 1934, a large air pagent was held at the airport (Figure 3.2).

The Depression briefly retarded the growth of aviation, but the 1930s saw a steady proliferation of new airline companies (Qantas and Ansett) and the expansion of others. Two gable-ended hangars were erected at Parafield during the mid-1930s and leased by Australian National Airways Pty Ltd (ANA) and Henry Snider. ANA built its own large hangar at Parafield in 1936, which was the first igloo type of hangar built on the site. Guinea Airways built another igloo hangar

alongside in 1939. In 1938, the aeroclub built new headquarters on the northern boundary of the airport away from the hangars.

Adelaide Airways Ltd based at Parafield was one of the predecessors of ANA. The company was established in July 1935 to operate services between Adelaide and Broken Hill, Melbourne, Kangaroo Island and Port Lincoln, and it acquired the Adelaide-Perth route flown by Western Australian Airways on 12 June 1936. Adelaide Airways merged with Tasmanian-founded Holymans Airways Pty Ltd in 1936 to form ANA with interstate routes that serviced Perth, Adelaide, Melbourne, Sydney and Hobart. The company continued to acquire other airlines and routes and become the premier Australian airline. The company introduced the DC2 to Australia and established a clear competitive advantage over its smaller rivals.

Guinea Airways was also based at Parafield after it introduced scheduled services between Adelaide and Darwin on 5 March 1937 with Lockheed Electra 10



Figure 3.2 Air Pagent 1934

aircraft. The company had been registered in Adelaide a decade before, on 4 November 1927, to operate services between its goldfields in New Guinea. The company operated a service between Adelaide and Sydney in 1938 before handing it over to Ansett Airways. The development of Parafield Airport in 1934 is shown in Figure 3.3. Thereafter it concentrated on developing regional services in South Australia and acquired the local operations of MacRobertson Miller Airways in April 1939.

Ansett Airways did not develop at Parafield but Parafield was one of the earliest airports added to that company's network. The airline began services between Melbourne and Parafield on 29 November 1937, less than two years after Reginald Myles Ansett established the company on 17 February 1936 with its inaugural flight from Hamilton, in western Victoria, to Essendon, in suburban Melbourne. The popularity of the service prompted Ansett to acquire additional aircraft and extend his operations. The Adelaide service was suspended during World War 2, but recommenced afterwards with DC3 aircraft.

3.2.2 World War II

During the mid-to-late-1930s, a timber-framed control tower was erected south of the ANA Hangar, and the Shell and Vacuum Oil Companies constructed fuel outlets/garages. The outbreak of war in 1939 saw a rush to upgrade aerodromes and rapid growth of the RAAF in response to the establishment of an Empire Air Training Scheme designed to provide aircrew to help England fight the war in Europe. The training stations were erected in standard temporary huts.

In early 1940, the Department of Defence took over the running of Parafield for the duration of the war. The commercial services of ANA, Guinea Airways and others continued from the airport in a constrained manner, while the activities of the aeroclub were suspended from July 1940. The RAAF commandeered its premises and aircraft for the use of the No. 1 Elementary Flying Training School. From July 1940, all civilians were excluded from the aerodrome except those employed by civil aviation and commercial aviation companies. In August 1941, the school's establishment was doubled in strength, with additional

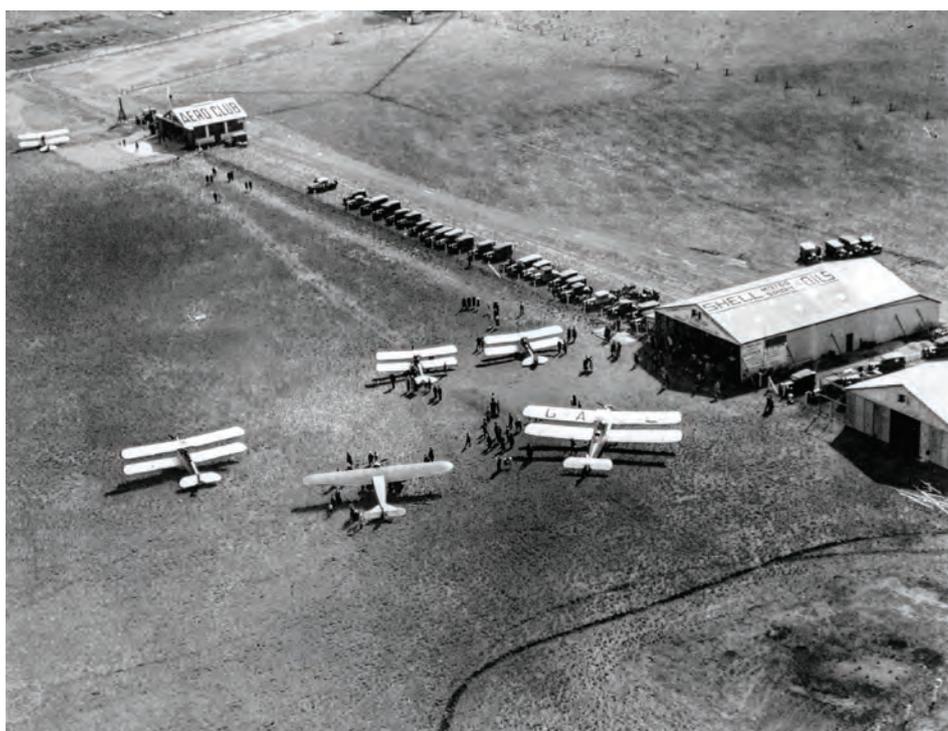


Figure 3.3 Parafield Airport 1934

huts erected shortly after by building company S.J. Weir. Twenty-four basic module Military P Series huts were constructed at Parafield in 1940, to total 70 by the end of the war. They were designed to accommodate 20 men and be adaptable for most camp requirements.

In June 1941, a separate Department of Aircraft Production was established. In 1942, the Department of Aircraft Production built two large airframe repair hangars/workshops at Parafield and for the rest of the war, serviced Elementary Flying Training School and No. 34 Squadron needs. It was around this time that the original farmhouse was demolished and Kitty Hawk Lane was created.

Commencing in 1942, the Commonwealth Government began acquiring land adjacent the airport to cater for the increasing size of aircraft using the airfield and the growth in military traffic, and began formalising the road network. The first expansion was west to the Gawler railway line.

In January 1943, No. 34 Squadron was reformed at Parafield with 4 officers, 66 Airmen and 3 Dakota aircraft. Additional huts and another Bellman Hangar (No. 107) were erected to accommodate them.

3.2.3 Post-World War II to 1955

With the end of World War II and the departure of No. 34 Squadron, Parafield was returned to civil and commercial airline operations and the repair and overhaul of military aircraft for the RAAF and Department of Aircraft Production. Between 1944 and 1949 much of Parafield's wartime encampment was sold off and removed from the site. The development of the airport in 1948 is shown in Figures 3.4 and 3.5.

In August 1945, the Commonwealth Government established by Act of Parliament the Australian National Airlines Commission, a Government instrumentality authorised to operate interstate air services, and also created Trans-Australia Airlines. By 1946 there were nine airline companies operating regular services within Australia, with ANA and Guinea Airways the main operators.

Trans-Australia Airlines began operations in September 1946 (Figure 3.6) and moved into the former No 34 Squadron hangar at Parafield. Two cinder runways were formed in 1949.



Figure 3.4 Parafield Airport circa 1948



Figure 3.5 Hangar Development - Parafield Airport circa 1948



Figure 3.6 TAA at Parafield Airport 1950s

In 1951, the workshops were enlarged and in 1953 a Bellman Hangar was relocated from Mallala to support aircraft servicing and maintenance. The airframe repair workshops, consisted of three hangars and ancillary buildings until they were closed in 1972.

3.2.4 Post 1955 (after the establishment of West Beach Airport)

As post-war civil and commercial aviation activities bloomed, and Parafield became Adelaide's principal airport, the Commonwealth sought to segregate private and aeroclub flying from regular/commercial transport services and to construct two airports for each mainland capital city to reduce congestion.

Planning for a new major airport at West Beach to reduce Parafield to a minor airport began before the end of the war, with the first parcel of land at West Beach purchased in late 1946. Construction of the West Beach airport began in 1947 and the new airport opened in February 1955, after which the major commercial airlines moved from Parafield to West Beach, and all remaining military aviation moved to Edinburgh.

The continued growth in general aviation activity since the mid-1950s has meant that Parafield has become a significant centre for recreational flying and pilot training, which is now its principal function. The runway was sealed for the first time in 1969.

In 1982, the airframe workshop hangars were taken over by the Australian Aviation Company (now called Flight Training Adelaide) with the aim of training further commercial airline and helicopter pilots. The company adapted the former hangars and constructed additional accommodation for international students, classrooms and aircraft simulators.

Other contemporary buildings have been constructed at Parafield since the 1980s, including a new line of hangars on the western side of the airport. Other hangars were re-modelled, and a few relocated.

In the years since the opening of Adelaide Airport, Parafield Airport has been regarded as a general aviation environment and as a training airport for flying and maintenance operations. The pilot training continues to prepare world-class pilots for flying with Australian and international airlines.

3.3 Facilities

Parafield Airport is a Certified Airport (as defined by CASA) and has facilities to provide for flying training, general aviation, charters and helicopter operations. The principal aviation-related facilities at Parafield Airport include:

- a four-runway system comprising the main (illuminated) 03L/21R runway (1350 m), 03R/21L runway (1279 m), 26L/08R runway (992 m) and 26R/08L runway (958 m) together with associated aprons and sealed and unsealed taxiway system;
- on-airport car parking facilities;
- aircraft maintenance hangars and associated facilities;
- helicopter facilities;
- air traffic control facilities;
- public transport access; and
- aviation fuel facilities.

3.4 Relationship to Other Airports

A number of other airports catering for the general aviation industry are currently operating within close proximity to Parafield, as described below.

Adelaide Airport is the international and domestic air transport gateway to the City of Adelaide and the State of South Australia. Facilities at Adelaide Airport are well established and cater for the full range of commuter services, domestic and international services.

RAAF Base Edinburgh is a Defence facility and is home to No 92 Wing's AP-3C Orion maritime patrol aircraft that conduct surveillance operations throughout Australia's airspace.

Gawler Aircraft Landing Area (ALA) is approximately 20 km north of Parafield and is predominantly used as a flying and training aerodrome for glider and light sports aircraft operations.

Murray Bridge ALA is approximately 100 km east of Adelaide. The aerodrome has a cross-runway configuration with associated taxiways and apron parking areas. A number of units and small hangars exist with some maintenance activity. There is a flying school situated on the aerodrome.

Aldinga ALA is approximately 60 km south of Adelaide. The aerodrome is a cross-runway configuration, with associated taxiways and parking. There is a flying school situated on the aerodrome and some maintenance facilities. Curfews and some operational restrictions apply. The main activities at the aerodrome include flying training and joy flights.

Goolwa ALA is approximately 130 km south of Adelaide. The aerodrome consists of a sealed runway with a natural-surface short cross strip, sealed taxiway and apron facility. There is a flying school situated on the aerodrome. The main activities include flying training and joy flights.

3.5 Economic Significance

The contribution that Parafield Airport makes to the South Australian economy is determined by estimating the employment and Gross State Product (GSP) associated with the airport's overall business activities. This has been measured through a combination of a business survey and economic modelling to estimate the direct and indirect (multiplier) economic benefits attributable to airport activity.

This section puts these outcomes into context by comparing the outcomes with those of previous (2008 and 2011) reports and by assessing the airport's operating environment over the last five years.

3.5.1 Changes in Airport Activity and Trend Analysis

The 2011 report noted that aircraft movements at Parafield Airport had declined substantially between 2000 and 2004 reaching the lowest number of movements by 2003/04 (127,162) since 1987/88, as shown in Figure 3.7. It should be noted, however, that from May 1998, airport tower hours changed from 0700 – 2200 to 0800 – 1800 which would have resulted in a substantially reduced number of captured aircraft movements. The definition of 'aircraft movement' was also changed to treat 'touch and goes' as one movement instead of two. Comparisons are therefore only reliable from 1998/99.

As can be seen from Figure 3.7, with the exception of 2013/14 there has been a sustained recovery in the number of aircraft movements after 2003/04 peaking at 243,132 in 2008/09. This is still the highest number of annual movements since the revised data capture times. PAL estimates that there are a number of aircraft movements per annum outside

the official capture hours. A recent 12-month study by Airservices Australia using radar from Adelaide and five noise monitors around the airport provided accurate movement data for 2015/2016. These data indicated that annual movements were approximately 218,000.

The sustained recovery in aircraft movements at Parafield Airport from 2004/05 to 2008/09 was consistent with strong economic trends over that time leading up to the 2007/08 Global Financial Crisis. While the impact of the Global Financial Crisis is not immediately reflected in aircraft movements at Parafield Airport, growth stagnated in 2009/10 followed by a decline in aircraft movements to 2000/01 levels by 2013/14 (170,138).

This performance is consistent with national and state-based general aviation trends over the same period to 2012. Bureau of Infrastructure, Transport and Regional Economics (BITRE) General Aviation Activity data show that total landings declined from 2008 to 2012 in the general aviation sector as shown in Figure 3.8 (BITRE 2013).

The slight recovery in 2013 at the national level is not reflected in Parafield Airport activity, which continued to decline until 2013/14. This is due to Parafield Airport's heavy reliance on aircraft training which continued to decline at the national and regional levels until 2013 as shown in Figure 3.9.

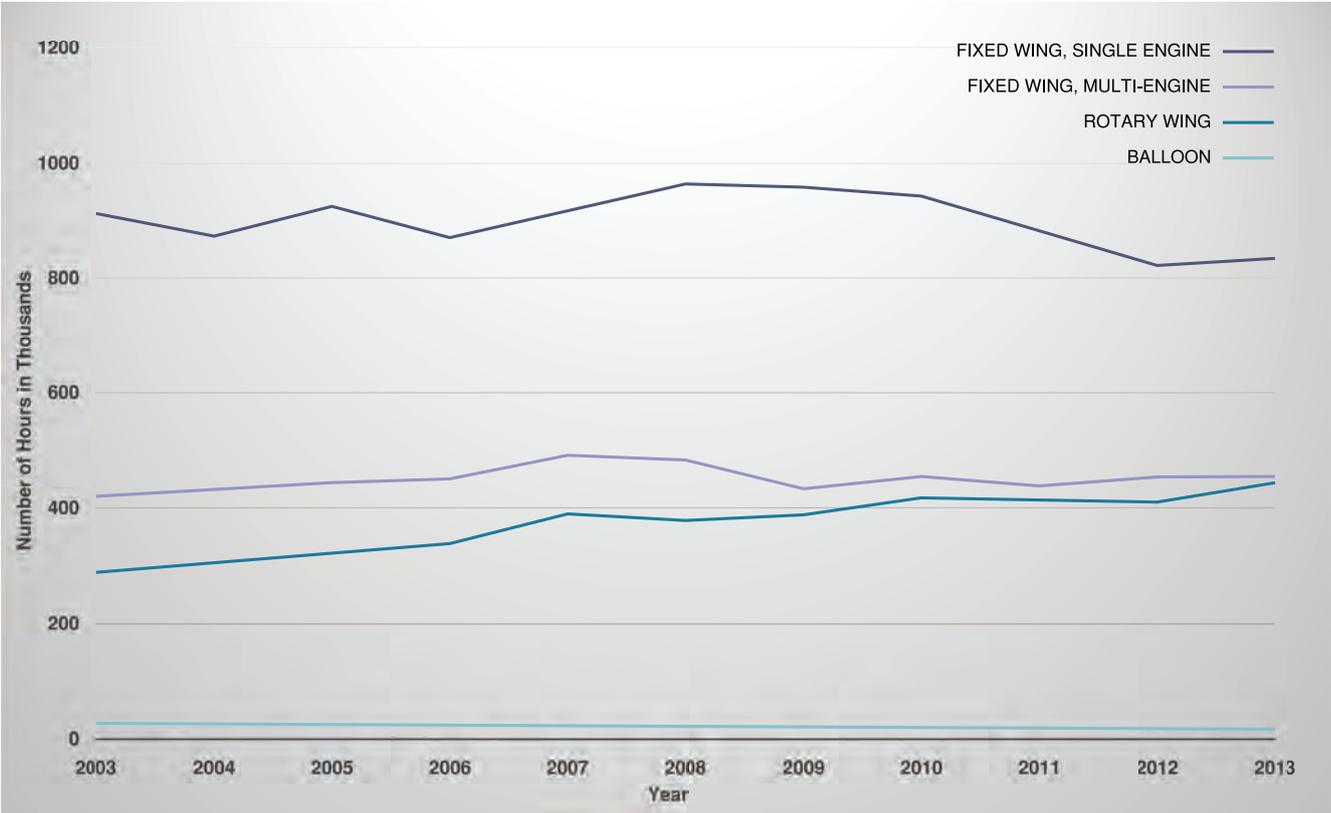
The BITRE report summarises these trends as follows:

- general aviation activity increased by 2.2 per cent in 2013, in terms of the number of hours flown.
- charter and aerial work flying were the two largest activity categories in the general aviation sector, representing 27.9 per cent and 23.6 per cent respectively of all general aviation flying hours during 2013. Training accounted for another 21.8 per cent of general aviation flying. Private and business flying together represented 20.8 per cent of total general aviation activity.
- general aviation categories to show an increase in flying activity were: test and ferry (up 14.6 per cent), aerial work (up 11.4 per cent), training (up 5.0 per cent), and business (up 0.3 per cent). Decreases in flying hours were recorded in agriculture (down 10.4 per cent), charter (down 3.2 per cent), and private flying (down 0.6 per cent).



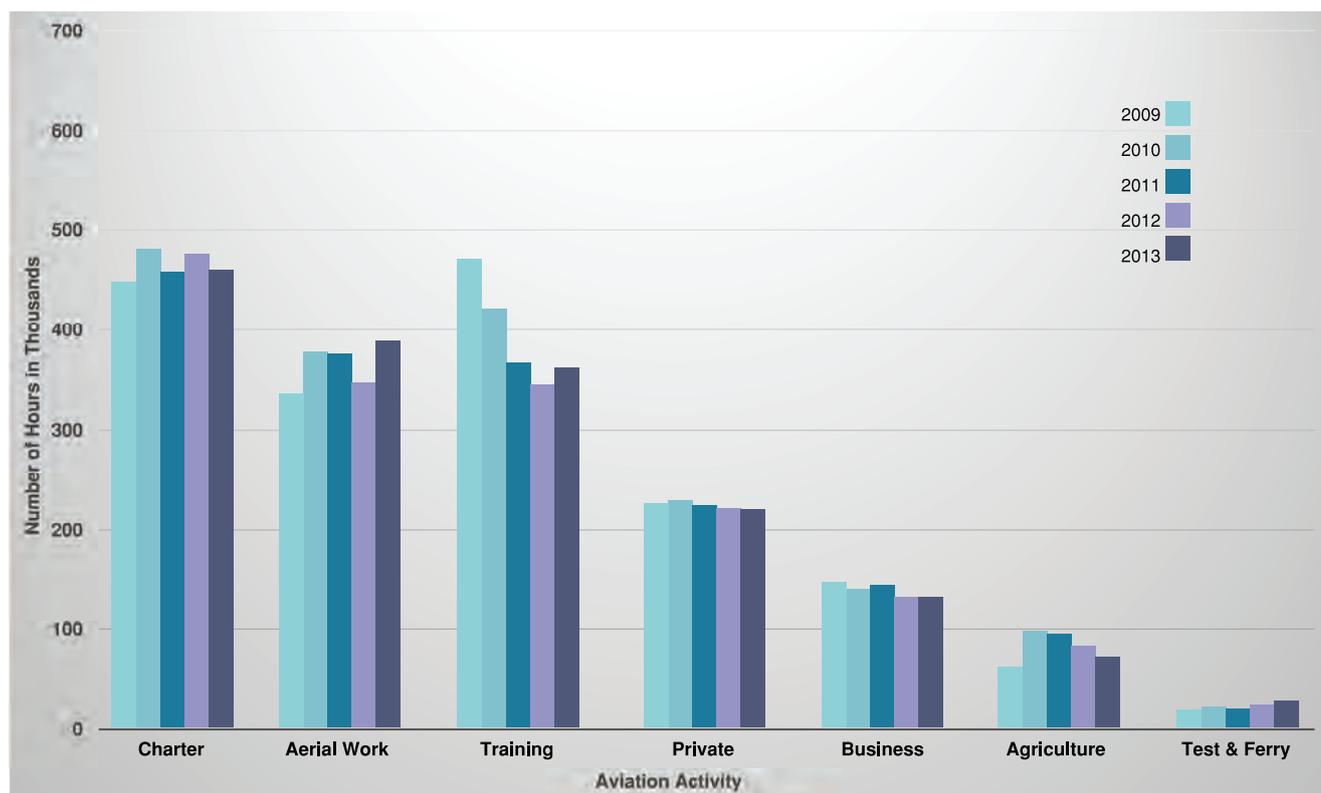
Source: Airservices Australia – Movements at Australian Airports (www.airservicesaustralia.com) as supplied by Parafield Airport Limited

Figure 3.7 Parafield Airport Aircraft Movements 1987/88 – 2015/16



Source: BITRE, General Aviation Activity, 2013

Figure 3.8 General Aviation hours flown, by category of aircraft (2003–2013)



Source: BITRE, *General Aviation Activity, 2013*

Figure 3.9 Hours flown in General Aviation by activity (2009–13)

Since 2013/14, aircraft movements at Parafield Airport have recovered to pre-Global Financial Crisis levels albeit with a slight decline in 2015/16 to 218,728.

3.5.2 The Economic Impact of the Airport

An analysis of the level of economic activity associated with the operation of Parafield Airport has been based on a comprehensive survey of airport businesses and economic modelling of the survey and other data. Estimates are made of:

- the total jobs, wages paid and expenditure of companies whose operations are based around the airport, identified through the survey; and
- induced (or multiplier) economic impacts associated with this direct impact.

The analysis provides a quantitative assessment of the contribution that Parafield Airport makes to the South Australian and Northern Adelaide economies as at 2016. The Northern Adelaide Region is defined

as the Local Government Areas of Salisbury, Playford, Tea Tree Gully and the eastern half of Port Adelaide Enfield.

This economic impact assessment is an update of previous reports undertaken in 1998, 2004, 2008 and 2011. The economic contribution of airport activity is measured by the amount of income it supports (its contribution to Gross State or Regional Product) and its employment outcomes.

The estimation of economic impact is based on the survey of entities operating at the airport, and their estimates of direct employment, both on-site and employment off-site that is dependent on their activities at the airport. The revenue/expenditure base that this employment supports is then estimated and traced through Input Output Tables for South Australia and the Northern Adelaide Region to determine estimates of income associated with that

employment, and the induced or flow-on impact that is related to these activities.

Business Survey

At the commencement of the project, PAL supplied a database containing 73 organisations (including PAL) operating from Parafield Airport (c.f. 84 in 2011). A business survey was designed and approved by AAL and PAL management to obtain data for the economic impact assessment. Following is a summary of the organisations surveyed:

- total number of organisations – 73 (comprising 39 aviation related business and 34 commercial/retail businesses).
- unable to be contacted – 4 (no answer, away, refused survey, etc.).
- completed surveys – 46 (67%).

Detailed Analysis

The quantification of the economic contribution of Parafield Airport to the State and regional economies is based on the responses to the business survey of entities operating at the airport, and determining the direct employment contribution of those entities. Forty-six respondents provided details of employment on site, and employment off-site that is dependent on their activities at the airport.

The average employment by respondent in each industry sectors has been factored up to provide an estimate of aggregate employment in each sector based on the estimated number of businesses within each industry sector at the airport. Responders that gave employment details but did not disclose their name or industry (i.e. confidential) were assumed to be in air transport or air transport services in the Business Precinct, and in retail in the Commercial Precinct.

Table 3.1 Summary of Results – Economic Contribution of Parafield Airport - 2016

	Airport Business Precinct	Commercial Precinct	Aeronautical	Non-Aeronautical	Total
Direct Impact					
Number of Businesses	39	34	29	44	73
Total Employment on-site	500	600	451	649	1100
Total Employment off-site	69	193	69	193	261
Total Employment	569	792	520	841	1361
Estimate of Total Revenue (\$m)	68.6	192.5	68.6	192.5	261.1
Estimate of Direct Wages (\$m)	50.7	34.6	47.4	37.9	85.3
Estimated Direct Value Added (\$m)	85.1	51.0	80.9	55.2	136.1
Economic Contribution					
Northern Adelaide					
Gross State Product (\$m)	111.1	51.4	103.2	59.3	162.5
Household Income (\$m)	844.7	38.0	78.2	44.5	122.7
Employment (FTEs)	988	700	901	787	1688
South Australia					
Gross State Product (\$m)	171.7	91.1	158.9	103.9	262.8
Household Income (\$m)	1208	65.1	112.1	73.8	185.9
Employment (FTEs)	1366	1079	1257	1187	2445

Note: FTE = full time equivalent jobs

Source: Hudson Howell 2017a

The ratios of revenue, wages and gross operating surplus for the underlying industry sectors for the Northern Metropolitan Region (air transport, retail, construction, etc.) were used as indicative for Parafield Airport businesses. These ratios have been used to estimate the direct revenue base for these businesses, including wages and gross operating surplus (i.e. returns on capital). These estimates therefore assume that the businesses in the airport area are similar to industry averages (on a per worker basis).

Table 3.2 Summary of Employment Outcomes by Industry (Northern Region) - 2016

Sector	Direct	Total
Aeronautical	451	451
Agriculture and Mining	0	7
Manufacturing	0	106
Retail and Hospitality	611	707
Construction and Utilities	35	57
Other Transport and Storage	1	47
Business and Financial Services	0	170
Education and Personal Services	2	144
Total	1100	1688

Source: Hudson Howells 2017a

Table 3.3 Summary of Employment Outcomes by Industry (South Australia) - 2016

Sector	Direct	Total
Aeronautical	520	521
Agriculture and Mining	0	23
Manufacturing	0	152
Retail and Hospitality	803	982
Construction and Utilities	35	77
Other Transport and Storage	1	96
Business and Financial Services	0	337
Education and Personal Services	2	257
Total	1361	2445

Source: Hudson Howells 2017a

Table 3.1 provides a summary of the core data based on the industry base and survey responses. It includes estimates of revenue, direct employment, wages and value added. As at 2016, Parafield Airport is estimated to support 1361 direct jobs of which 1100 are on-site, and in the Northern region, while it is assumed that the off-site employment of 261 jobs are based elsewhere in the State (mostly in metropolitan Adelaide). The wages generated in the Northern region are estimated as \$56.4 million annually, while wages paid to households in the State is estimated to be \$85.3 million.

Table 3.1 provides a summary of the estimated economic impacts by precinct and by aviation/non-aviation activities (mainly retail).

Tables 3.2 and 3.3 contain the modelled employment outcomes by industry sector in the respective regions. While the direct employment is, as expected, primarily in the retail and air transport/aeronautical sectors (and to a lesser extent in construction), the flow through effects demonstrate that the contribution of the airport's operations permeates the economic fabric of the respective communities, with jobs created in retail beyond that in the precinct, in business services, in road transport and in education, health and personal services.

Table 3.4 compares these 2016 results with those of previous studies undertaken in 2008 and 2011.

Table 3.4 Economic Contribution of Parafield Airport - Comparison Across Time

Impact	2008	2011	2016	% Increase
Direct Employment				
On-site	750	823	1100	34
Off-site	154	194	261	35
Total Direct	904	1017	1361	34
Induced Employment	809	907	1084	19
Total Employment	1713	1924	2445	27
Total Value Added (Contribution to GSP (\$m))	184.5	184.3	262.8	43

Source: Hudson Howells 2017a

The revenues estimated by category of activity are applied to the relevant industry sectors, and the impact of this is traced through the economy to estimate the induced effects, which are then added to the direct effects to give the total economic impact. In total, therefore, including the induced or multiplier effect, the full economic impacts associated with the operations of Parafield Airport are estimated to be:

- in the Northern Adelaide Region, support for 1688 jobs, and a contribution to Gross Regional Product of \$162.5 million; and
- for South Australia, support for 2445 jobs, and a contribution to Gross State Product \$262.8 million.

A detailed summary of the direct economic impacts that Parafield Airport has as at 2016 is presented in Appendix B.

